

## STEEL FLUE SYSTEM INSTALLATION, OPERATION AND MAINTENANCE MANUAL FOR JALOTAKKA FLUES

Before installing, the products should be inspected to comply with an order confirmation and that their surface would be free from defects. The steel flue system is intended to lead the flue gasses, resulting from the use of fireplaces, stoves and hearths (dry operation conditions, for example, the wood used as fuel) safely to the outdoors.

**The fire class of the steel flue system is T600; please check the compatibility of your fireplace chimney before installing!**

The indicated temperature class T600 of the flue system should be at least the same level as the indicated mean temperature of flue gasses of the hearth (the number indicated in the temperature class indicates the temperature in Celsius). In the use of a hearth, the heating instructions put forward by the hearth manufacturer must also be taken into account, including the fuel quantity, in order to prevent the temperature of the flue gasses of the hearth from rising higher than specified by the manufacturer.

CE marking of the flue system:

**Manufacturer:** Jalotakka Oy, Kangaskatu 1, 48600 Kotka

**Year of manufacture:** 2020

**The certificate number:** 0809 – CPR - 1109

**Standard ID:** EN 1856-1: 2009

**Product description:** Järjestelmäsavupiiput

Prefabricated chimney

**T600 - N1 – D/W - V<sub>m</sub> L20100 - G70**

T600 = Temperature class

N1 = low-pressure flue (2 l/sm<sup>2</sup> a 40 Pa)

D/W = the flue is intended for dry and wet operating conditions

V<sub>m</sub> L20100 = Corrosion resistance and inner pipe material thickness

G70 = Soot Fire Tested, safety distance of the flue 70 mm from combustible materials



**JALOTAKKA**

Kangaskatu 1, 48600 Kotka

09

DoP – 1 - 2019

EN 1856-1: 2009

**Prefabricated metal chimney**

T600 - N1 – D/W - V<sub>m</sub> L20100 - G70

**Compressive strength**

Maximum load: 15 m chimney components

**Wind load: The height of the free-standing part: 1.5 m above the last support.**

Max. interval of the transverse supports: 3 m

**Soot fire resistant: Yes**

Other than vertical installation: The maximum intervals of supports 2.5 m with an angle of 30 °

**Flow resistance: NPD**

Thermal resistance: NPD

**Freezing-thawing resistant**

## STEEL FLUE DIAMETER DIMENSIONS AND WEIGHT PER METER

STEEL FLUE	FLUE 125
Inside diameter of the flue pipe	125
The outer diameter of the outer shell	255
Weight, kg/m	10

NOTE! Height measurements are stated in millimeters.

## **SAFETY DISTANCES OF THE FLUE SYSTEM**

Steel flue safety distance means the distance of the flue from combustible material. The safety distance of the steel flue system is 70 mm from the combustible material. The declared safety distance of the flue system must be taken into account with regard to the vapor barrier, the underlays and roofing installation. When the gap required by safety distance is covered by lathing or other lightweight building materials, they must not be attached to the flue. This does not apply to collars or the like included in the delivery. See attachments 2 and 4 related to safety distances.

## **LOCATION AND HEIGHT OF THE STEEL FLUE SYSTEM**

The steel flue system is appropriate to be placed as close to the ridge as possible. Due to fire safety, on the roof ridge, the minimum distance between the flue head and the roofing should be at least 80 cm when the roofing belongs to at least an A1 or B roof (t2) fire class. With conventional roof slopes, to the height of the chimney located on the slope is added 10 cm per each slope meter counted from the ridge. If the roofing does not belong to the above fire class, the distance to the roofing should be at least 1.5 m. Also, the hearth can affect the length of the flue, i.e., the hearth manufacturer must determine the possible minimum lengths for the flue to be attached to the hearth. See Annex 1 on the dimensioning of the flue on the roof.

## **SUPPORT AND BRACKETING OF THE STEEL FLUE SYSTEM**

The design of the steel flue system should take into account that the maximum height of the upper portion of the flue on the roof is 1.5 m without special support. If the length of your flue on the roof is more than 1.5 m, make sure before installing the flue that your order has included the necessary fixings and roof supports. The delivery includes the bracket band of the flue and 3pcs 0.5m perforated tape battens. The flue is supported first to the roof laths, or on the roof, folding the perforated tapes under the sealant rubber.

## **STEEL FLUE SMOKE DAMPER**

The Jalotakka steel flue is equipped with a smoke damper. In those hearths which have a continuous fuel supply (for example, oil/gas boiler or wood pellet fireplace with automatic feeding system) smoke dampers are not used.

## **INSTALLATION OF STEEL FLUE SYSTEM**

Handle the flue modules with care, do not scratch the painted parts.

Outer shells made of special steel (stainless steel, chrome, copper or brass) are protected by a plastic film; remove the plastic film after installation, but before using the hearth.

