

Wall-, Ceiling-, Roof duct LUX-ECO

Building authority approval for Germany Z-7.4-3469
VKF-Fire protection application for Switzerland Nr. 25346
Fire safety assessment for Austria Nr. 315012204-1

1 MOUNTING AND REGULATIONS

The installing has to be performed professionally according to the abovementioned approval, installing instructions respectively according to the valid national regulations. In Germany in particular DIN V 18160-1, as well as the applicable regional building rules (LBauO), fire regulations (FeuVO), relevant DIN standards and all other building- and safety regulations. The required cross section has to be determined according to DIN EN 13384 and has to be checked by the executing specialist firm. Before the installation, the design of the system has to be clarified with the concerned district chimney sweeper.

2 NEEDED TOOLS

(for on-site wall cutting)

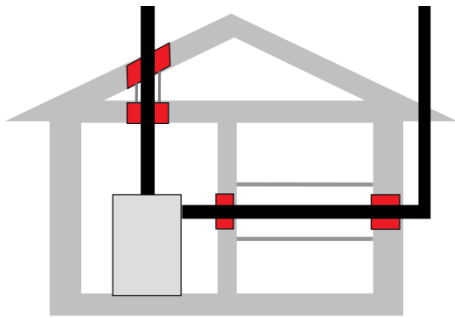
- Electronic cable and pipe finder
- Drilling machine and extension cable
- Jigsaw
- Chainsaw
- Handsaw
- Spirit level
- Retractable tape measure and pencil to mark
- Stanley knife
- Tool kit
- Cordless screwdriver
- Filler tools
- etc. ...

3 GENERAL SAFETY INSTRUCTIONS



- While working at high altitudes and in the roof area, it is important to set up securing and holding systems. The general safety regulations for occupational safety apply here!
- All tools and components must be secured against falling during installation and also appropriate retention and catching devices should be installed.
- When using fixed or mobile scaffolding and work platforms, the relevant safety regulations must be strictly adhered to.
- Before starting to drill into walls or ceilings, check the installation location for power cables, water and gas pipes using appropriate measuring tools.
- If necessary, inspect the building plans so that no load-bearing beams of the house structure are damaged.
- In general, all construction and safety regulations must be observed.

4 APPLICATION AREA



- The LUX-ECO wall, ceiling, and roof duct is used when an exhaust gas system with high exhaust gas temperature (maximum 400°C) penetrates components made of combustible materials and the distances to combustible components should be reduced with regard to building regulations. This makes it possible that a required change of the framework in the wall can be avoided.
- During installation of exhaust flue systems, connectors and chimneys through the flammable walls, ceilings and roofs may be subject to heat accumulation, as the heat in the pass-through can't be dissipated (no air circulated and cooling) which can lead to smoldering fires in the wall structure. By the use of our approved wall, ceiling, roof duct LUX-ECO the safe usability is assured!
- The wall, ceiling, roof duct is used for openings through internal and external walls, as well as roofs inside the house and from the inside to the outside. (In the sketch above the locations of the wall, ceiling, roof duct LUX-ECO is shown).



Please note the max. installing length of the wall duct LUX-ECO:

- WALL: max. 360 mm
- CEILING & ROOF: max. 500 mm

5 CHARACTERISTICS AND COMPOSITION

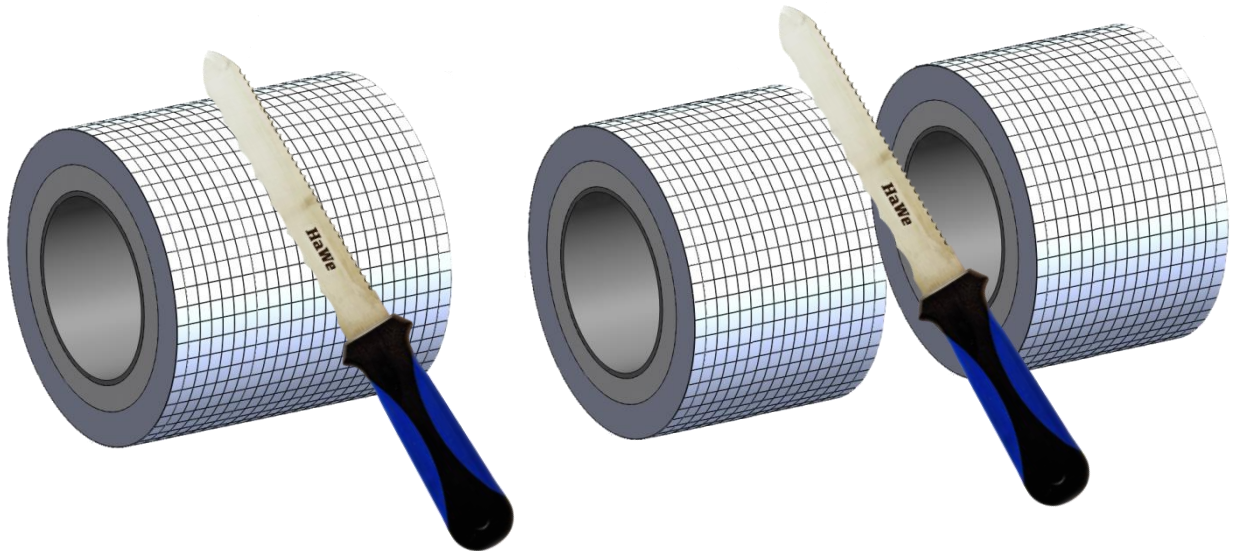
The components are intended for the implementation of single or double-walled exhaust systems with min. 25 mm insulation material and a max. nominal diameter of 250 mm through walls, ceilings and roofs made of combustible building materials, the supply can also be single-walled until penetration.

Only fireplaces that do not generate exhaust gases with temperatures higher than 400 ° C at nominal heat output may be connected to the flue gas systems.

The use of wall, ceiling and roof duct components does not exempt the national fire safety requirements, (e.g. layout of the exhaust systems in shafts). The duct is not fire-resistant.

6 DETAIL SHORTEN WALL DUCT

Mark the desired length and cut with a coarse-toothed, sharp knife. It is important to ensure that a straight cut is made. The length of the Wall duct LUX-ECO must not exceed 360 mm for walls and 500 mm for ceilings / roofs.



7 FIRE PROTECTION ADHESIVE

The fire protection adhesive is supplied in a 1 kg hose and must be thoroughly kneaded before use, which gives the adhesive a homogeneous consistency and is easier to process. The fire protection glue is used to bond the wall duct LUX-ECO to the radiation protection plate or serves for the connection to the masonry in the case of a penetration of an external wall insulation, see point 10 under item 4.



8 DETAILS RADIATION PROTECTION PLATE

The radiation protection panel consists of non-combustible vermiculite fire protection material according to building material class A1, with thickness 20 mm and dimension 615 x 615 mm.

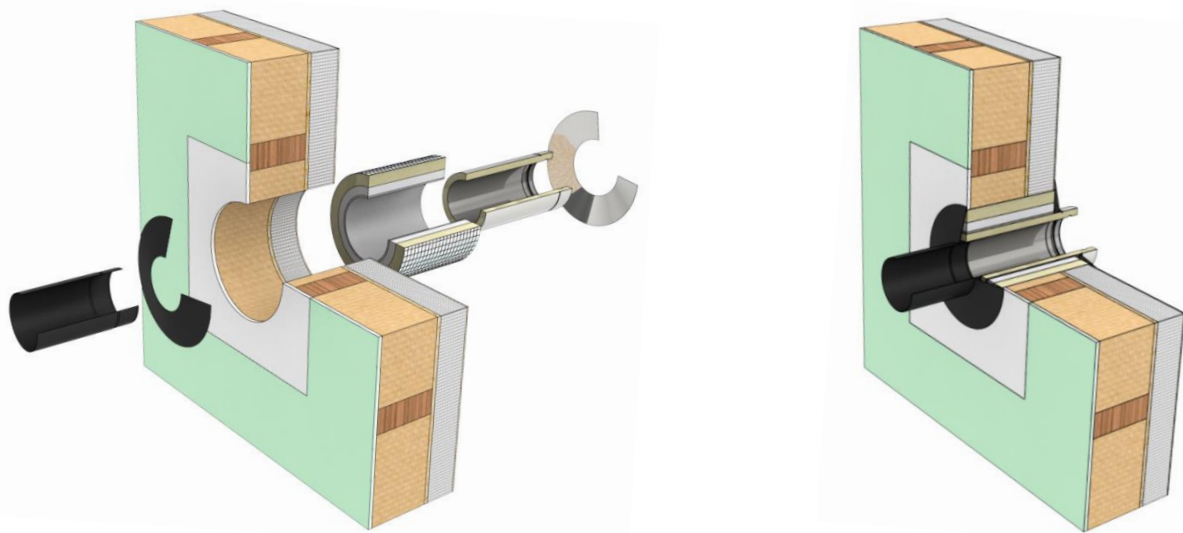
There are basically two ways to connect the radiation protection plate with the wall duct:

1. The wall duct LUX-ECO can be glued to the radiation protection plate with fire protection glue, by selecting the required cut-out with diameter 1 cm larger than the outside diameter of the exhaust pipe, enabling you to easily guide the exhaust pipe through (see item 11 pos. 6)

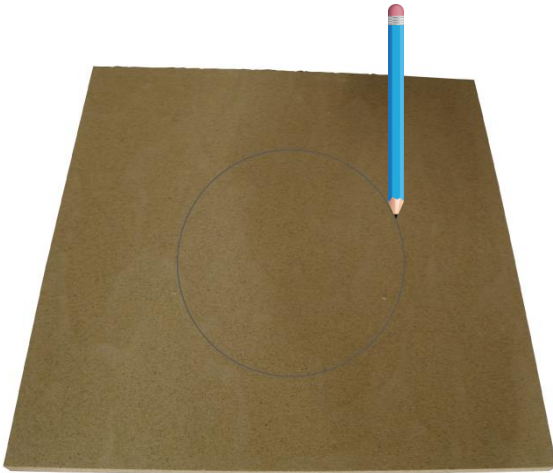
or

2. Select the section of the radiation protection plate approx. 1 cm larger than the outside diameter of the wall duct LUX-ECO used. The wall duct can be flush with the outer edge of the radiation protection plate. However, it should be noted that a larger covering rosette is required in the interior of the wall.

Following is a schematic representation of the wall duct before and after installation:



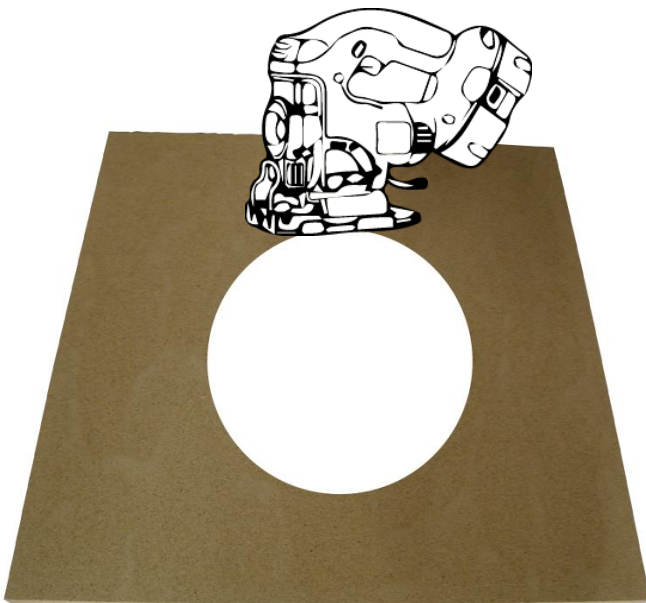
Creation of the hole cutout in the radiation protection plate



