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UBAtc Assessment Operator

Buildwise
Kleine Kloosterstraat 23
1932 Sint-Stevens-Woluwe
info@buildwise.be
www.buildwise.be

SECO Belgium
Registered office:
Koloniënstraat 56 box 10 1000 Brussel
Corporate office:
Hermeslaan 9 1831 Diegem
mail@seco.be -
www.groupseco.be

Technical Assessment Body issuing the European Technical Assessment: UBAtc. UBAtc has been designated according to Article 29 of Regulation (EU) No 305/2011 and is member of EOTA (European Organisation for Technical Assessment)

Trade name of the construction product:	PROMATECT®-LT
Product family to which the construction product belongs:	35 - Fire protective board
Manufacturer:	Etex Building Performance nv Bormstraat 24 2830 TISSELT (BELGIUM)
Manufacturing plant(s):	ETEX Production Plant No. 01 (known to UBatc)
Website:	www.promat.com
This European Technical Assessment is issued in accordance with Article 95(4) of Regulation (EU) No 2024/3110, on the basis of:	European Assessment Document (EAD): EAD 350142-00-1106: "Fire protective board, slab and mat products and kits"
Version:	1
This European Technical Assessment contains:	36 pages, with 2 annexes which form an integral part of this European Technical Assessment

European Organisation for Technical Assessment

Legal bases and general conditions

1 This European Technical Assessment is issued by UBAtc (Union belge pour l'Agrément technique de la construction, i.e. Belgian Union for technical Approval in construction), in accordance with:

- Article 95(4) of the Regulation (EU) No 2024/3110[1] of the European Parliament and of the Council of 27 November 2024 laying down harmonised conditions for the marketing of construction products and repealing Regulation (EU) No 305/2011
- Commission Implementing Regulation (EU) No 1062/2013 [2] of 30 October 2013 on the format of the European Technical Assessment for construction products
- European Assessment Document : EAD 350142-00-1106 - Fire protective board, slab and mat products and kits

2 Under the provisions of Regulation (EU) No 305/2011, UBAtc is not authorized to check whether the provisions of this European Technical Assessment are met once the ETA has been issued.

3 The responsibility for the conformity of the performances of the products with this European Technical Assessment and the suitability of the products for the intended use remains with the holder of the European Technical Assessment.

4 Depending on the applicable Assessment and verification of constancy of performance (AVCP) system, (a) notified body(ies) may carry out third-party tasks in the process of assessment and verification of constancy of performance under this Regulation once the European Technical Assessment has been issued.

5 This European Technical Assessment allows the manufacturer of the construction product covered by this ETA to draw up a declaration of performance for the construction product.

6 CE marking should be affixed to all construction products for which the manufacturer has drawn up a declaration of performance.

7 This European Technical Assessment is not to be transferred to other manufacturers, agents of manufacturers, or manufacturing plants other than those indicated on page 1 of this European Technical Assessment.

8 The European Technical Assessment holder confirms to guarantee that the product(-s) to which this assessment relates, is/are produced and marketed in accordance with and comply with all applicable legal and regulatory provisions, including, without limitation, national and European legislation on the safety of products and services. The ETA-holder shall notify the UBAtc immediately in writing of any circumstance affecting the aforementioned guarantee. This assessment is issued under the condition that the aforementioned guarantee by the ETA-holder will be continuously observed.

9 According to Article 11(6) of Regulation (EU) No 305/2011, when making a construction product available on the market, the manufacturer shall ensure that the product is accompanied by instructions and safety information in a language determined by the Member State concerned which can be easily understood by users. These instructions and safety information should fully correspond with the technical information about the product and its intended use which the manufacturer has submitted to the responsible Technical Assessment Body for the issuing of the European Technical Assessment.

10 Pursuant to Article 11(3) of Regulation (EU) No 305/2011, manufacturers shall adequately take into account changes in the product-type and in the applicable harmonised technical specifications. Therefore, when the contents of the issued European Technical Assessment do not any longer correspond to the product-type, the manufacturer should refrain from using this European Technical Assessment as the basis for their declaration of performance.

11 All rights of exploitation in any form and by any means of this European Technical Assessment are reserved for UBAtc and the ETA-holder, subject to the provisions of the applicable UBAtc regulations.

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13 Subject to the application introduced, this European Technical Assessment is issued in English and may be issued by the UBAtc in its official languages. The translations correspond fully to the English reference version circulated in EOTA.

14. This European Technical Assessment was first issued by UBAtc on 28 January 2026.

[1] OJEU, L series of 2024/12/18

[2] OJEU, L 289 of 2013/10/31

Technical Provisions

1 Technical description of the product

1.1 Introduction

This European Technical Assessment is being issued for the product PROMATECT®-LT on the basis of agreed data/information, deposited with the UBAtc, which identifies the product that has been assessed. Changes to the product/production process, which could result in the deposited data/information being incorrect, should be notified to the UBAtc before the changes are introduced. The UBAtc will decide whether or not such changes affect the ETA and consequently the validity of the CE marking on the basis of the ETA and if so whether further assessment/alterations to the ETA, shall be necessary.

1.2 PROMATECT®-LT

PROMATECT®-LT is cement-bonded fire protective board based on calcium silicate. The board is white-beige in appearance and has a smooth matte upper surface and a slightly coarse reverse face.

Boards can have square or rabbeted edges. Cuts can be straight, bevel or chamfer cuts. The type of edge shall be in accordance with the assemblies as they are described in Annex II of this ETA.

Table 1 – Dimensions and density

Thickness	Length x width	Tolerance on length and width
(mm)	(mm)	(mm)
25 ± 0,5	2500 x 1200	+3 / -3
30 ± 0,5	2500 x 1200	+3 / -3
35 ± 0,5	2500 x 1200	+3 / -3
40 ± 0,5	2500 x 1200	+3 / -3
50 ± 0,5	2500 x 1200	+3 / -3
Density (dry 105 °C): 615 kg/m³ ± 15% Density (23 °C, 50 % RH): 650 kg/m³ ± 15%		

1.3 Ancillary products

Ancillary products referred to in this ETA, as a part of installation provisions or in the framework of determining performances (e.g. fire resistance test), are not covered by this ETA and may not be CE-marked based on it.

2 Specification of the intended use in accordance with the applicable EAD

2.1 Intended use (exposure conditions

The ETA covers fire protective boards intended for exposure conditions as specified in Table 2, when no more than accidental wetting is expected.

Table 2 – Intended use (exposure conditions)

Exposure	EAD 35014200-1106 reference
Internal use (internal dry conditions)	Type Z_2
Internal and semi-exposed use (internal and external dry conditions)	Type Y

2.2 Intended use (Assemblies)

PROMATECT®-LT is intended to protect elements or to be used in assemblies as specified in Table 3.

Table 3 – Intended use (assemblies)

	EAD 350142-00-1106 reference
Horizontal membrane protection incl. suspended ceilings acc. to EN 13964	Type 1
Vertical membrane protection	Type 2
Load-bearing concrete elements	Type 3
Load-bearing steel elements	Type 4
Load-bearing flat concrete profiled sheet composite elements	Type 5
Load-bearing concrete filled hollow steel columns	Type 6
Load-bearing timber elements	Type 7
Fire separating assemblies with no load-bearing requirements	Type 8
Technical services assemblies in buildings	Type 9
Fire protective uses not covered by types 1-9	Type 10

Table 3 shows the possible intended uses of the boards. Not all of these have been assessed in the framework of this ETA with regard to fire resistance performance. At present, the ETA covers the use of the boards as shown in table A.2.1.1 (see Annex II of the ETA).

In the future, as more fire resistance tests are performed, the ETA scope will be extended to include all the uses listed in Table 3. For each fire resistance test, a new chapter will be added to the annex II of the ETA.

NOTE: In accordance with EAD 350142-00-1106, until the withdrawal of relevant national test and classification standards, CE marking will cover a limited number of assemblies subjected to fire resistance assessment.

2.3 Working life/Durability

The provisions made in this European Technical Assessment are based on an assumed intended working life of 25 years. This declaration is based on the assessments presented in sections 3.4 and 3.5 of this ETA.

Indications given regarding the working life cannot be interpreted as a guarantee given by the producer or the UBAtc but are to be regarded only as a means for choosing the appropriate product(s) in relation to the expected economically reasonable working life of the construction works.

2.4 Assumptions under which the product was assessed

2.4.1 Manufacturing directives

PROMATECT®-LT in manufactured at the ETEX Production Plant No.°1 (known to UBAtc). This production plant has been audited. The production process and the internal production control procedures of PROMATECT®-LT are organised and documented as required according to the section 3 of the EAD.

2.4.2 Installation directives

Installation instructions provide in the technical documentation of the manufacturer shall be respected, as well as the assembly descriptions in Annex II of this ETA.

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

3.1 Reaction to fire classification

PROMATECT®-LT boards in relation to their reaction to fire behaviour are classified as **A1 / $A1_{fl}$ / $A1_{L}$** according to EN 13501-1.

3.2 Resistance to fire

Ventilation and smoke extracting ducts assemblies (Intended use Type 9) incorporating PROMATECT®-LT boards have a resistance to fire classification according to EN 13501-2, EN 13501-3 and EN 13501-4 as presented in Annex II of this ETA.

The tested assemblies, as presented in Annex II of this ETA, have a fire resistance classification of respectively

The tested assemblies, as presented in Annex II of this ETA, have a fire resistance classification of respectively:

- Ventilation ducts
  EI 120 (v_e-h_o-i ↔ o) S for 40 mm boards

- Smoke extraction ducts
  EI 120 (v_e-h_o) S1500multi for 40 mm boards

The assemblies incorporating PROMATECT®-LT boards are presented in Annex 2 of this ETA.

NOTE: This ETA covers a limited number of assemblies subjected to fire resistance assessment. As time progresses, the performance declaration for fire resistance covered by CE marking should gradually be enlarged by the ETA-holder and incorporated in this ETA by amendment or revision. In the meantime, and taking into account the transitional arrangements for test and classification standards and the corresponding national legislation, the ETA-holder should be permitted to maintain and be able to use - on a national basis - his portfolio of test data for this characteristic, based on relevant national standards, next to the performance declaration covered by the CE marking based on this ETA.

3.3 Content, emission and/or release of dangerous substance

No performance is assessed.

3.4 Extended durability assessment

3.4.1 Resistance to deterioration caused by water

No performance is assessed.

3.4.2 Resistance to soak/dry

No performance is assessed.

3.4.3 Resistance to freeze/thaw

The PROMATECT®-LT boards are resisting to freeze /thaw.

3.4.4 Resistance to heat/rain

No performance is assessed.

3.5 Basic durability assessment

3.5.1 Flexural strength

In accordance with EN 12467, the PROMATECT®-LT boards have an average flexural strength (MOR) of 1,5 MPa.

This value is a guidance value, and does not reflect a statistical evaluation, nor a minimum guaranteed value. This value is not intended to be used as a calculation value as basis for structural design. The PROMATECT®-LT boards have sufficient strength to support their own mass. The PROMATECT®-LT boards are not intended to support additional loads.

3.5.2 Dimensional stability

The PROMATECT®-LT boards, tested in accordance with EN 318, are dimensionally stable.

3.5.3 Tensile strength perpendicular to the plane of the board

In accordance with EN 319, the PROMATECT®-LT boards have an average tensile strength perpendicular of 0,42 MPa.

This value is a guidance value, and does not reflect a statistical evaluation, nor a minimum guaranteed value. This value is not intended to be used as a calculation value as basis for structural design

3.5.4 Tensile strength parallel with the plane of the board

In accordance with EN 789, the PROMATECT®-LT boards have an average tensile strength parallel of 1,10 MPa.

This value is a guidance value, and does not reflect a statistical evaluation, nor a minimum guaranteed value. This value is not intended to be used as a calculation value as basis for structural design

3.5.5 Compressive strength of the board

In accordance with EN 789, the PROMATECT®-LT boards have an average tensile strength parallel of 4,25 MPa.

This value is a guidance value, and does not reflect a statistical evaluation, nor a minimum guaranteed value. This value is not intended to be used as a calculation value as basis for structural design

3.6 Adhesion of finishings

No performance is assessed.

3.7 Water permeability

No performance is assessed.

3.8 Thermal resistance

No performance is assessed.

3.9 Water vapour transmission coefficient

No performance is assessed.

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with Regulation (EU) N° 3110/2024, Article 94, Regulation (EU) N° 305/2011 is repealed, but references to the repealed Regulation shall be construed as references to the Regulation.

In accordance with Regulation (EU) N° 305/2011, Article 65, Directive 89/106/EEC is repealed, but references to the repealed Directive shall be construed as references to the Regulation.