Start the installation by aligning the possible bushing holes, e.g., for the ceiling and the roof, and open those taking into account the safety distance requirements (Annexes 2 and 4). First, install the connecting tube into the connecting pipe coming from the fireplace. Please also note the instructions given by the hearth manufacturer on connecting the hearth to the flue. Next, install the bottom section of the flue to the connecting pipe (the bottom section is right side up when the base plate in the bottom section is directed downwards). If the connecting pipe coming to the hearth tube does not have a separate seal, which seals the connecting pipe of the hearth and the flue, before installing the pipe "tape must be extruded" of heat resistant Fire Cement to the outer or inner surface of the sleeve coming from the hearth, depending on which side the connecting pipe of the flue is intended.

If the bottom part goes through the intermediate bottom, it should be supported immediately with the bushing ring, which is attached to the ceiling with eight screws. Before fixing, check the straightness of the flue.

Interim parts are installed so that the inner tube sleeve must always be upwards. You can also install the inner tube and the outer tube with the insulator separately. Observe also that the tongue of the higher insulation always goes into the tongue of the lower insulation (e.g., by monitoring that the upper end of the outer shell and the insulator tongue run on the same level (Figure 5).

Remember to "extrude the tape," putting Fire Cement always to the inner surface of the upper end of the inner tube of the lower section, before installing the new section. NOTE! Keep the flue damper in the open position, so the extra mass drips into the hearth

Note that the smocking of the outer pipes will always be upwards and the widening downwards. Outer pipes must overlap about 25 mm. Attach the outer tubes to each other with a band. Outer pipes will then be in place when the band fits well into the mounting grooves.

Finally, install the upper section and cut off the excess insulation wool on the level of the exterior shell (Figure 4). After this, install the rain cap. Check that the rain cap sits well against the end of the upper section and fasten it with two roofing screws.

On the ceiling and on the insulated roof the flue pipe also has to be insulated in accordance with Annexes 2 and 4.

For the insulation is used 70 mm fire resistant wool. The insulation of the bushing is finished by installing the metal sheath around the wool, (Annex 2 and 4) the metal sheath should extend 100 mm above the basic insulation. Before additional insulation, install the vapor barrier sealing flange carefully around the flue. After this, the damper flange is taped with aluminum tape tightly to the flue and from the outer edges with blue tape attached to the actual vapor barrier plastic. The vapor barrier plastics are to be 70 mm from the outer surface of the flue. The flange and the aluminum vapor barrier sealant tape can be attached to the flue.

Carefully make, or have a professional make, the roof sealing around the flue. The delivery includes the roof sealing rubber; it is very suitable for example for felt roofing. Place the sealing rubber on top of the flue and pull it down onto the cover, attach the rubber from the reinforcement sector to the roof with five roofing screws/side. If the roofing is uneven, we recommend the use of sealant mass under the fastening place as well as at the connection point of the flue and the rubber. In a log house, please note the housing slump. From Jalotakka one can purchase a roof plate for all flue sizes.

It is necessary to pay special attention to the orthodox installing of the underlay around the flue in order for the water, possibly condensing on the underside of the roofing cover, or condensed water or heavy snowstorm snow does not flow along the pipe into the insulation or the room when melting. The Flue delivery includes an upper-end support/underlay bushing which can in most cases be applied to the support of the flue and to the sealing of the underlay. If, due to the installation site or the underlay, the included upper-end support/ bushing of the underlay is not suitable for the purpose, see the underlay supplier's instructions.

Secure the underlay bushing plate to the ribs with the roofing screws so that it also supports the flue. Tape the underlay to the plate with blue tape taking into account the safety distance. The safety distance from the underlay to the outer surface of the flue is 70 mm

If the flue goes through the roof more than 1.5 m above the solid support, it will be supported with an adjustable roof support available from the manufacturer or with a stay ring and steel wire ropes or other similar support.

No extra equipment can be attached to the rain cap of the flue!

From the manufacturer are also available flue wall brackets, as well as any other special parts.

Steel flues have not been tested when in a casing. Ultimately, the suitability of the casing is defined or approved by the person responsible for it.

## OPERATION AND MAINTENANCE OF A STEEL FLUE SYSTEM

Before lighting a fire in the hearth, make sure that the smoke damper is open. The smoke damper must not limit the draft of the flue, and it must not be closed until the burning of the embers has completely finished.

The sweeping of the chimney should be carried out at intervals according to the relevant legislation in force each year in permanent housing, and every three years in leisure homes. If necessary, the rescue authority may also demand for denser sweeping intervals.

NOTE! The sweeping brush used in sweeping must be suitable for acid-proof pipe (Community chimney sweeping)

Also, ensure that the chimney sweep has a safe passage over to the flue and that it is possible for the sweeping work to be carried out safely.