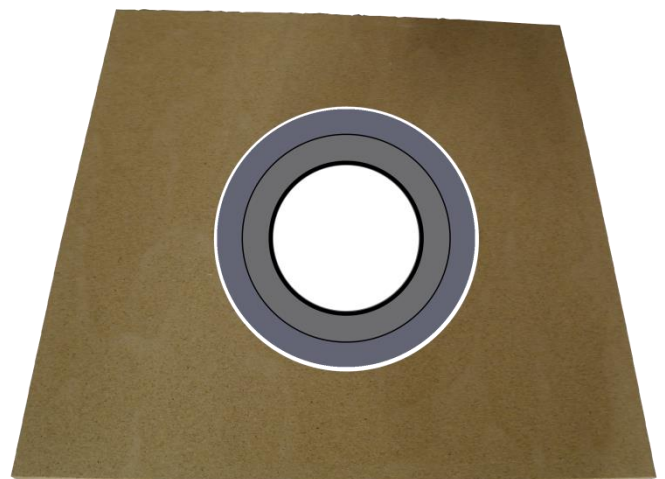
1. Mark the cutout you need with a pencil



2. Pre-drill a groove for the jigsaw with a cordless screwdriver / drill.

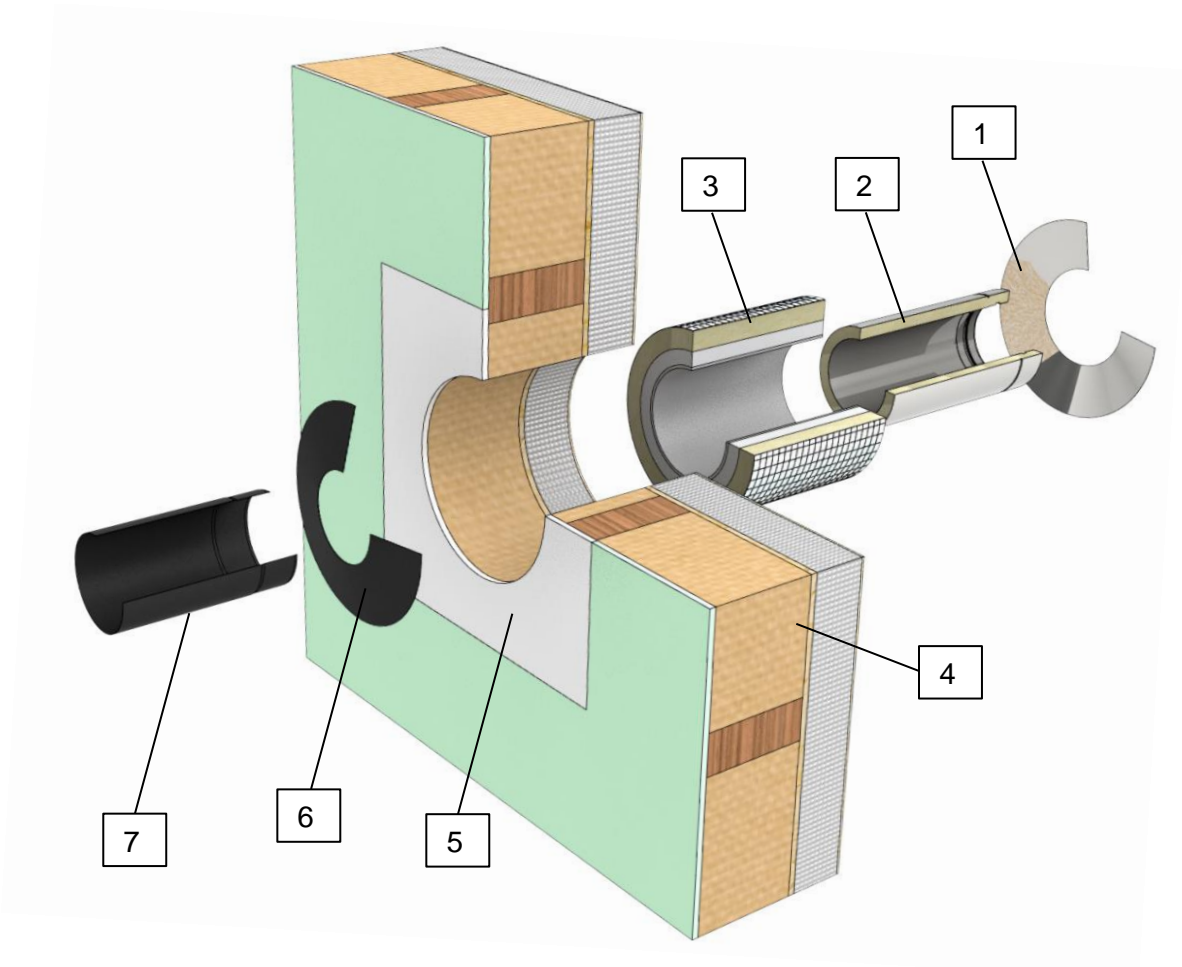


3. Cut out the drawn circle with the jigsaw and remove it.



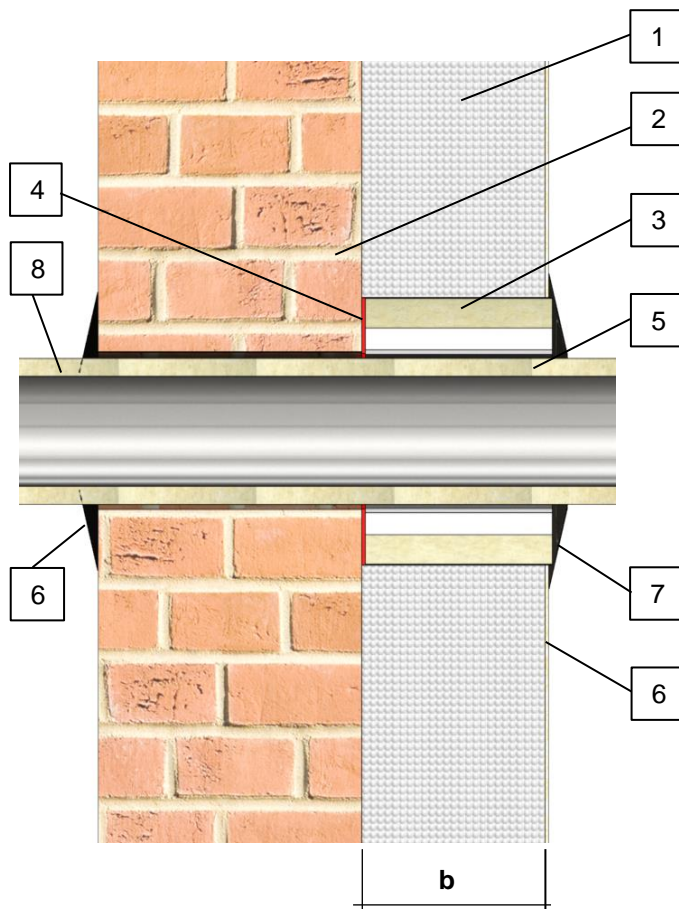
4. Insert the Wall duct LUX-ECO into the hole of the radiation protection plate and arrange the front edge flush.