For the products covered by EAD 350142-00-1106 the applicable European legal act is European Commission Decision 1999/454/EC of 22 June 1999 [3].

The system of assessment and verification of constancy of performance, specified in the European Commission Decision 1999/454/EC, as amended, is specified in the following Table 4.

Table 4 – System of assessment and verification of constancy of performance applicable to PROMATECT®-LT

Product(s)	Intended use(s)	Level(s) or class(es) (resistance to fire)	Assessment and verification of constancy of performance system(s)*
Fire Protective Products	For fire compart-mentation and/or fire protection or fire performance	Any	1

* See Annex V to Regulation (EU) N° 305/2011

[3] OJEU, L 178/52 of 1999/07/14, p.3

In addition, according to the European Commission Decision 1999/454/EC, as amended, the systems of assessment and verification of constancy of performance specified in Table 5 apply to fire protective products with regard to reaction to fire.

Table 5 – Systems of assessment and verification of constancy of performance with respect to the reaction to fire

Product(s)	Intended use(s)	Level(s) or class(es) (reaction to fire)	Assessment and verification of constancy of performance system(s)[a]
Fire Protective Products	For uses subject to regulations on reaction to fire	(A1, A2, B, C)*	1
		(A1, A2, B, C)**, D, E, F	3
		(A1 to F)*** , NPD****	4

[a] Systems 1, 3 and 4 : See Regulation (EU) N° 305/2011, Annex V

* Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material)

** Products/materials not covered by footnote (*)

*** Products/materials that do not require to be tested for reaction to fire (e.g., products/materials of class A1 according to Commission Decision 96/603/EC[4], as amended)

**** 'No Performance Determined' in accordance with Regulation (EU) N° 305/2011, Article 6(f)

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

5.1 Tasks for the ETA-holder

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 ETA.

The manufacturer may only use constituent materials stated in the technical documentation of this ETA.

The factory production control shall be in accordance with the "Control Plan" relating to the ETA which is part of the technical documentation of this ETA. The "Control Plan" is laid down in the context of the factory production control system operated by the manufacturer and deposited at the UBAtc and shall be in agreement with the provisions given in the EAD.

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

5.2 Tasks of notified bodies

The notified body (bodies) shall perform the tasks specified in Regulation (EU) N° 305/2011, Annex V, clause 1.2 (b).

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 (reports).

In cases where the provisions of the ETA and its "Control Plan" are no longer fulfilled the notified body shall inform the UBAtc without delay.

[4] OJEU L267 of 1996/10/19

UBAtc asbl is a non-profit organization according to Belgian law. It is a Technical Assessment Body notified by the Belgian notifying authority, the Federal Public Services Economy, SMEs, Self-Employed and Energy, on 17 July 2013 in the framework of Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC. As a transitional provision this notification shall be deemed to apply to the Regulation (EU) No 2024/3110 of the European Parliament and of the Council of 27 November 2024 laying down harmonised conditions for the marketing of construction products and repealing Regulation (EU) No 305/2011.

UBAtc asbl is member of the European Organisation for Technical Assessment, EOTA (www.eota.eu).

This European Technical Assessment has been issued by UBAtc asbl, in Sint-Stevens-Woluwe, on the basis of the technical work carried out by the Assessment Operators, Buildwise and SECO Belgium.

On behalf of UBAtc asbl,

Bart De Pauw,
General manager

On behalf of the Assessment Operator,
Buildwise and SECO Belgium, responsible for
the technical content of the ETA,

Olivier Vandooren,
CEO Buildwise

Bernard Heiderscheidt,
CEO SECO Belgium

The most recent version of this European Technical Assessment may be consulted on the UBAtc website (www.butgb-ubatc.be).

Annex I: Reference documents

Reference number : EAD 350142-00-1106

Document title : Fire protective products - Fire protective board, slab and mat products and kits.

Reference number : EN 13501-1:2018

Document title : Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests

Reference number : EN 13501-2:2023

Document title : Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services

Reference number : EN 13501-3:2005

Document title : Fire classification of construction products and building elements - Part 3: Classification using data from fire resistance tests on products and elements used in building service installations: fire resisting ducts and fire dampers

Reference number : EN 13501-4:2016

Document title : Fire classification of construction products and building elements - Part 4: Classification using data from fire resistance tests on components of smoke control systems

Reference number : EN 1366-1:2020

Document title : Fire resistance tests for service installations – Part 1: Ducts

Reference number : EN 12467: 2012+A2:2018

Document title : Fibre-cement flat sheets - Product specification and test methods

Reference number : EN 318:2002

Document title : Wood based panels - Determination of dimensional changes associated with changes in relative humidity

Reference number : EN 789:2004

Document title : Timber structures - Test methods - Determination of mechanical properties of wood based panels

Annex II : Fire resistance performances and assembly methods for uses of boards covered by this ETA

Annex II.1 Overview of fire resistance performances for PROMATECT®-LT assemblies

The fire protective assemblies in Table Annex II.1.1 have been assessed within the framework of this ETA. Assemblies installed according to the provisions given in this annex are covered by this ETA.

Table Annex II.1.1

Assemblies assessed within the framework of this ETA	Classification according to EN 13501-2/3	Test Standard	Intended use category according to EAD 350142-00-1106	Installation details	Date of addition to this ETA
Horizontal and vertical ventilation ducts, composed of PROMATECT®LT (thickness 40 mm) fire protective board	EI 120 (v_e-h_o, i ↔ o) S	EN 1366-1	Type 9	Annex II.2	28-01-2026
Horizontal and vertical "multi" smoke extraction ducts, composed of PROMATECT®- LT (thickness 40 mm) fire protective board	EI 120 (v_e-h_o) S1500 multi	EN 1366-8	Type 9	Annex II.3	28-01-2026

Annex II.2 Specification of a fire-resistant ventilation duct called PROMADUCT® (intended use type 9), composed of PROMATECT®-LT fire protective board (thickness 40 mm)

Annex II.2.1 Date of addition to this ETA

This annex was added to ETA 25/1005 on 28-01-2026. This assembly was not covered by this ETA prior to the addition of this annex.

Annex II.2.2 Classification

The assembly described in this Annex has been tested according to EN 1366-1 and **classified EI 120 (v_e-h_o-i↔o) S** in accordance with EN 13501-3.

Annex II.2.3 Installation requirements

Installation requirements in paragraph 2.4.2 of this ETA and this Annex shall be taken into account.

Annex II.2.4 Type and function

The classified ventilation duct system – built from PROMATECT®-LT boards – is defined as fire resisting ducts for general (comfort) ventilation. The function of those ducts is ventilation of rooms (supply of fresh air and removal of contaminated air) meeting at the same time the criteria of integrity and/or insulation and/or smoke leakage when passing through the fire zones, which they do not serve. The classified ventilation ducts fulfil mentioned criteria with no need to be fitted with fire dampers at points where ductwork penetrates fire separating elements.

Annex II.2.5 Description of the PROMADUCT®

This ventilation duct system is commercialized as the PROMADUCT®. Only the PROMATECT®-LT boards shall be CE-marked referring on this ETA. Other ancillary components of PROMADUCT® shall not be CE-marked based on this ETA.

This classification covers rectangular, self-supporting ventilation ducts made of fire protection boards. The classification covers following groups of systems:

- horizontal and vertical ducts with maximum cross-section of 1250 mm x 1000 mm made in four-sided configuration;
- horizontal and vertical ducts – built with the covered joint installation method – with width from 1251 mm to 2420 mm, maximum height of 1000 mm and cross-sectional area not higher than 2,178 m², made in four-sided configuration;
- horizontal and vertical ducts – built with the staggered joint installation method – with width from 1251 mm to 2420 mm, maximum height of 1500 mm, made in four-sided configuration;

The self-supporting ventilation ducts are constructed using the following set of products:

- fire protection calcium silicate boards PROMATECT®-LT with properties:
  - thickness: 40 mm,
  - density (23 °C and 50% RH): 650 kg/m³ ± 15%,
  - standard dimensions: 1200 mm x 2500 mm;
- fire protection calcium silicate boards PROMATECT®-H with properties:
  - thickness: 10 mm,
  - density: 870 kg/m³ ± 15%,
  - standard dimensions: 1250 mm x 2500 mm or 1250 mm x 3000 mm;
- steel fasteners: staples, screws, nails;
- glue Promat®-K84 or PROMACOL®-S used to seal all joints of fire resistant boards;
- steel threaded rods, steel support beams (profiles) used to provide suspensions and supporting constructions for ventilation ducts;
- fire protection polyurethane foam PROMAFOAM®-C used to protect staggered joint building method vertical duct penetration points where ducts pass through separating elements;
- fire protection sealant PROMASEAL®-A used to seal penetration points where threaded rod pass through calcium silicate boards;
- mineral wool with minimum density of 35 kg/m³ used to seal penetration points where ducts pass through separating elements

Annex II.2.6 Insulation

None.

Annex II.2.7 Joints

Annex II.2.7.1 Board joints

All internal and external joints are filled and finished with PROMAT® K84 or PROMACOL®-S glue as shown in the details of installation method descriptions. The filled joints are the result of application of glue when forming the duct structure.

Specifications for the components are given in Table Annex II.2.7.1.1.

Table Annex II.2.7.1.1

Element	Identification	Characteristics	Mounting and fixing
Glue	PROMAT® K84 glue	Viscous glue based on sodium silicate with addition of inorganic charges.	The glue is applied with a spatula. The joints are completely filled up according to the installation instructions of the manufacturer.
Glue	PROMACOL®-S glue	Silicate-based adhesive used in fire protection systems.	The glue is applied with a spatula. The joints are completely filled up according to the installation instructions of the manufacturer.

Annex II.2.7.2 Covered joint method

The self-supporting ventilation ducts have a box-like construction. The duct walls are made of PROMATECT®-LT boards 40 mm. The boards are fixed in corners with screws/nails at spacing not longer than 150 mm or staples at spacing not longer than 120 mm.

Transverse joints of boards are covered from the external side with strips of PROMATECT®-H boards 10 mm having a minimum width of 100 mm. As an option it is possible to protect transverse joints of ducts with cover strips made of PROMATECT®-LT boards having minimum width of 100 mm and the same thickness as a self-supporting duct wall (40 mm).

All joints of fire protection boards (longitudinal and transverse) are sealed with Promat®K84 glue. or PROMACOL®S Requirements concerning the dimensions of staples, nails and screws used to connect boards are shown in the Table Annex II.2.7.11.1.

Annex II.2.7.3 Internal stiffeners

In case the width of the ventilation ducts is from 1251 mm to 2420 mm, the additional internal stiffeners (stiffeners) are used, which are made of PROMATECT®-LT boards with the same height as a duct and with cross-section not smaller than 300 x d mm, where d is the duct wall thickness (40 mm). The distance between the stiffeners is not longer than 300 mm. The method of duct strengthening in case the duct width is bigger than 1250 mm is presented in the figures in Annex II.2.8 Fig. 2

Annex II.2.7.4 Suspension of the ducts

Horizontal ventilation ducts are suspended to floors using suspension devices consisting of steel supporting beams, steel threaded rods with nuts and washers minimum M8 and steel expansion anchors. The method of suspending ducts to floors is presented in the figures in Annex II.2.8 Fig. 8.

Suspension devices are sized such that the calculated tensile stresses in all vertically orientated components (steel rods, anchors) do not exceed the value of 6 N/mm².

The maximum distance between suspension devices is 1200 mm.

The maximum distance between the suspension device and the closest duct section joint is 300 mm. Components of suspension devices are not required to be protected against fire.

Steel profiles should be selected based on static calculations depending on the dimensions and weight of the duct. List of sample steel supporting beams and their equivalents is provided below (Table Annex II.2.7.12.1).

In case the width of horizontal ducts is from 2001 mm to 2420 mm and the cross-sectional area is not higher than 2,178 m², an additional threaded rod is used passing through the duct at half the distance between the stiffeners. The penetration points of the rods through PROMATECT®-LT boards are sealed with fire protection sealant PROMASEAL®-A and strengthened using blocks of PROMATECT®-LT boards with dimensions of 100x100x40 mm. The method of suspending ducts using rods passing through their centers is presented in Fig. 10 ÷ 12 in Annex II.2.8. The additional threaded rod is not used for vertical ducts.

For vertical ducts, where the distance between floors is longer than 5 m, additional supporting/fixing constructions are used in the form of steel profiles, console brackets and steel anchors. All construction elements should be selected based on static calculations depending on the dimensions and weight of the duct, providing that the distance between supporting construction does not exceed 5,0 m. The example method of supporting the vertical duct is presented in Fig. 6 in Annex II.2.8.