The smoke damper housing must be cleaned of soot at regular intervals (e.g., 1 time/year)

Check at regular intervals (e.g., 1 time/year) the water resistance of the barrel on the roof, and that the rain cap is intact and securely in place.

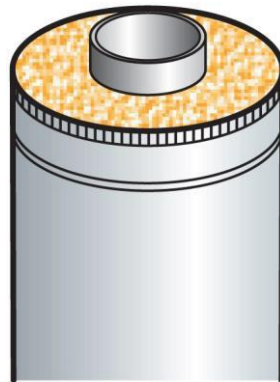
**Attach the nameplate of the flue to the outer shell of the flue or in the immediate vicinity of the hearth, so that it is easily legible. In addition, on the nameplate should be marked the flue size, installation date, as well as the performer of the installation.**

Manufacturing

Jalotakka Oy  
Kangaskatu 1  
48600 Kotka  
FINLAND

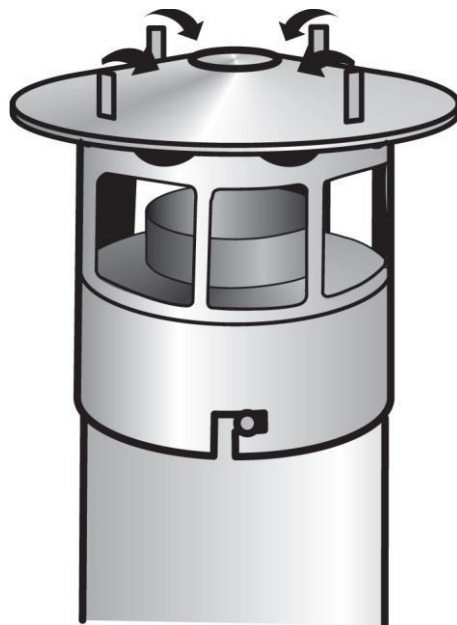
tel. +358 10 2394 770  
info@jalotakka.com

Figure 4



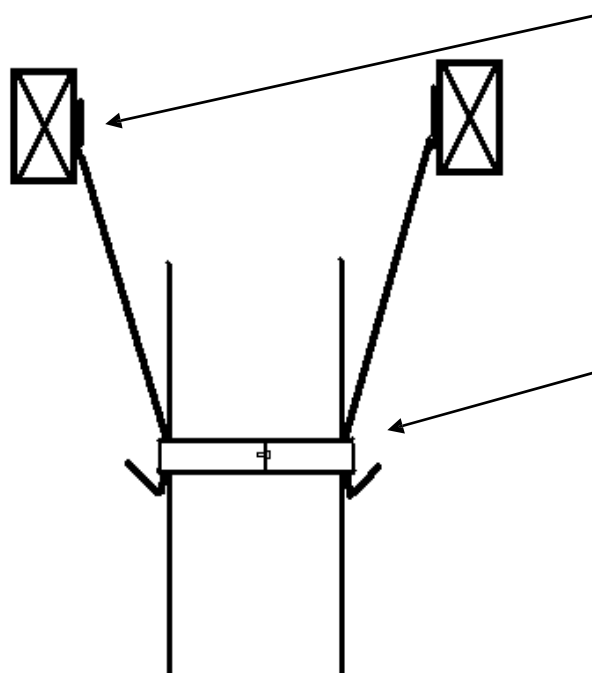
The insulation of the flue is cut, if necessary, at the same level with the outer casing of the top section

#### HAT LOCK



The inner tube has to fit through the cap flange. The cap is fastened with two roofing screws to the flue.