9 DETAILS WALL DUCT

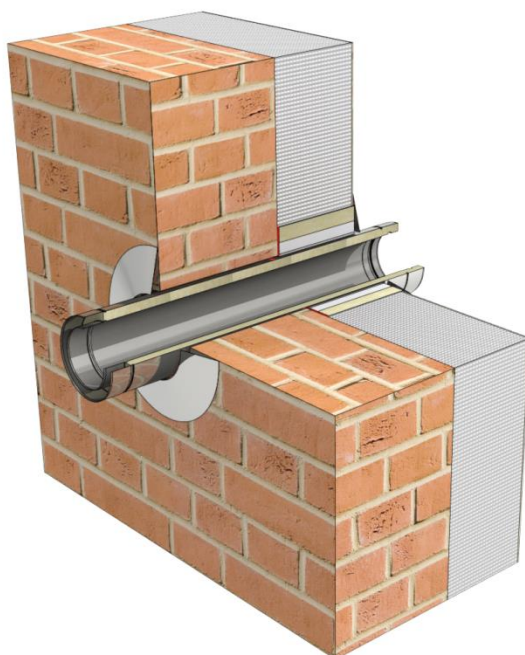


LEGEND	
Position number	Component description
1	Wall cover / covering collar outside
2	Double wall pipe / chimney system
3	Wall duct LUX-ECO
4	Combustible drywall
5	Radiation protection plate inside
6	Wall cover / covering collar inside
7	Single wall flue pipe inside