Annex II.2.7.5 Penetration seals

Penetrations of ventilation PROMADUCT®-LT ducts through structural separating elements (walls and floors) are additionally protected by means of strips of PROMATECT®-LT boards with minimum cross-section dimensions of 100 mm x 40 mm, fixed around the duct on both sides of the separation. The gap between duct walls and the edge of an opening in a wall/floor is tightly filled with mineral wool with minimum density of 35 kg/m^3. The installation method of the fire protection system provided for penetrations of the classified ventilation ducts through rigid partitions is presented in Fig. 13 ÷ 15 in Annex II.2.8.

Annex II.2.7.6 Access panel

The classified ventilation ducts can be equipped with access panels with maximum internal dimensions of 600 mm x 600 mm. They are installed in openings located in any side of the duct (horizontal or vertical). The frame of the access panel is made of PROMATECT®-H board 10 mm thick with maximum external dimensions of 760 mm x 760 mm. It is fixed to the duct wall by steel staples 35/11,1/1,57x1,40 mm and sealed with Promat®-K84 or PROMACOL®-S glue. The movable part of the access panel consists of two PROMATECT®-LT boards 40 mm thick with maximum dimensions of 596 mm x 596 mm (internal plate) and 760 mm x 760 mm (external plate), fixed to each other by steel staples 75/11,4/1,88x1,70 mm. The movable part is attached to the duct using steel screws 4,2 x 70 mm. The inner edges of the access panel opening are sealed with fire protection sealant PROMASEAL®-A. The construction of access panels is presented in Fig. 16 in Annex II.2.8.

Annex II.2.7.7 Staggered joint method

Each duct is constructed from four PROMATECT®-LT boards, 40 mm thick, used to form continuous horizontal or vertical ventilation ducts. The internal cross-sectional dimensions can range from 0 mm x 0 mm to 2420 mm x 1500 mm.

The boards are juxtaposed with offset joints (600 mm from one side to another) and have straight edges without rebates. Maximum board lengths vary by duct size:

- Up to 1800 mm for ducts < 1000 mm x 1250 mm (W x H)
- Up to 1200 mm for ducts between 1000 mm x 1250 mm and 2420 mm x 1500 mm (W x H)

Assembly uses PROMACOL®-S adhesive and Ø 4.8 x 90 mm screws spaced every 150 mm, starting 75 mm from edges. Adhesive is applied to moistened surfaces prior to assembly and smoothed after installation.

Annex II.2.7.8 Internal stiffeners

- Ducts ≤ 1250 mm x 1000 mm (W x H): No internal reinforcement needed.
- Ducts > 1250 mm x 1000 mm up to 2420 mm x 1500 mm:
  - Install PROMATECT®-LT internal stiffeners (250 mm x H x 40 mm)
  - Position: 806 mm center-to-center across the width, max 600 mm apart along length
  - Fix to upper and lower plates using two Ø 4.8 x 90 mm screws

Annex II.2.7.9 Suspension of the ducts

Support channels

- Installed at each joint between horizontal panels
- Max spacing: 1200 mm center-to-center

For ducts ≤ 1250 mm x 1000 mm (W x H):

- Use either:
  - Steel angle "L profile" ≥ 40 x 40 x 4 mm
  - Perforated galvanized "C-channels" ≥ 41 x 41 x 2 mm

For ducts > 1250 mm x 1000 mm up to 2420 mm x 1500 mm:

- Use perforated galvanized "C-channels" ≥ 42 x 41 x 41 x 2 mm

Support threaded rods

- Widths ≤ 1250 mm: two M14 threaded rods placed outside the duct (W_{ext} + 150 mm)
- Widths 1251 mm to 2420 mm: two M12 threaded rods outside the duct (W_{ext} + 230 mm), fixed via MQZ-L13 (or equivalent) plate, 5 mm thick, Ø 13 mm holes

Thermal protection

- Ducts ≤ 1250 mm x 1000 mm: No protection needed
- Ducts > 1250 mm x 1000 mm:
  - Cradle enclosed in 40 mm PROMATECT®-LT boards
  - Fixed with Ø 4.2 x 75 mm screws @ 300 mm spacing
  - Joints sealed with PROMAT®K84 or PROMACOL®-S adhesive

Annex II.2.7.10 Penetration seals

Wall Penetration

- Duct runs continuously through wall
- Opening size: L+100 mm x W + 100 mm max
- Wall thickness: ≥ 150 mm
- Annular gap: 50 mm max, 15 mm min

Filling option: mineral wool (≥ 30 kg/m³) or PROMAFOAM®-C foam

Covering:
- 100 mm x 40 mm PROMATECT®-LT flange around duct on both sides
- Fix with:
  - PROMAT® K84 or PROMACOL®-S adhesive
  - Screws/anchors @ max 200 mm spacing, starting 25 mm from edge
  - Options include:
    - 5 x 100 mm screws (aerated concrete)
    - Fischer FNA II M6 x 30/50 mm (metal)
    - SPIT Tapcon 6 x 100 mm (concrete)
    - Fischer 6 x 60 mm nylon anchors

For large ducts (W > 1250 mm):
- Add horizontal counter-flange (100 mm x 40 mm PROMATECT®-LT)
- Fix to duct with Ø 4.2 x 75 mm screws @ 200 mm spacing

Slab (Floor) Penetration

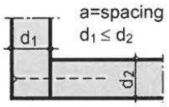
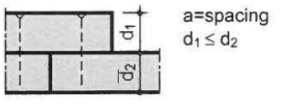
For ducts ≤ 1250 mm x 1000 mm:
- Horizontal flange (100 mm x 40 mm PROMATECT®-LT) around duct, fixed to slab
- Vertical counter-flange also 100 mm x 40 mm, fixed to duct with Ø 4.2 x 75 mm screws

For ducts > 1250 mm x 1000 mm:
- Horizontal + vertical counter-flange (100 mm x 40 mm)
- Fix horizontal flange to slab with screws or anchors at 200 mm max spacing
- Upper flange (above slab) fixed similarly to support duct weight

Duct-to-Duct Connection
- Opening cut to W x H on completed duct to receive new section
- Flange: PROMATECT®-LT, 50 mm x 40 mm
- Fix with Ø 4.2 x 75 mm screws @ 200 mm max spacing
- Apply PROMAT® K84or PROMACOL®-S adhesive at all mating joints

Annex II.2.7.11 Board fixing details

Table Annex II.2.7.11.1

Material	Board thickness D1 mm	 Corner connection		
		Screws a ≤ 150 mm	Nails a ≤ 150 mm	Steel staples a ≤ 120 mm
PROMATECT® - H	10	≥ 4,5 x 35 mm	≥ 30 mm	≥ 35 / 11,1 / 1,57 x 1,40 mm
PROMATECT® - LT	40	≥ 4,8 x 90 mm	≥ 90 mm	≥ 80 / 11,4 / 1,88 x 1,70 mm
Material	Board thickness D1 mm	 Surface connection		
		Screws a ≤ 200 mm	Nails a ≤ 200 mm	Steel staples a ≤ 150 mm
PROMATECT® - H	10	≥ 4,0 x 35 mm	≥ 35 mm	≥ 35 / 11,1 / 1,57 x 1,40 mm
PROMATECT® - LT	40	≥ 4,2 x 75 mm	≥ 70 mm	≥ 75 / 11,4 / 1,88 x 1,70 mm

Annex II.2.7.12 Hanger system details

Specifications for the components are given in Table Annex II.2.7.11.1.

Steel profiles should be selected based on static calculations depending on the dimensions and weight of the duct. List of sample steel supporting beams and their equivalents is provided below in Table Annex II.2.7.12.1

Table Annex II.2.7.12.1

	35/42/1,5	41/41/2	41/41/2,5	41/41/3	41D	41/52/2	41/72/2
Fischer		FUS 41/2	FUS 41/2,5		FUS 41D/2,5		FUS 62D/2,5
Würth			Varifix 41/41/2,5	Varifix 41/62/3			Varifix 41/82/3
Mefa	C 35/42/1,5	C 45/45/2,5	C 45/45/3	C 45/45/3			
Sikla			MS 41/41/2,5				
Mupro	MPC 38/40/2	MPC 39/52/2,5 MPR 41/41/2	MPR 41/41/2,5	MPC 40/80/3		MPR 41/62/2,5	
Hilti		MQ 41/2	MQ 41/2	MQ 41/3	MQ 41D	MQ 52	MQ 72
L-shape steel bars	L 25/25/3	L 40/40/4	L 40/40/4	L 50/50/3	L 60/60/4	L 70/70/5	L 70/70/7
	L 30/30/3	L 50/50/3	L 50/50/3	L 50/50/5	L 60/60/6	L 70/70/7	L 80/80/8
	L 35/35/3,5	L 50/50/5	L 50/50/5				

Table Annex II.2.7.12.2

Element	Identification	Characteristics	Mounting and fixing
L-channels	Galvanized steel channels according to EN 14195 or equivalent	Dimensions: ≥ 25/25/3 (mm) Length: corresponding with duct dimensions	Installed at ≤ 1200 mm centres
C-channels	Galvanized steel channels according to table Annex II.2.7.12.1 details	Dimensions: ≥ 35/40/1 (mm) Length: corresponding with duct dimensions	Installed at ≤ 1200 mm centres
Rods	Galvanized steel rods grade 4.8	≥ M8	Installed at ≤ 1200 mm centres. The distance between the steel rods and the duct wall is ≤ 50 mm.

Table Annex II.2.7.12.3

Element	Identification	Characteristics	Mounting and fixing
Board fillets	Fire Protective board PROMATECT®-LT according to the ETA for this product	Thickness: ≥ 40 mm	Fixed along the entire perimeter of the duct
		Width: ≥ 100 mm	Fixed horizontally under the floor with anchors
Anchors	Galvanized steel anchors or screws	≥ M6 or 5x100 mm	Used for fixing of the board fillets (≥ 1 per fillet)
Screws	Galvanized steel screws according to EN 14566:2008+A1:2009 or equivalent	≥ Ø 4,8 x 90 mm	Used for fixing of the board fillets at ≤ 150 mm centers
Sealing material	Mineral wool according to EN 13162	Thickness and width to fill the gap Density: ≥ 35 kg/m³	Cut to size and installed between the penetration floor and the duct

Covered Joint method

Key to Fig. 1 ÷ 16

1) Board PROMATECT®-LT, thickness 40 mm

2) Strip of PROMATECT®-H board, thickness 10 mm or strip of PROMATECT®-LT board, thickness 40 mm, width minimum 100 mm

3) Steel profile, dimensions according to static calculations

4) Suspension device, threaded rod

5) Steel staples, nails or screws, acc. to Table Annex II.2.7.11.1

6) Glue PROMAT®-K84 or PROMACOL®-S

7) Strip of PROMATECT®-LT board, thickness 40 mm, width minimum 100 mm

8) Mineral wool, density minimum 35 kg/m³

9) Rigid wall

10) Rigid floor

11) Steel anchor, minimum M6

12) PROMASEAL®-A fire-protection sealant

13) Block of PROMATECT®-LT board, dimensions 100 mm x 100 mm x 40 mm

14) Strip of PROMATECT®-H board, thickness 10 mm, width minimum 80 mm

15) Steel screws

16) Fire damper/grill

17) Steel screws minimum 5x100 mm

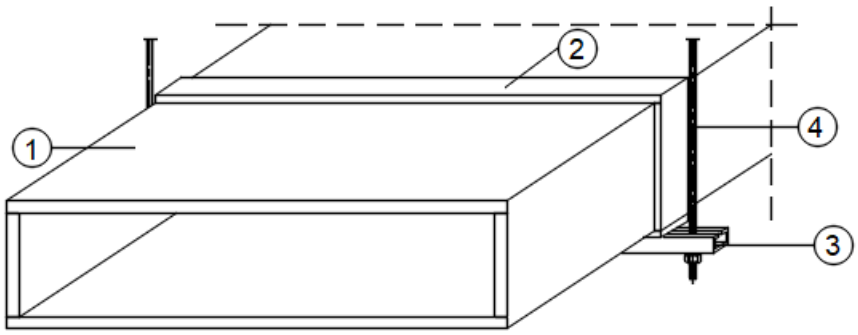


Fig. 1 – Self-supporting horizontal ventilation ducts PROMADUCT®-LT with maximum cross-section dimensions of 1250 mm x 1000 mm