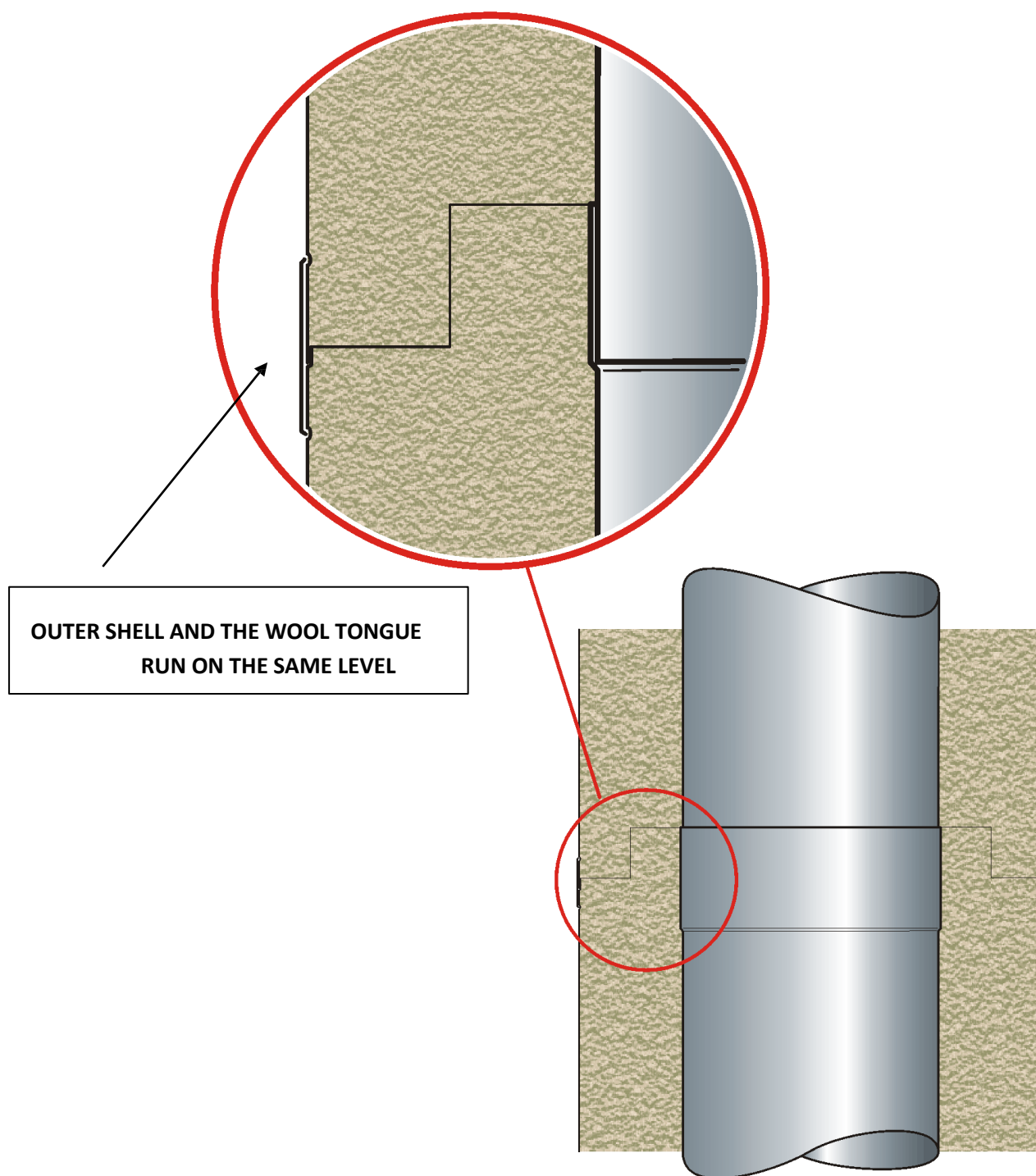
#### INSTALLATION OF THE FLUE BRACKET

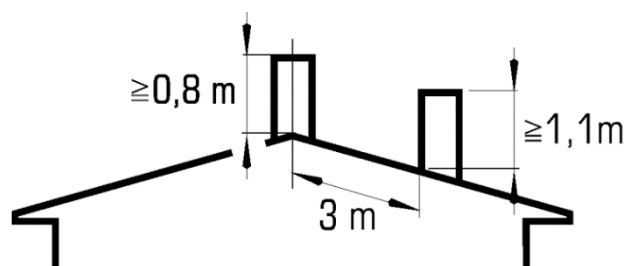


Perforated tape mounting, e.g., to the roof truss with 5 x 60 screws

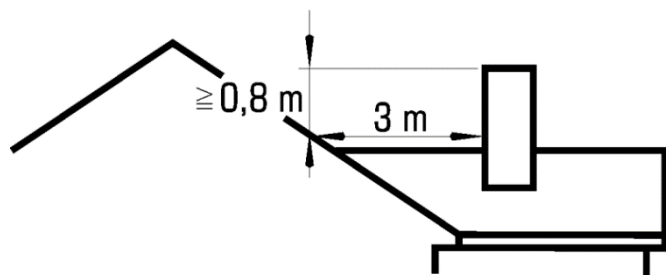
Perforated tape 3 pieces are bent and clamped under the collar

Figure 5.