10 DETAILS WALL DUCT LUX-ECO IN EXTERIOR INSULATION



Component depth $b \leq 180$ mm



Pos. 1 Exterior insulation

- Polystyrene
- Polyurethane
- Rock wool
- Mineral wool
- and others

Pos. 2 Masonry

- Brick
- Clinker
- Solid sand
- and others

Pos. 3 Wall duct

- shortenable wall duct

Pos. 4 Connection of the wall duct to the Masonry

- Tile glue according to DIN EN 12 004
- Fire protection adhesive

Pos. 5 Double wall chimney system

- in wall duct and Masonry
- chimney system / connecting pipe with min. 25 mm heat insulation

Pos. 6 Exterior plaster

- Reinforcing mesh including adhesive and reinforcing mortar & finishing coat

Pos. 7 Wall cover / covering collar

- outside

Pos. 8 Flue pipe

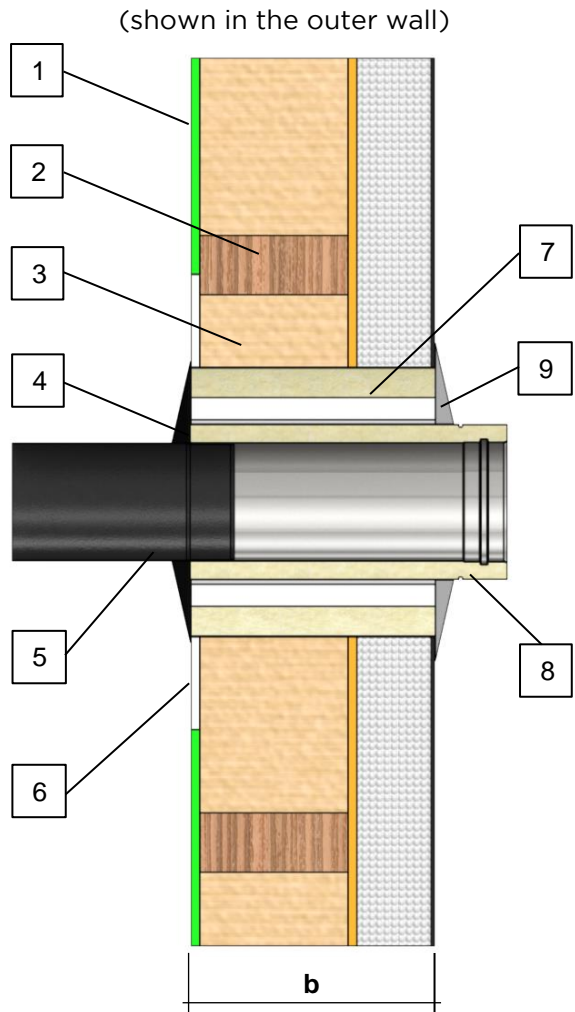
- uninsulated
- insulated

Pos. 9 Wall cover / covering collar

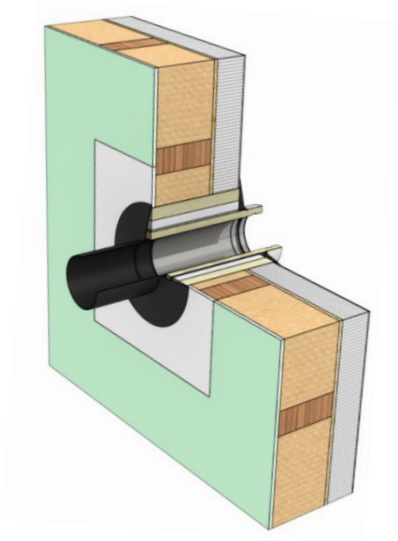
- outside

11

DETAILS WALL DUCT LUX-ECO IN COMBUSTIBLE WALLS

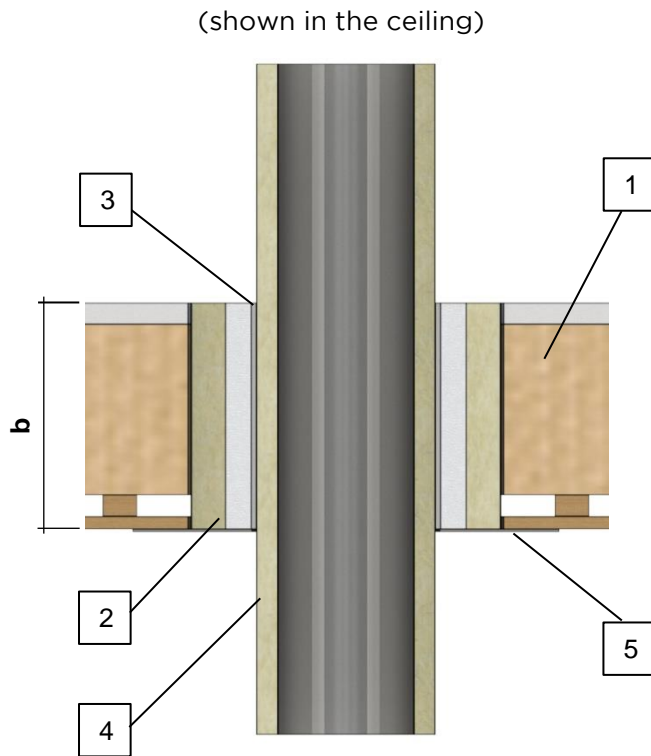


Component depth $b \leq 360$ mm



- Pos. 1 Wallboard
 - Gypsum plasterboard
 - Gypsum fiber board
 - Gypsumbased fire protection board