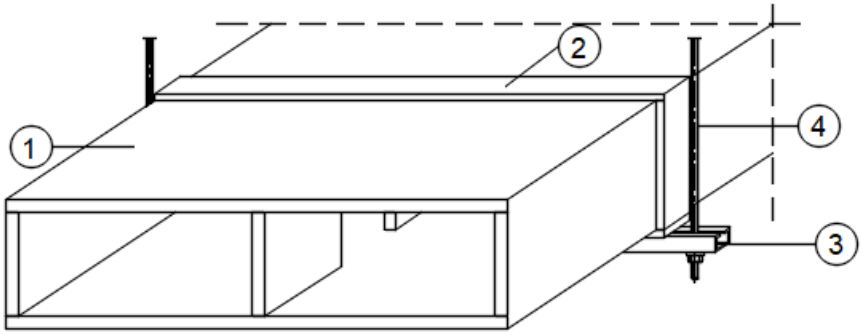


Fig. 2 – Self-supporting horizontal ventilation ducts PROMADUCT®-LT with maximum cross-sectional area of 2,178 m², maximum height of 1000 mm and width from 1251 mm to 2000 mm

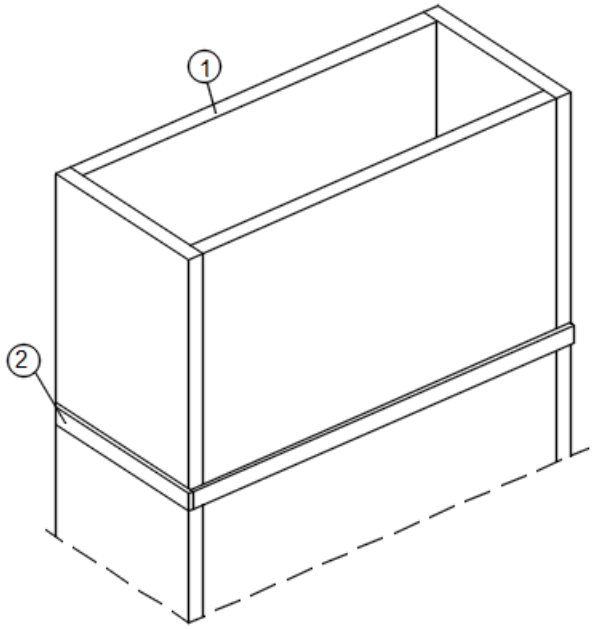


Fig. 3 – Self-supporting vertical ventilation ducts PROMADUCT®-LT with maximum cross-section dimensions of 1250 mm x 1000 mm

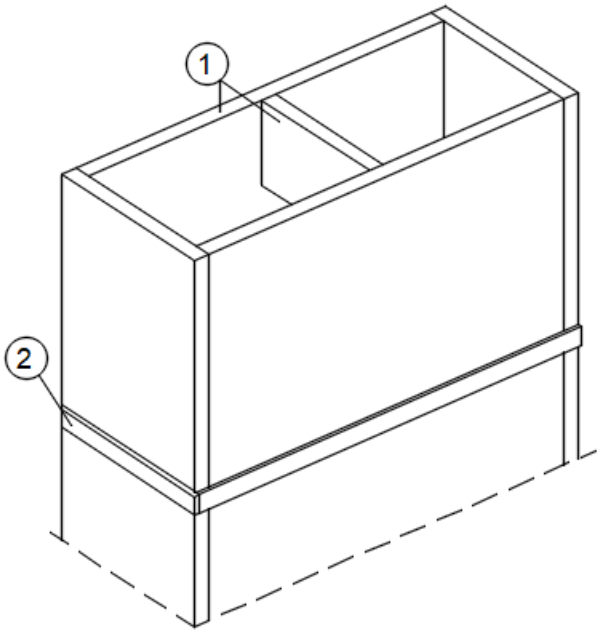


Fig. 4 – Self-supporting vertical ventilation ducts PROMADUCT®-LT with maximum cross-sectional area of 2,178 m², maximum height of 1000 mm and width from 1251 mm to 2420 mm

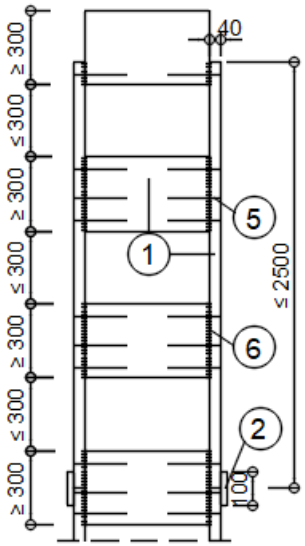


Fig. 5 – Self-supporting vertical ventilation ducts PROMADUCT®-LT with maximum cross-sectional area of 2,178 m², maximum height of 1000 mm and width from 1251 mm to 2420 mm – longitudinal section

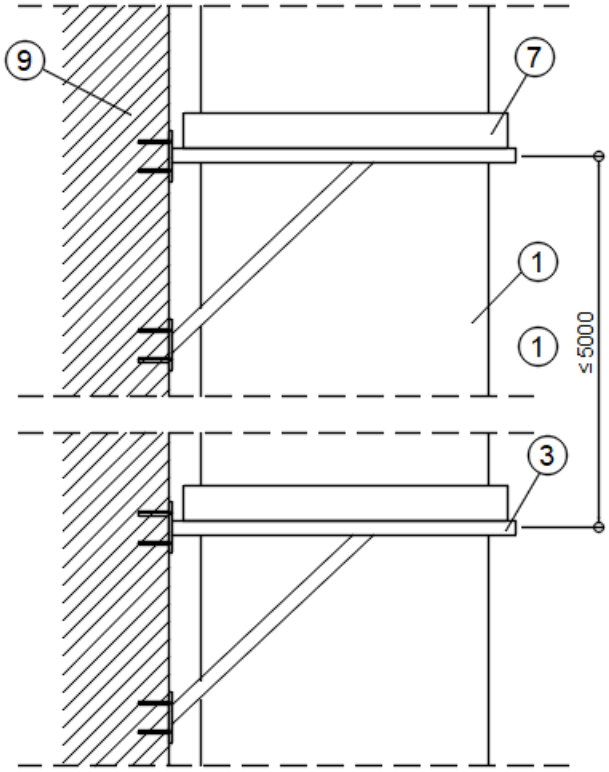


Fig. 6 – Self-supporting vertical ventilation ducts PROMADUCT®-LT – the method of supporting in the case the distance between floors is longer than 5,0 m

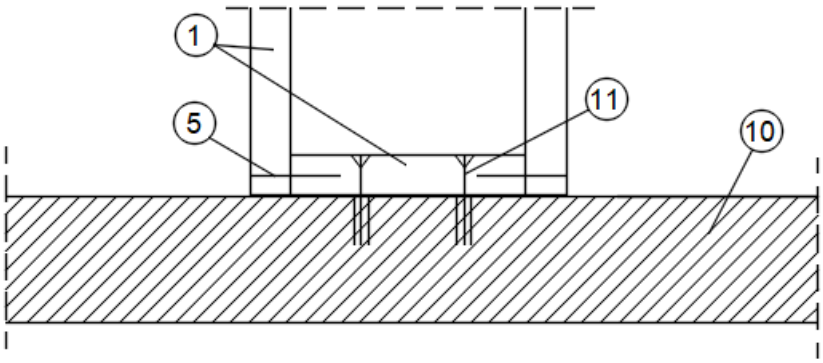


Fig. 7 – Self-supporting vertical ventilation ducts PROMADUCT®-LT – the beginning of the ductwork

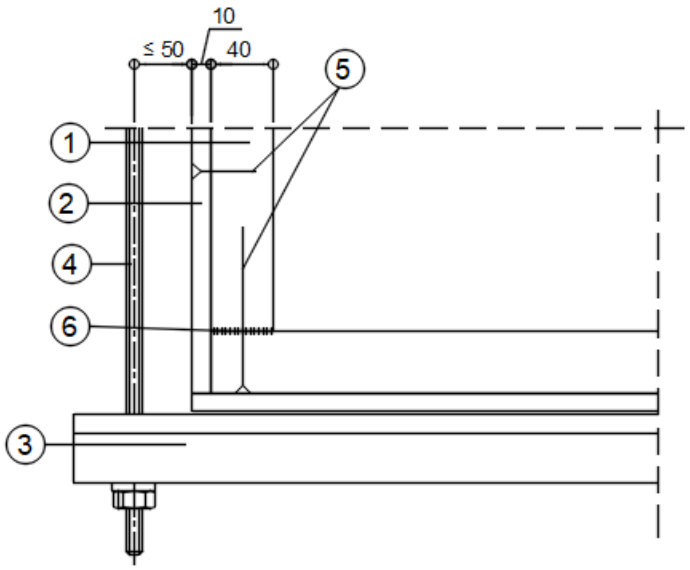
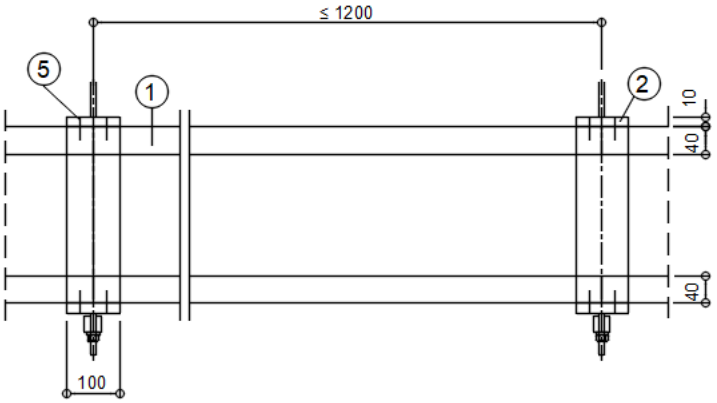


Fig. 8 – Self-supporting horizontal ventilation ducts PROMADUCT®-LT – the method of suspending to floors



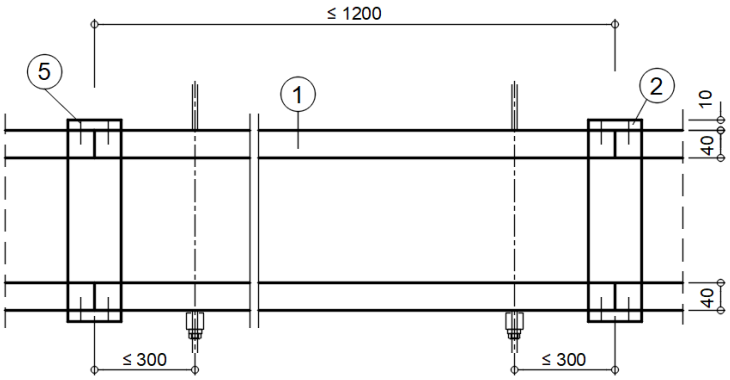
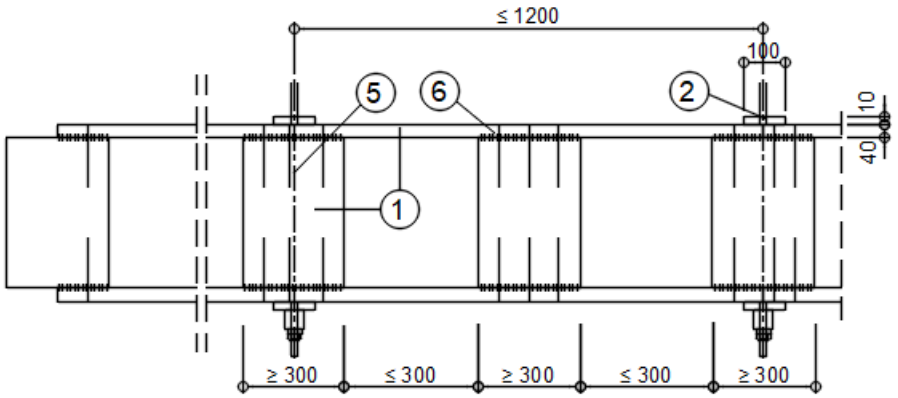


Fig. 9 – Self-supporting horizontal ventilation ducts PROMADUCT®-LT – longitudinal section