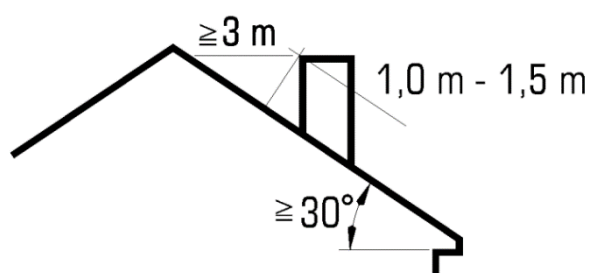




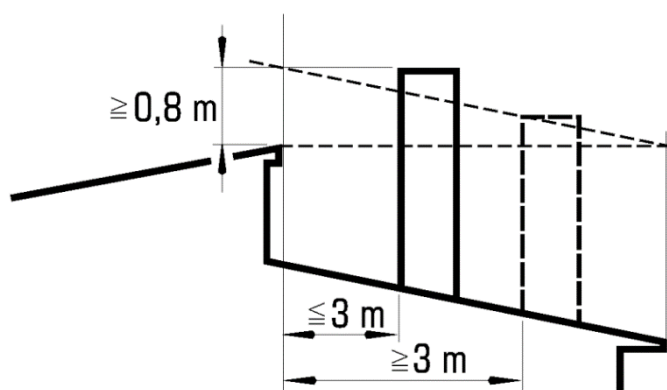
When the chimney passes through the roof slope anywhere else than close to the ridge, to the length of the barrel should be added 10 cm per slope meter calculated from the ridge.



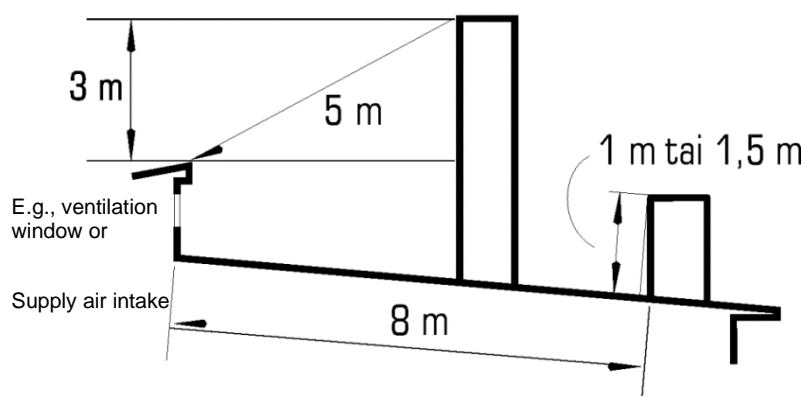
Safety distance is deemed to be fulfilled when the chimney passes through the roofing and its distance from other structures in the horizontal direction are 3 m, and the slope crossing is 1-1.5 m.



When the chimney passes through a slope with an inclination of 30 degrees or steeper, the safety distance is considered to be fulfilled when the horizontal distance of the flue from other structures is 3 m, and the height is 1-1.5 m.

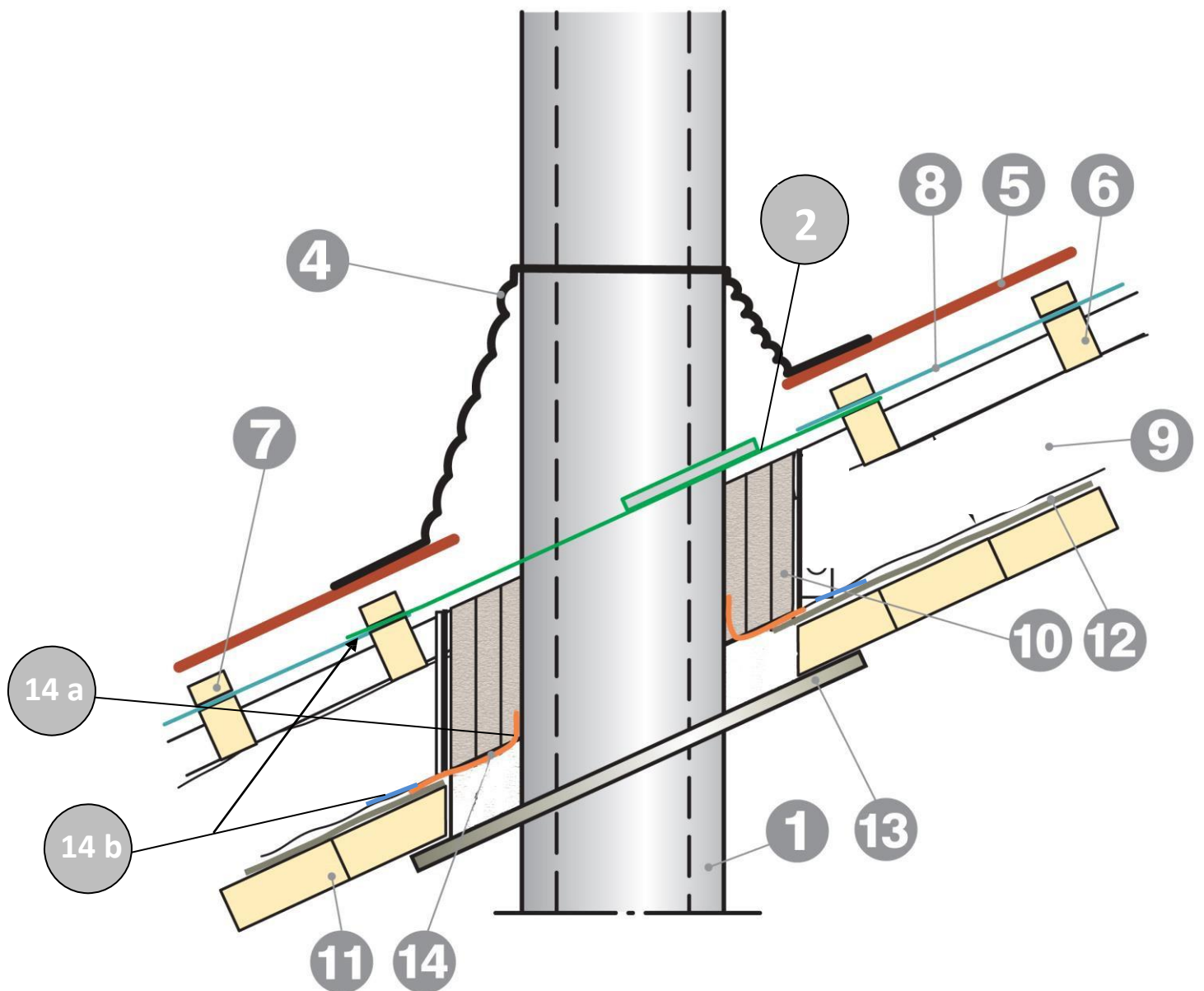


When determining the length of the chimney, the safety distance from the supply air intakes and ventilation windows should also be taken into account so that the chimney distance is not less than 8 m or when the height difference is 3 m, not less than 5 m.



**NOTE!** The safety distance of the roofing that does not belong to the A1 or B roof (t2) categories is always 1,5m

## Bushing of an insulated roof G (70)



- |                                      |   |
|--------------------------------------|---|
| 1) Flue pipe                         | 10) Additional insulation of the bushing  |
| 2) Underlay seal plate + blue tape   |   |
| 4) Roof seal rubber                  | 11) Ceiling                               |
| 5) Roof                              | 12) Vapor barrier                         |
| 6) Rib                               | 13) Bushing flange of the ceiling         |
| 7) Rib                               | 14) Vapor barrier sealing flange and tape |
| 8) Underlay                          |   |
| 9) Load-bearing structure/Insulation | 14 a) Tape, Aluminium                     |
|                                      | 14 b) Tape, Blue                          |