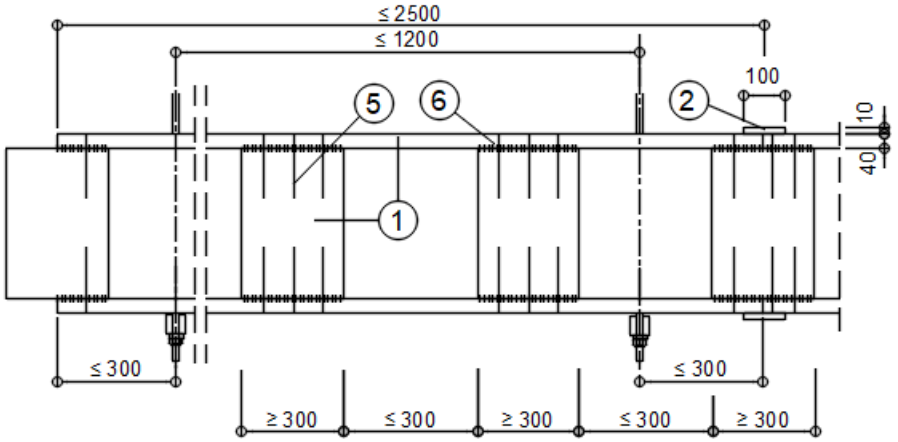


Fig. 10 – Self-supporting horizontal ventilation ducts PROMADUCT®-LT with maximum cross-sectional area of 2,178 m², maximum height of 1000 mm and width from 1251 mm to 2000 mm – longitudinal section

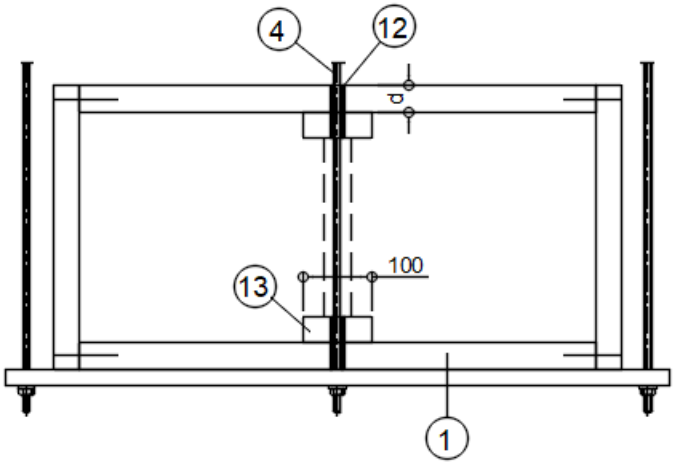


Fig 11– Self-supporting horizontal ventilation ducts PROMADUCT®-LT with maximum cross-sectional area of 2,178 m², maximum height of 1000 mm and width from 2001 mm to 2420 mm – the method of suspending to floors

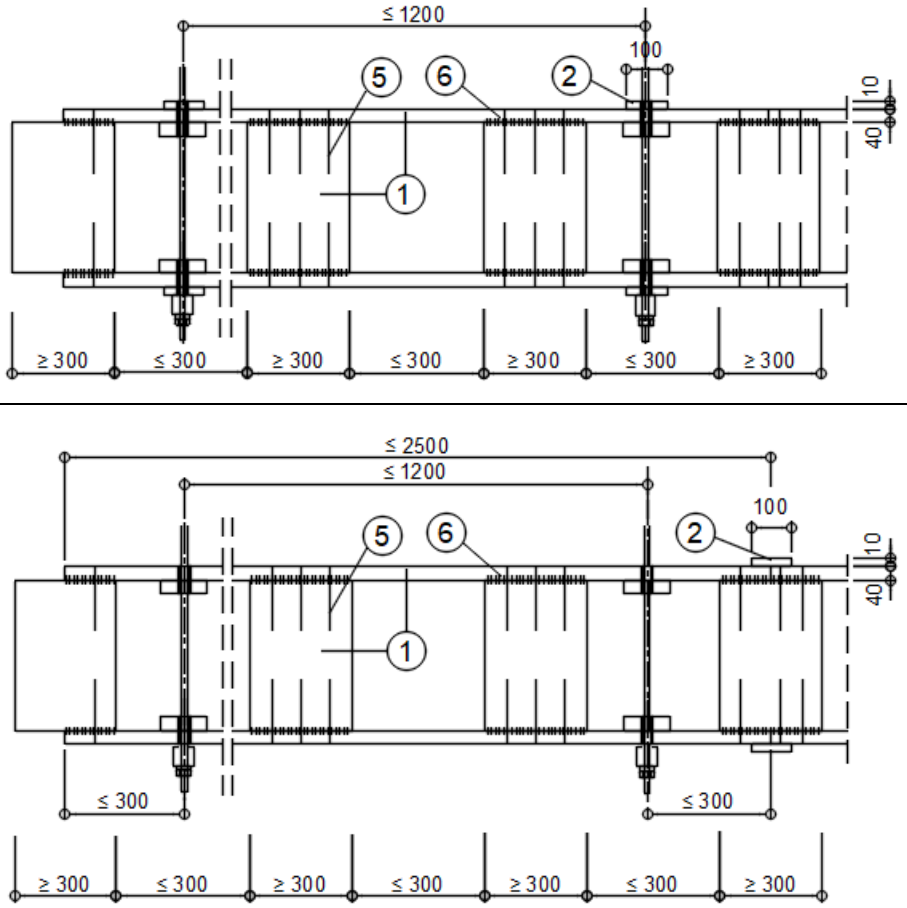


Fig. 12 – Self-supporting horizontal ventilation ducts PROMADUCT®-LT with maximum cross-sectional area of 2,178 m², maximum height of 1000 mm and width from 2001 mm to 2420 mm – longitudinal section

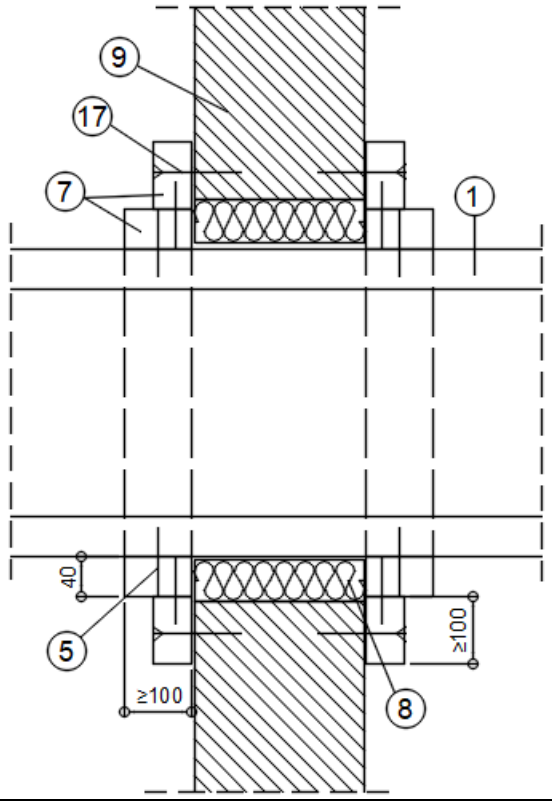


Fig. 13 – Self-supporting horizontal ventilation ducts PROMADUCT®-LT – the penetration point through the rigid wall

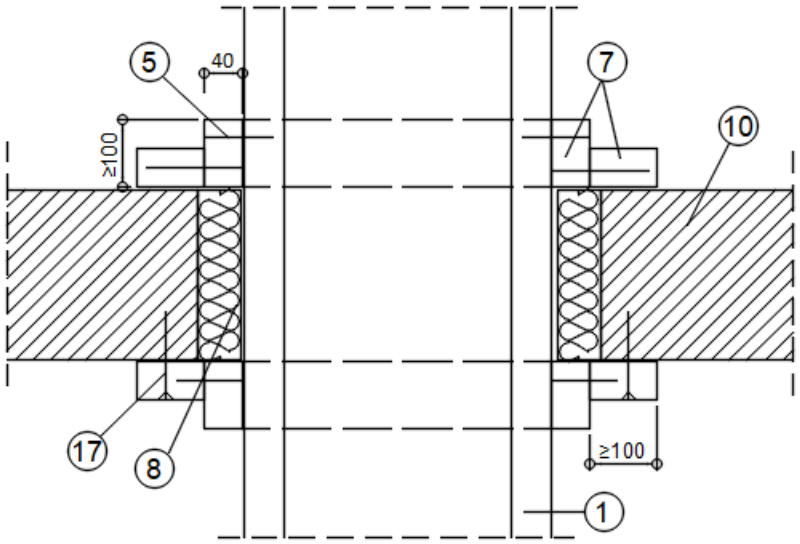


Fig. 14 – Self-supporting vertical ventilation ducts PROMADUCT®-LT – the penetration point through the floor

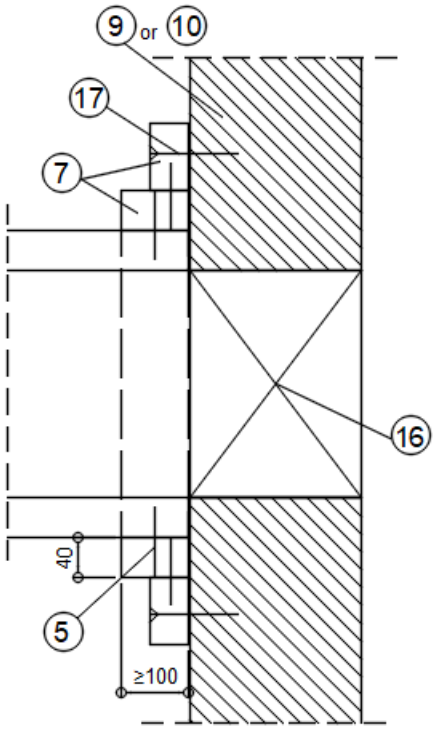


Fig. 15 – Self-supporting rectangular ventilation ducts PROMADUCT®-LT – the one-sided connection

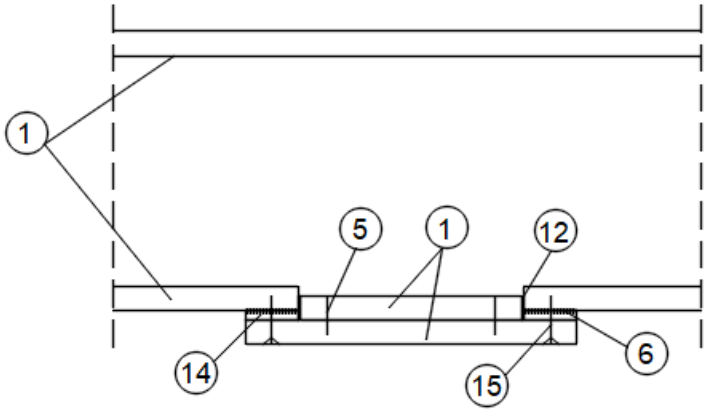


Fig. 16 – Self-supporting vertical ventilation ducts PROMADUCT®-LT – the access panel - Covered Joint method

Annex II.3 Specification of a multi compartment smoke extraction duct (intended use type 9), composed of PROMATECT®-LT fire protective board (thickness 40 mm)

Annex II.3.1 Date of addition to this ETA

This annex was added to ETA 25/1005 on 28-01-2026. This assembly was not covered by this ETA prior to the addition of this annex.

Annex II.3.2 Classification

The assembly described in this Annex has been tested according to EN 1366-8 and classified **EI 120 (v_e-h_o) S1500multi** in accordance with EN 13501-4.

Annex II.3.3 Installation requirements

Installation requirements in paragraph 2.4.2 of this ETA shall be taken into account.

Annex II.3.4 Type and function

The classified product is defined as smoke extraction ducts or following the nomenclature used in the classification standard – multicompartment smoke control ducts. The function of those ducts is removal of smoke and hot gases from smoke detection zones located in different fire compartments meeting at the same time the criteria of integrity and/or insulation and/or smoke leakage specified for standard temperature-time curve. COMBI-PROMADUCT® is a design and installation approach that can be implemented with any PROMADUCT® fire-rated multi-compartment smoke extraction duct solution. It allows a single duct network to function both as a standard smoke extraction duct under normal operating conditions and, when connected to multiple smoke control dampers and activated by the building's fire safety control system, as a smoke extraction duct during fire events in line with local building regulations.

Annex II.3.5 Description of the PROMADUCT®

This smoke extraction duct system is commercialized as the COMBI-PROMADUCT®. Only the PROMATECT®-LT boards shall be CE-marked referring on this ETA. Other ancillary components of PROMADUCT® shall not be CE-marked based on this ETA.

Annex II.3.5.1 Dimensions and duct types

This classificatin covers rectangular, self-supporting multi compartment smoke extraction ducts made of fire protection boards. The classification covers following groups of systems:

- horizontal and vertical ducts with maximum cross-section of 1250 mm x 1000 mm made in four-sided configuration;
- horizontal and vertical ducts – built with the covered joint installation method – with width from 1251 mm to 2420 mm, maximum height of 1000 mm and cross-sectional area not higher than 2,178 m², made in four-sided configuration;

Annex II.3.5.2 The materials

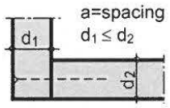
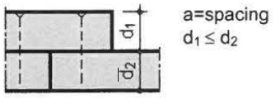
The self-supporting smoke extraction ducts are constructed using the following set of products:

- fire protection calcium silicate boards PROMATECT®-LT with properties:
  - thickness: 40 mm,
  - density: 650 kg/m³ ± 15%,
  - standard dimensions: 1200 mm x 2500 mm ;
- fire protection calcium silicate boards PROMATECT®-H with properties:
  - thickness: 10 mm,
  - density: 870 kg/m³ ± 15%,
  - standard dimensions: 1250 mm x 2500 mm or 1250 mm x 3000 mm;
- steel fasteners: staples, screws, nails;
- glue Promat®-K84 or PROMACOL®-S used to seal all joints of fire resistant boards
- steel threaded rods, steel support beams (profiles) used to provide suspensions and supporting constructions for smoke extraction ducts;
- fire protection polyurethane foam PROMAFOAM®-C used to protect staggered joint building method vertical duct penetration points where ducts pass through separating elements.
- fire protection sealant PROMASEAL®-A used to seal penetration points where threaded rod pass through calcium silicate boards;
- mineral wool with minimum density of 35 kg/m³ used to seal penetration points where ducts pass through separating elements.

Annex II.3.5.3 The composition of the ducts

The self-supporting multi compartment smoke extraction ducts have a box-like construction. The duct walls are made of PROMATECT®-LT boards 40 mm thick. The boards are fixed in corners with steel staples, screws or nails, requirements concerning the dimensions of staples, nails and screws used to connect boards are shown in the Table Annex II.3.5.3.1.

Table Annex II.3.5.3.1

Material	Board thickness D1 mm	 Corner connection		
		Screws a ≤ 150 mm	Nails a ≤ 150 mm	Steel staples a ≤ 120 mm
PROMATECT® - H	10	≥ 4,5 x 35 mm	≥ 30 mm	≥ 35 / 11,1 / 1,57 x 1,40 mm
PROMATECT® - LT	40	≥ 4,8 x 90 mm	≥ 90 mm	≥ 80 / 11,4 / 1,88 x 1,70 mm
Material	Board thickness D1 mm	 Surface connection		
		Screws a ≤ 200 mm	Nails a ≤ 200 mm	Steel staples a ≤ 150 mm
PROMATECT® - H	10	≥ 4,0 x 35 mm	≥ 35 mm	≥ 35 / 11,1 / 1,57 x 1,40 mm
PROMATECT® - LT	40	≥ 4,2 x 75 mm	≥ 70 mm	≥ 75 / 11,4 / 1,88 x 1,70 mm

Annex II.3.5.4 Joints

All internal and external joints are filled and finished with PROMAT® K84 or PROMACOL®-S glue as shown in the details of installation method descriptions. The filled joints are the result of application of glue when forming the duct structure.

Specifications for the components are given in Table Annex II.3.5.4.1.

Table Annex II.3.5.4.1

Element	Identification	Characteristics	Mounting and fixing
Glue	PROMAT® K84 glue	Viscous glue based on sodium silicate with addition of inorganic charges. It is grey or off-white in color and intumesces slightly in case of fire. The glue is supplied in canisters of 15 kg.	The glue is applied with a spatula. The joints are completely filled up according to the installation instructions of the manufacturer.
Glue	PROMACOL®-S glue	Silicate-based adhesive used in fire protection systems.	The glue is applied with a spatula. The joints are completely filled up according to the installation instructions of the manufacturer.

Annex II.3.5.5 Covered joint method

The self-supporting multi compartment smoke extraction ducts have a box-like construction. The duct walls are made of PROMATECT®-LT boards 40 mm. The boards are fixed in corners with screws/nails at spacing not longer than 150 mm or staples at spacing not longer than 120 mm.

Transverse joints of boards are covered from the external side with strips of PROMATECT®-H boards 10 mm and having minimum width of 100 mm. As an option it is possible to protect transverse joints of ducts with cover strips made of PROMATECT®-LT boards having minimum width of 100 mm and the same thickness as a self-supporting duct wall (40 mm).

All joints of fire protection boards (longitudinal and transverse) are sealed with Promat®K84 glue. Requirements concerning the dimensions of staples, nails and screws used to connect boards are shown in the Table Annex II.3.5.4.1.

Annex II.3.5.6 Internal stiffeners

In case the width of the multi compartment smoke extraction ducts is from 1251 mm to 2420 mm, the additional internal stiffeners (stiffeners) are used, which are made of PROMATECT®-LT boards with the same height as a duct and with cross-section not smaller than 300 x d mm where d is the duct wall thickness (40 mm). The distance between the stiffeners is not longer than 300 mm. The method of duct strengthening in case the duct width is bigger than 1250 mm is presented in the figures in Annex II.3.7.

Annex II.3.5.7 Suspension of the ducts

Horizontal smoke extraction ducts are suspended to floors using suspension devices consisting of steel supporting beams, steel threaded rods with nuts and washers minimum M8 and steel expansion anchors. The method of suspending ducts to floors is presented in the figures in Annex II.3.7

Suspension devices are sized such that the calculated tensile stresses in all vertically orientated components (steel rods, anchors) do not exceed the value of 6 N/mm².

The maximum distance between suspension devices is 1200 mm.

The maximum distance between the suspension device and the closest duct section joint is 300 mm. Components of suspension devices are not required to be protected against fire.

Steel profiles should be selected based on static calculations depending on the dimensions and weight of the duct. List of sample steel supporting beams and their equivalents is provided below (Table Annex II.3.5.7.2).

In case the width of horizontal ducts is from 2001 mm to 2420 mm and the cross sectional area is not higher than 2,178 m², an additional threaded rod is used passing through the duct at half the distance between the stiffeners. The penetration points of the rods through PROMATECT®-LT boards are sealed with fire protection sealant PROMASEAL®-A and strengthened using blocks of PROMATECT®-LT boards with dimensions of 100x100x40 mm. The method of suspending ducts using rods passing through their centers is presented in Fig. 10 ÷ 12 in Annex II.3.11. The additional threaded rod is not used for vertical ducts.

For vertical ducts, where the distance between floors is longer than 5 m, additional supporting/fixing constructions are used in the form of steel profiles, console brackets and steel anchors. All construction elements should be selected based on static calculations depending on the dimensions and weight of the duct providing that the distance between supporting construction does not exceed 5,0 m. The example method of supporting the vertical duct is presented in Fig. 6 in Annex II.3.11.

Table Annex II.3.5.7.1

	35/42/1,5	41/41/2	41/41/2,5	41/41/3	41D	41/52/2	41/72/2
Fischer		FUS 41/2	FUS 41/2,5		FUS 41D/2,5		FUS 62D/2,5
Würth			Varifix 41/41/2,5	Varifix 41/62/3			Varifix 41/82/3
Mefa	C 35/42/1,5	C 45/45/2,5	C 45/45/3	C 45/45/3			
Sikla			MS 41/41/2,5				
Mupro	MPC 38/40/2	MPC 39/52/2,5 MPR 41/41/2	MPR 41/41/2,5	MPC 40/80/3		MPR 41/62/2,5	
Hilti		MQ 41/2	MQ 41/2	MQ 41/3	MQ 41D	MQ 52	MQ 72
L-shape steel bars	L 25/25/3	L 40/40/4	L 40/40/4	L 50/50/3	L 60/60/4	L 70/70/5	L 70/70/7
	L 30/30/3	L 50/50/3	L 50/50/3	L 50/50/5	L 60/60/6	L 70/70/7	L 80/80/8
	L 35/35/3,5	L 50/50/5	L 50/50/5				

Table Annex II.3.5.7.2

Element	Identification	Characteristics	Mounting and fixing
L channels	Galvanized steel channels according to EN 14195 or equivalent	Dimensions: ≥ 25/25/3 (mm) Length: corresponding with duct dimensions	Installed at ≤ 1200 mm centres
C-channels	Galvanized steel channels according to table Annex 11.3.5.7.1 details	Dimensions: ≥ 35/40/1 (mm) Length: corresponding with duct dimensions	Installed at ≤ 1200 mm centres
Rods	Galvanized steel rods grade 4.8	≥ M8	Installed at ≤ 1200 mm centres. The distance between the steel rods and the duct wall is ≤ 50 mm.

Annex II.3.5.8 Penetration seals

Penetrations of smoke extraction PROMADUCT®-LT ducts through structural separating elements (walls and floors) are additionally protected by means of strips of PROMATECT®-LT boards with minimum cross-section dimensions of 100 mm x 40 mm, fixed around the duct on both sides of separation. The gap between duct walls and the edge of an opening in a wall/floor is tightly filled with mineral wool with minimum density of 35 kg/m^3. The installation method of the fire protection system provided for penetrations of the classified smoke extraction ducts through rigid partitions is presented in Fig. 13 - 14 in Annex II.3.7.

Annex II.3.5.9 Vertical ducts

For vertical ducts, where the distance between floors is longer than 5 m, additional supporting/fixing constructions are used in the form of steel bars (profiles), threaded rods and steel anchors.

Annex II.3.5.10 Access panel

The classified smoke extraction ducts can be equipped with access panels with maximum internal dimensions of 600 mm x 600 mm. They are installed in openings located in any side of the duct (horizontal or vertical). The frame of the access panel is made of PROMATECT®H board 10 mm thick with maximum external dimensions of 760 mm x 760 mm. It is fixed to the duct wall by steel staples 35/11,1/1,57x1,40 mm and sealed with Promat®-K84 or PROMACOL®-S glue. The movable part of the access panel consists of two PROMATECT®-LT boards 40 mm thick with maximum dimensions of 596 mm x 596 mm (internal plate) and 760 mm x 760 mm (external plate), fixed to each other by steel staples 75/11,4/1,88x1,70 mm. The movable part is attached to the duct using steel screws 4,2 x 70 mm. The inner edges of the access panel opening are sealed with fire protection sealant PROMASEAL®-A. The construction of access panels is presented in Fig. 16 in Annex II.3.7.

Annex II.3.5.11 Staggered joint method

Each duct is constructed from four PROMATECT®-LT boards, 40 mm thick, used to form continuous horizontal or vertical multi compartment smoke extraction ducts. The internal cross-sectional dimensions can range from 0 x 0 mm to 1250 mm x 1000 mm.

The boards are juxtaposed with offset joints (600 mm from one side to another) and have straight edges without rebates. Maximum board length is 1200 mm. Each duct section consists of four boards.

Assembly uses PROMACOL®-S adhesive and Ø 4.8 x 90 mm screws spaced every 150 mm, starting 75 mm from edges. Adhesive is applied to moistened surfaces prior to assembly and smoothed after installation.

Annex II.3.5.12 Internal stiffener

These ducts can be mounted without internal reinforcement.

Annex II.3.5.13 Suspension of the duct

Support channels
- Installed at each joint between horizontal panels
- Max spacing: 1200 mm center-to-center

For ducts ≤ 1250 mm x 1000 mm (W x H) Use either:
- Steel angle "L profile" ≥ 40 x 40 x 4 mm
- Perforated galvanized "C-channels" ≥ 41 x 41 x 2 mm

Support threaded rods
- Widths ≤ 1250 mm: two M14 threaded rods placed outside the duct (W_{ext} + 150 mm)

Thermal protection
- These duct supports do not require thermal protection.