**NOTE! SAFETY DISTANCES TO COMBUSTIBLE MATERIAL IS 70 MM.**

1) Rib

2) Roof seal rubber

#### 4) Underlay

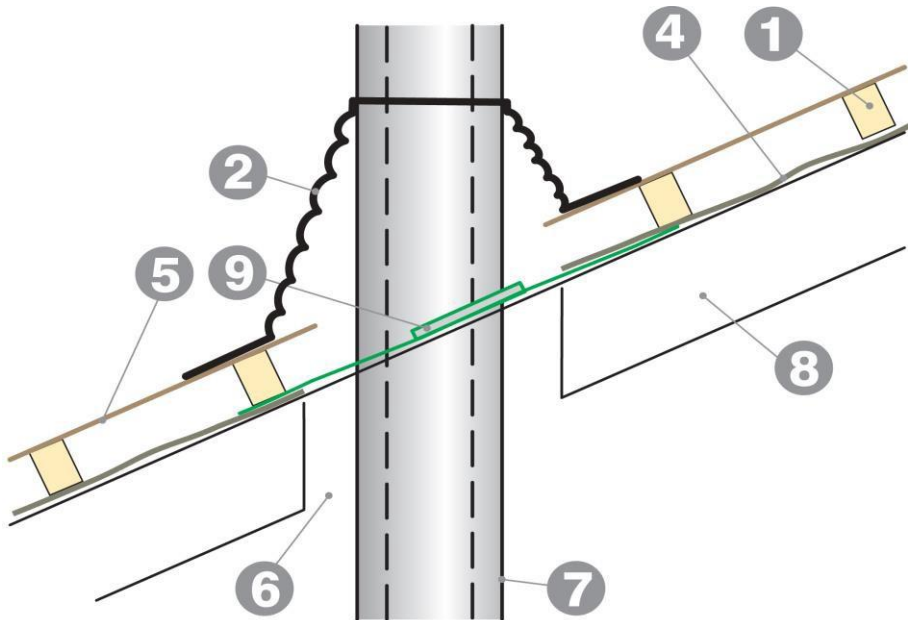
### 5) Roof

6) Safety distance 70mm

7) Flue pipe

## 8) Load-bearing structure

9) Flue support/underlay  
bushing + Blue sealing  
tape



1) Flue pipe

## 2) Insulation

### 3) Ceiling

#### 4) Bushing flange

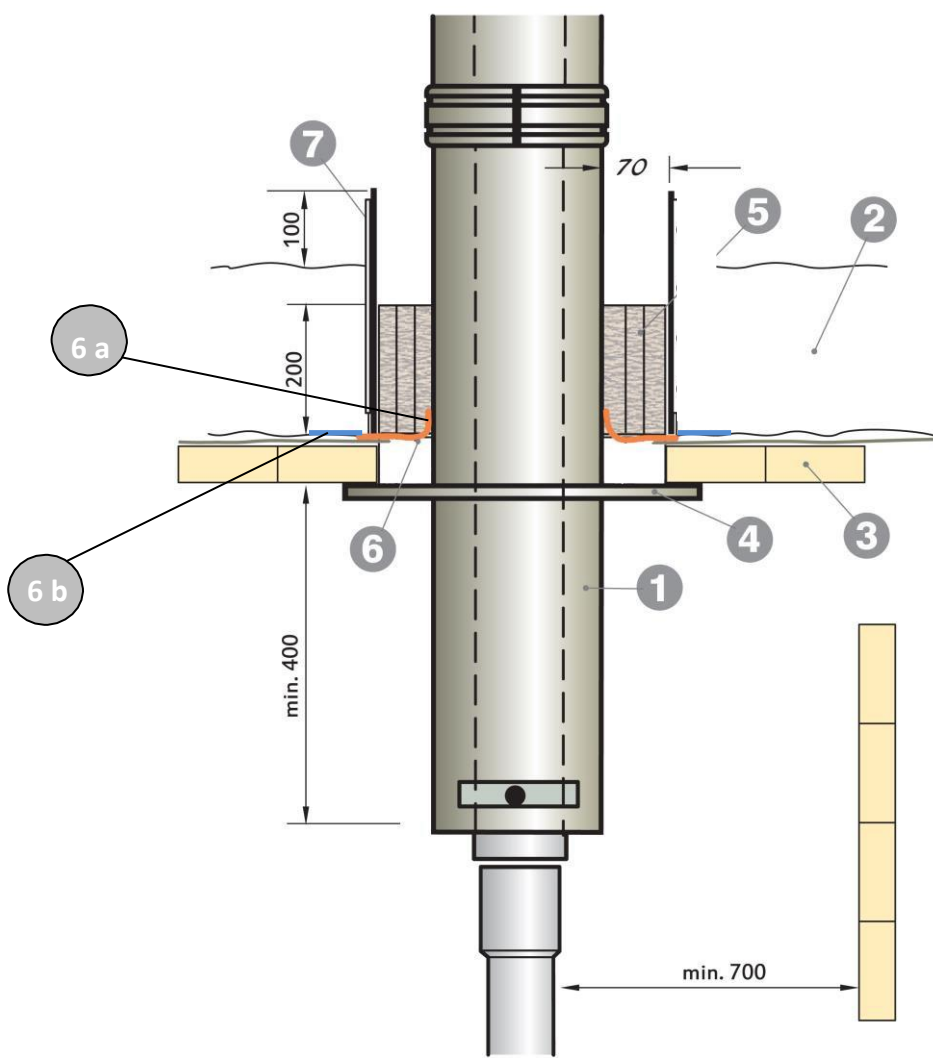
### 5) Bushing insulation

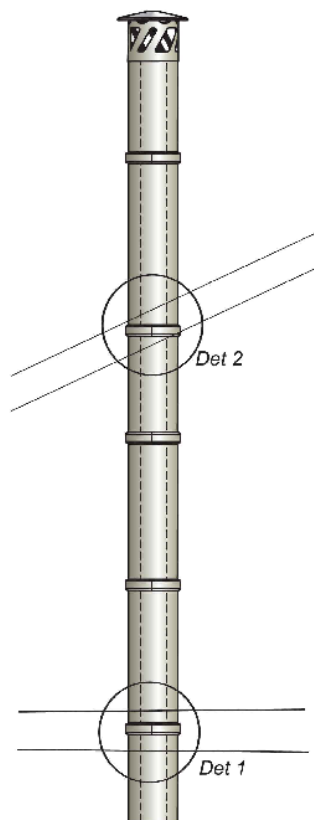
6) Vapor barrier sealing flange and tape