Annex II.3.5.14 Penetration seals

Wall Penetration

- Duct runs continuously through wall
- Opening size: L+100 mm x W + 100 mm max
- Wall thickness: ≥ 150 mm
- Annular gap: 50 mm max, 15 mm min

Filling option: mineral wool (≥ 30 kg/m³) or PROMAFOAM®-C foam

Covering:
- 100 mm x 40 mm PROMATECT®-LT flange around duct on both sides
- Fix with:
  - PROMAT®K84 or PROMACOL®-S adhesive
  - Screws/anchors @ max 200 mm spacing, starting 25 mm from edge
  - Options include:
    - 5 x 100 mm screws (aerated concrete)
    - Fischer FNA II M6 x 30/50 mm (metal)
    - SPIT Tapcon 6 x 100 mm (concrete)
    - Fischer 6 x 60 mm nylon anchors

Slab (Floor) Penetration

For ducts ≤ 1250 mm x 1000 mm:
- Horizontal flange (100 mm x 40 mm PROMATECT®-LT) around duct, fixed to slab
- Vertical counter-flange also 100 mm x 40 mm, fixed to duct with Ø 4.2 x 75 mm screws

Duct-to-Duct Connection

- Opening cut to W x H on completed duct to receive new section
- Flange: PROMATECT®-LT, 50 mm x 40 mm
- Fix with Ø 4.2 x 75 mm screws @ 200 mm max spacing
- Apply PROMAT®K84 or PROMACOL®-S adhesive at all mating joints

Annex II.3.6 Field of application

Table Annex II.3.6.1

Parameter	Covered Joint method	Staggered Joint method
Board Type & Thickness	PROMATECT®-LT 40 mm	PROMATECT®-LT 40 mm
Cover strips	PROMATECT®-H 10 mm or PROMATECT®-LT 40 mm, min. width of 100 mm Required over longitudinal joints	Not required
Adhesive	Promat Glue®-K84	PROAMCOL®-S
Maximum dimensions (Width x Height)	No stiffeners: 1250 × 1000 mm With internal stiffeners (PROMATECT®-LT strips): 2420 × 1000 mm, with maximum cross-sectional area of 2,178 m²	No stiffeners: 1250 × 1000 mm
Operating pressure range	-1500Pa to +500 Pa	-1500Pa to +500 Pa
Wall/Floor penetration	Permitted through: - Concrete or aerated concrete floors ≥150 mm - Concrete walls ≥115 mm - Masonry walls ≥115 mm	Permitted through: - Concrete or aerated concrete floors ≥150 mm - Concrete walls ≥150 mm - Masonry walls ≥150 mm

Covered Joint method

Key to Fig. 1 ÷ 16

1) Board PROMATECT®-LT, thickness 40 mm

2) Strip of PROMATECT®-H board, thickness 10 mm or strip of PROMATECT®-LT board, thickness 40 mm, width minimum 100 mm

3) Steel profile, dimensions according to static calculations

4) Suspension device, threaded rod

5) Steel staples, nails or screws, acc. to Table Annex II.3.5.3.1

6) Glue PROMAT®K84 or PROMACOL®-S

7) Strip of PROMATECT®-LT board, thickness 40 mm, width minimum 100 mm

8) Mineral wool, density minimum 35 kg/m3

9) Rigid wall

10) Rigid floor

11) Steel anchor, minimum M6

12) PROMASEAL®-A fire-protection sealant

13) Block of PROMATECT®-LT board, dimensions 100 mm x 100 mm x 40 mm

14) Strip of PROMATECT®-H board, thickness 10 mm, width minimum 80 mm

15) Steel screws

16) Fire damper/grill

17) Steel screws minimum 5x100 mm

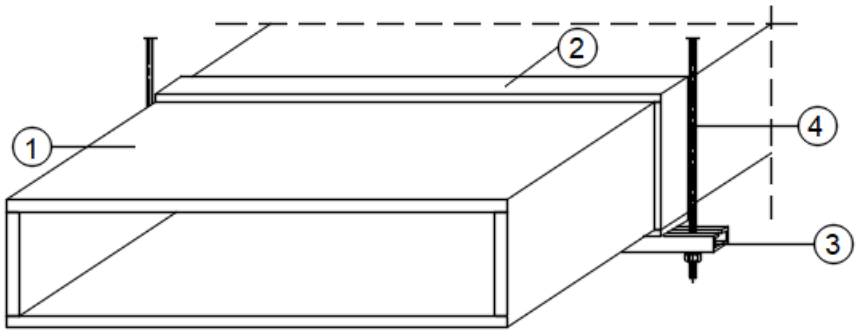


Fig. 1 – Self-supporting horizontal smoke extraction ducts PROMADUCT®-LT with maximum cross-section dimensions of 1250 mm x 1000 mm

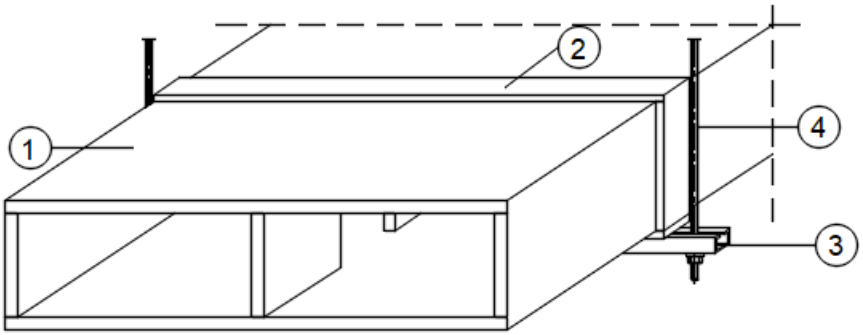


Fig. 2 – Self-supporting horizontal smoke extraction ducts PROMADUCT®-LT with maximum cross-sectional area of 2,178 m², maximum height of 1000 mm and width from 1251 mm to 2000 mm

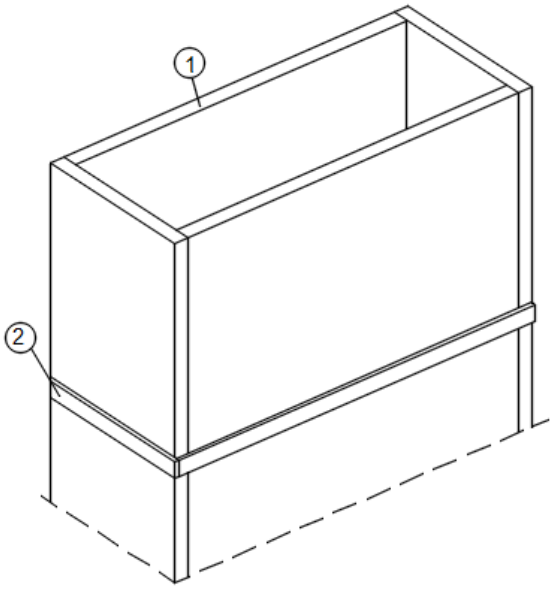


Fig. 3 – Self-supporting vertical smoke extraction ducts PROMADUCT®-LT with maximum cross-section dimensions of 1250 mm x 1000 mm

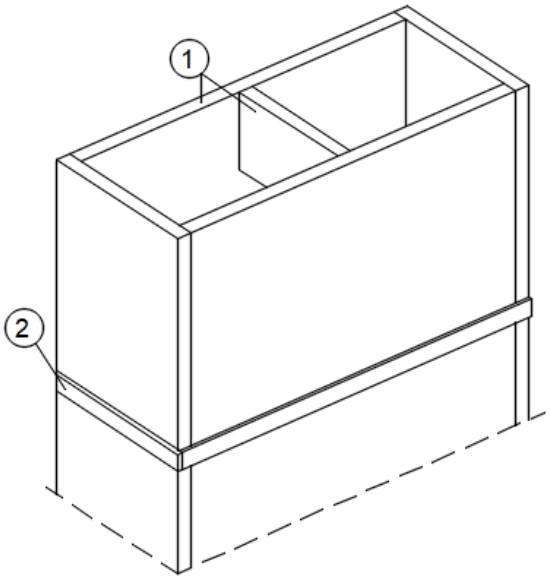


Fig. 4 – Self-supporting vertical smoke extraction ducts PROMADUCT®-LT with maximum cross-sectional area of 2,178 m², maximum height of 1000 mm and width from 1251 mm to 2420 mm

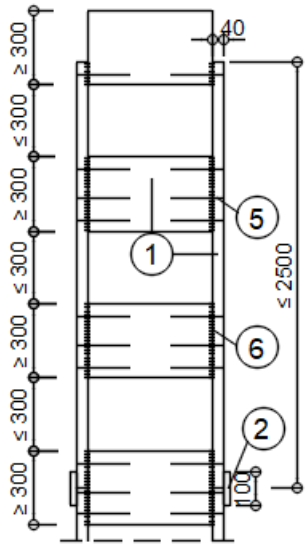


Fig. 5 – Self-supporting vertical smoke extraction ducts PROMADUCT®-LT with maximum cross-sectional area of 2,178 m², maximum height of 1000 mm and width from 1251 mm to 2420 mm – longitudinal section

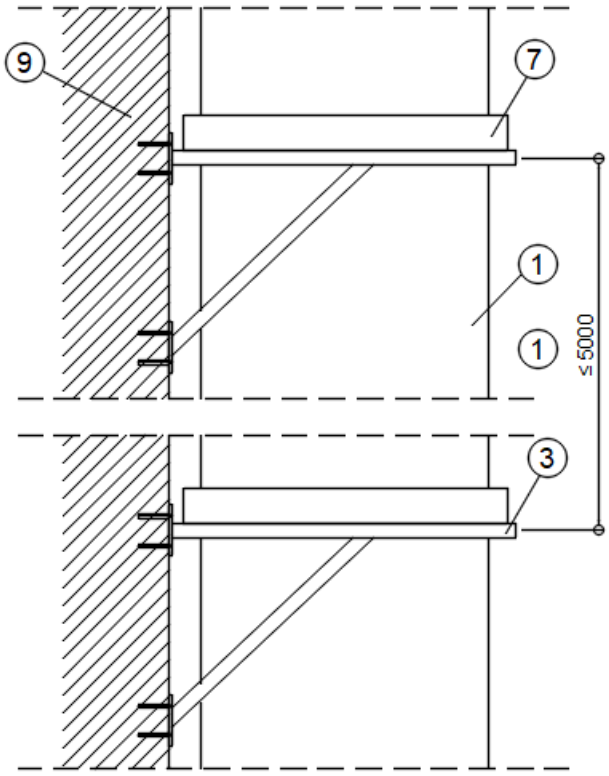


Fig. 6 – Self-supporting vertical smoke extraction ducts PROMADUCT®-LT – the method of supporting in the case the distance between floors is longer than 5,0 m

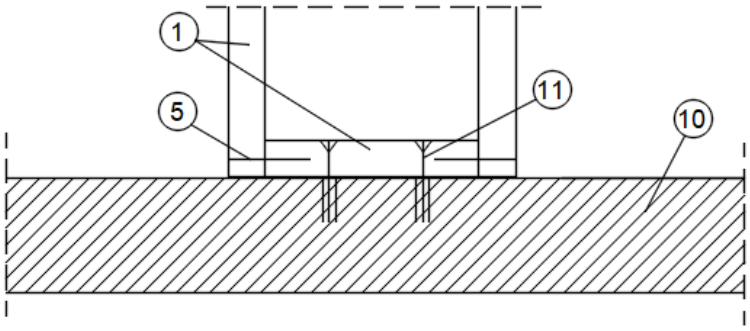


Fig. 7 – Self-supporting vertical smoke extraction ducts PROMADUCT®-LT – the beginning of the ductwork

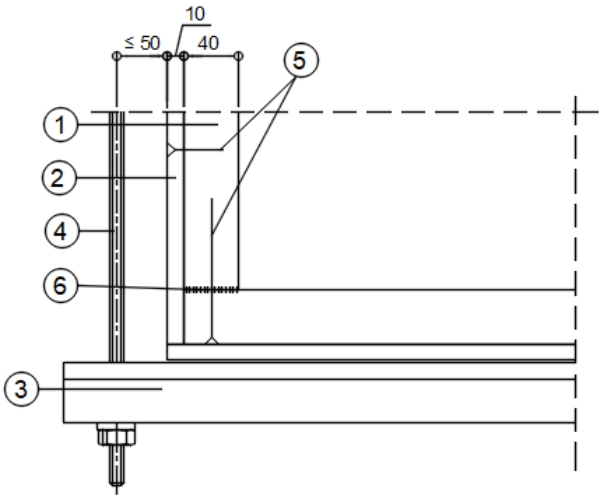
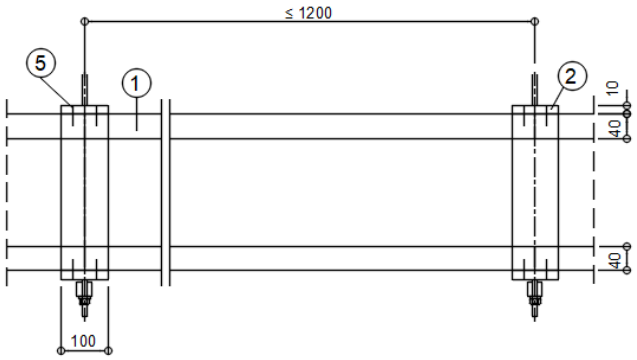


Fig. 8 – Self-supporting horizontal smoke extraction ducts PROMADUCT®-LT – the method of suspending to floors