6 a) Tape, Aluminium

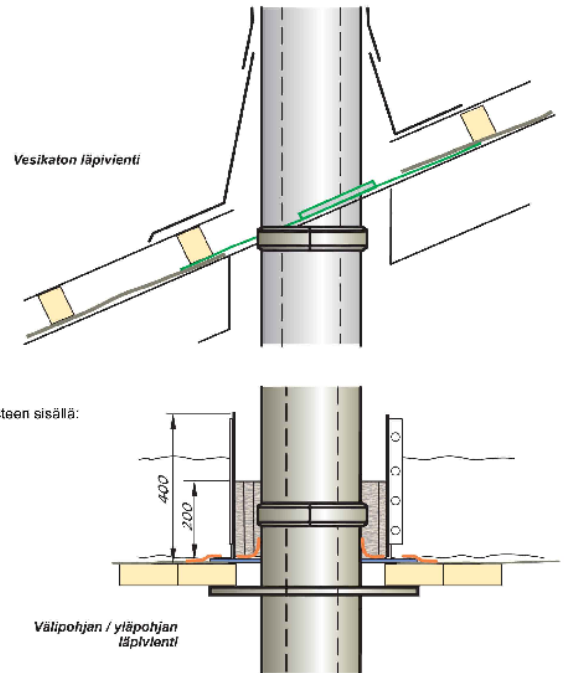
6 b) Tape, Blue

7) Bushing flange

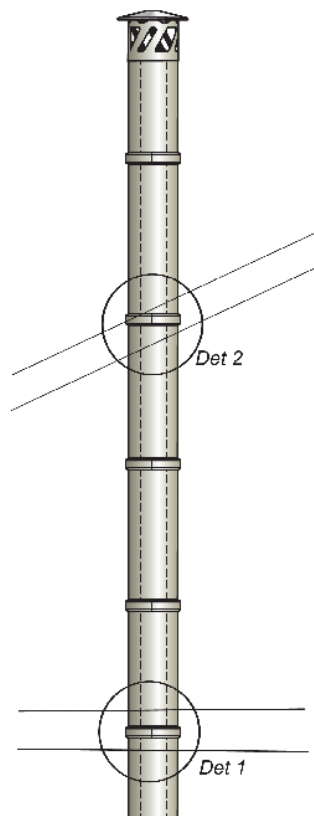




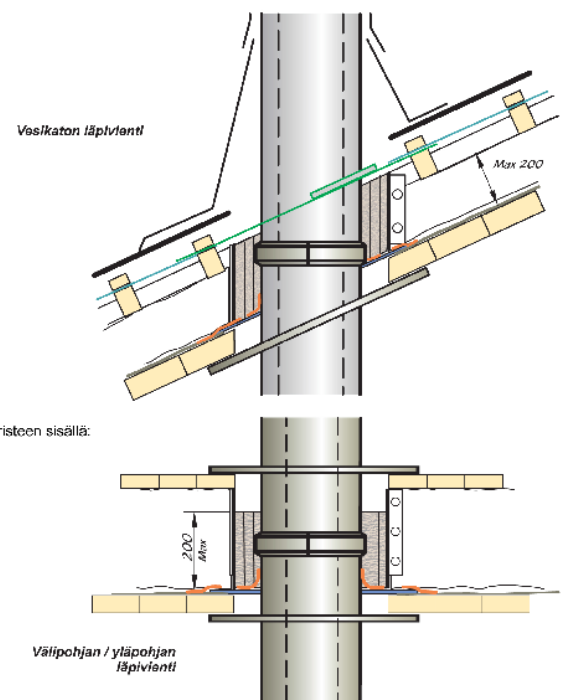
Hormin liitos on testattu läpiviennin eristeen sisällä:  
EN 1856-1 : 2009



Hormin läpiviennit T600	
Suojaetäisyys G=70	Det1 ja Det2
Liite JT teräshormin asennusohjeeseen, T600	Kokoonpano 1:20 Leikkaukset 1:10
Jalotakka Oy / Muurinen Mikko Kangaskatu 1 48600 Kotka 010 2394 770 12.12.2011	LUPAKUVA ARK



Hormin liitos on testattu läpiviennin eristeen sisällä:  
EN 1856-1 : 2009



Hormin läpiviennit T600	
Suojaetäisyys G=70	Det1 ja Det2
Liite JT teräshormin asennusohjeeseen, T600	Kokoonpano 1:20 Leikkaukset 1:10
Jalotakka Oy / Muurinen Mikko Kangaskatu 1 48600 Kotka 010 2394 770 12.12.2011	LUPAKUVA ARK

**STEEL FLUE INSTALLATION PROTOCOL**  
**(Attached to the Operation and maintenance instructions)**

Date:

Construction site:

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Installer / Builder:

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Installation time:

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The diameter of the inner pipe of the  
steel flue system:

125 mm ☐

The inner tube material thickness: 1,00 mm

Temperature class of the steel flue system: T600

Safety distance from combustibile building materials: 70 mm

Hearth type, to which the flue pipe is  
connected:

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The maximum temperature of the hearth flue gas in Celsius:

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Sweeping method: Sweeping with nylon brush.

For more information on the bushing, waterproofing, safety distances or other relevant issues:

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