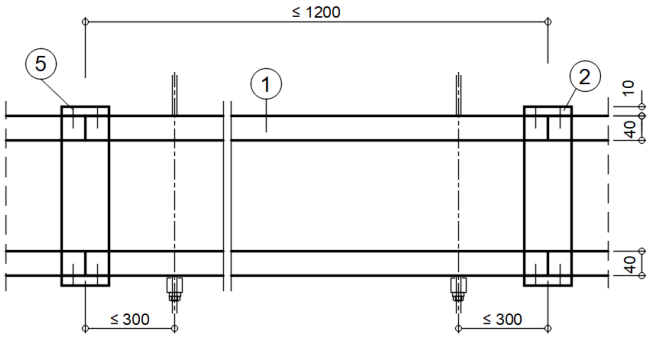
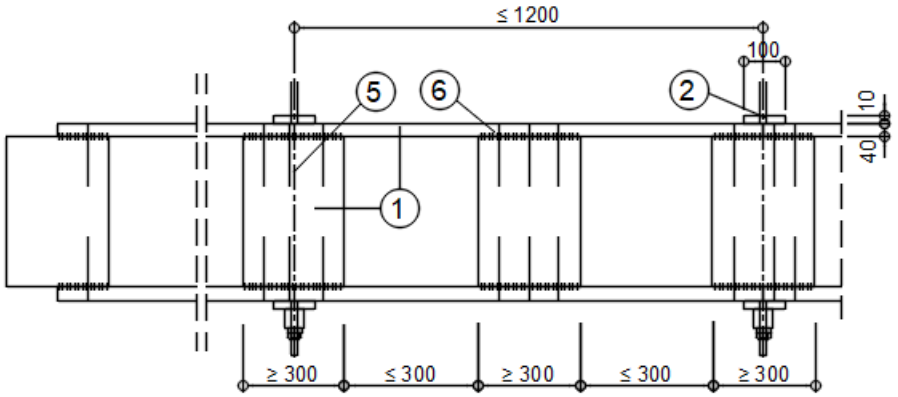


Fig. 9 – Self-supporting horizontal smoke extraction ducts PROMADUCT®-LT – longitudinal section



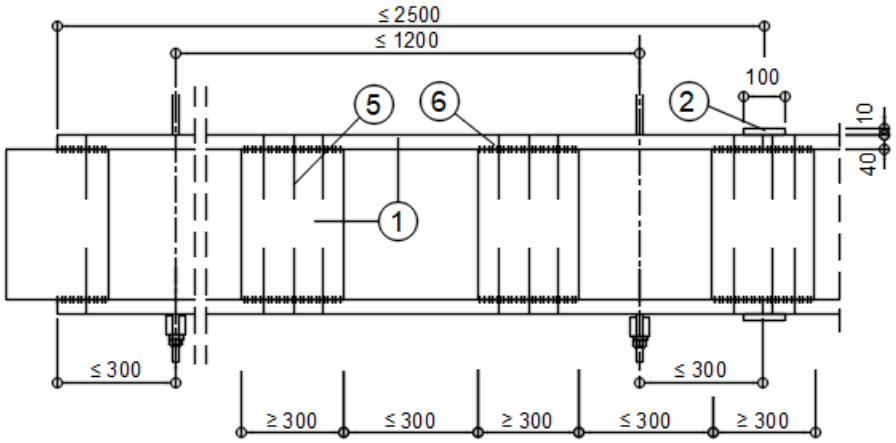


Fig. 10 – Self-supporting horizontal smoke extraction ducts PROMADUCT®-LT with maximum cross-sectional area of 2,178 m², maximum height of 1000 mm and width from 1251 mm to 2000 mm – longitudinal section

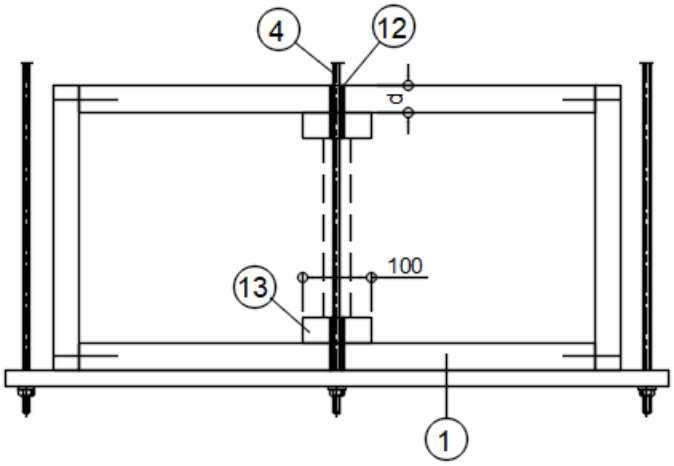
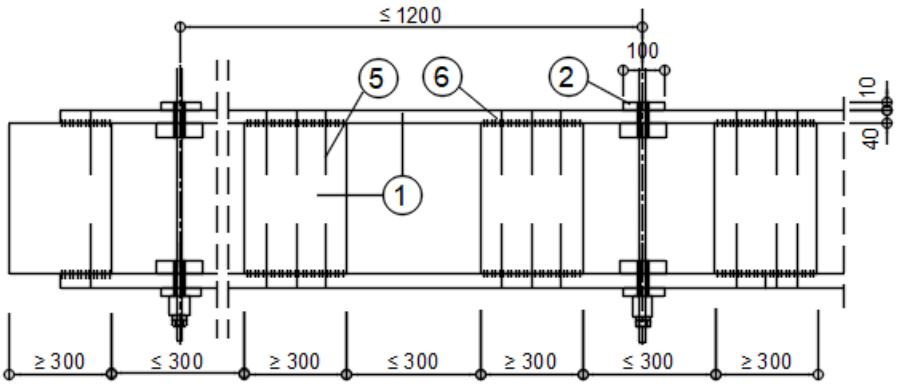


Fig. 11 – Self-supporting horizontal smoke extraction ducts PROMADUCT®-LT with maximum cross-sectional area of 2,178 m², maximum height of 1000 mm and width from 2001 mm to 2420 mm – the method of suspending to floors



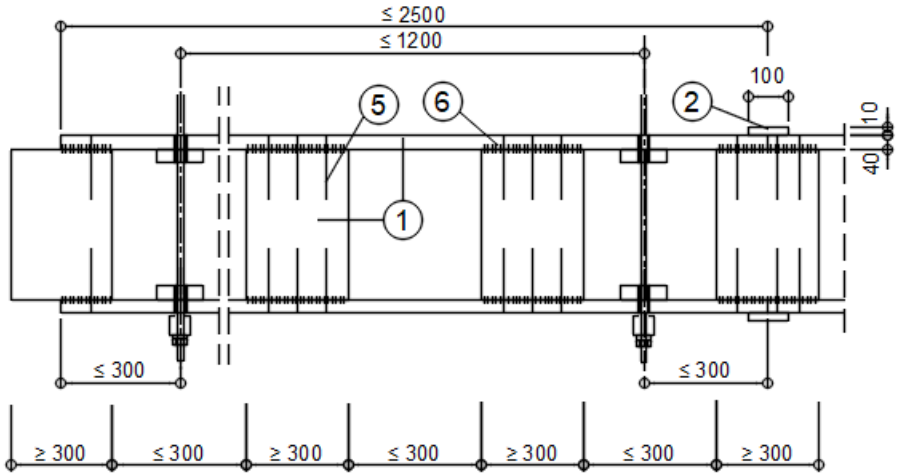


Fig. 12 – Self-supporting horizontal smoke extraction ducts PROMADUCT®-LT with maximum cross-sectional area of 2,178 m², maximum height of 1000 mm and width from 2001 mm to 2420 mm – longitudinal section

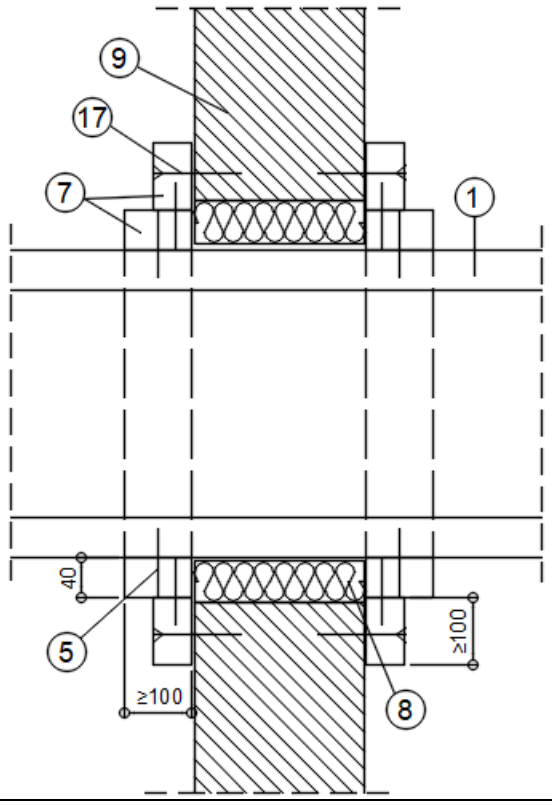


Fig. 13 – Self-supporting horizontal smoke extraction ducts PROMADUCT®-LT – the penetration point through the rigid wall

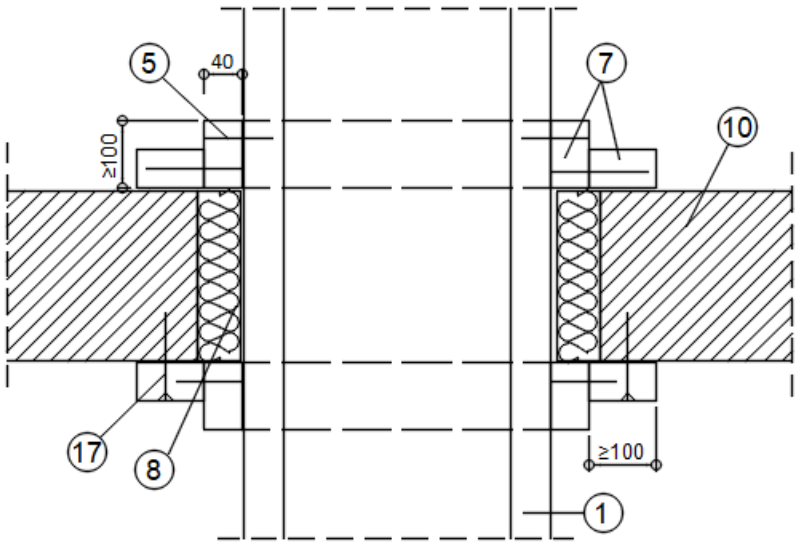


Fig. 14 – Self-supporting vertical smoke extraction ducts PROMADUCT®-LT – the penetration point through the floor

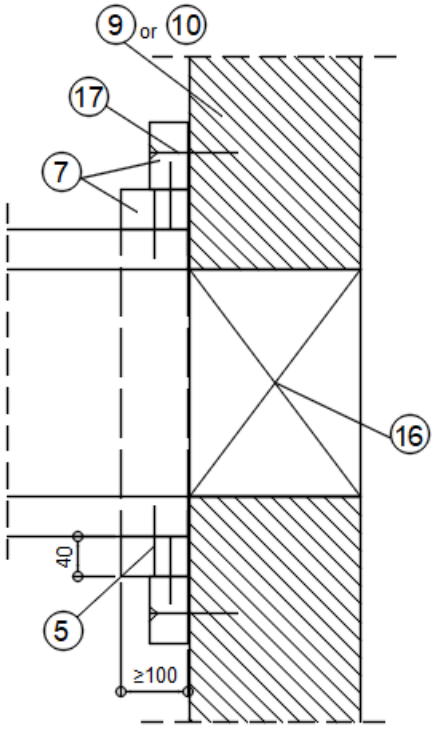


Fig. 15 – Self-supporting rectangular smoke extraction ducts PROMADUCT®-LT – the one-sided connection

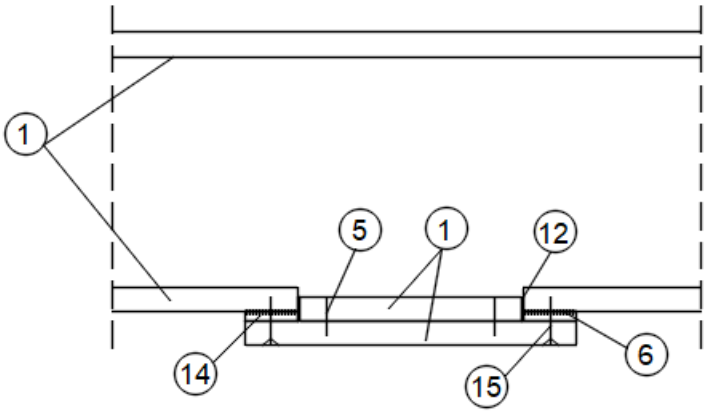


Fig. 16 – Self-supporting vertical smoke extraction ducts PROMADUCT®-LT – the access panel - Covered Joint method