 - Calcium-Silicate plate
 - Promatect H
 - Promatect L
 - Promaxon Typ A
 - Bluclad
 - Incl. vapour barrier film B2-DIN 4102)
- Pos. 2 Framework
 - Drywall construction
 - Wooden frame
- Pos. 3 Wall insulation materials
 - Mineral wool, A1-DIN 4102
 - Mineral wool, A2-DIN 4102
 - Polystyrene
 - Cellulose, cork
 - Wood fiber insulation
 - and others
- Pos. 4 Wall cover / covering collar
 - inside
- Pos. 5 Flue pipe
 - uninsulated
 - insulated
- Pos. 6 Wall connection
 - Variant 1: Push the wall duct through the radiation protection plate
 - Variant 2: Glue the wall duct with fire resistant adhesive over the entire surface of the radiation protection plate
- Pos. 7 Wall duct
 - shortenable wall duct
- Pos. 8 Double wall chimney system
 - min 25 mm heat insulation
- Pos. 9 Wall cover / covering collar
 - outside

12 DETAILS CEILING-AND FLAT ROOF DUCT LUX-ECO



Components depth $b \leq 500$ mm

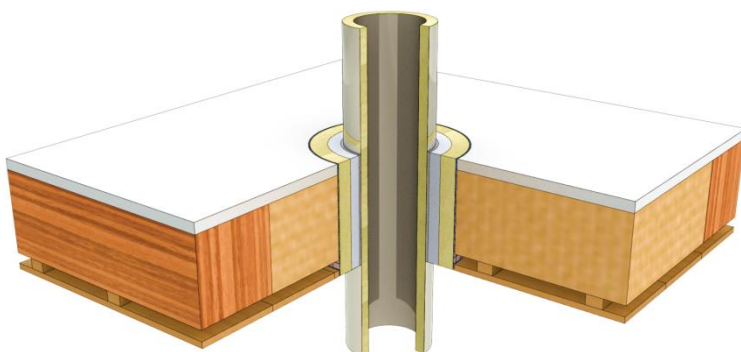
Pos. 1 Wooden beam ceiling / flat roof
 - insulated
 - uninsulated

Pos. 2 Ceiling- and flat roof duct
 - shortenable ceiling- and flat roof duct

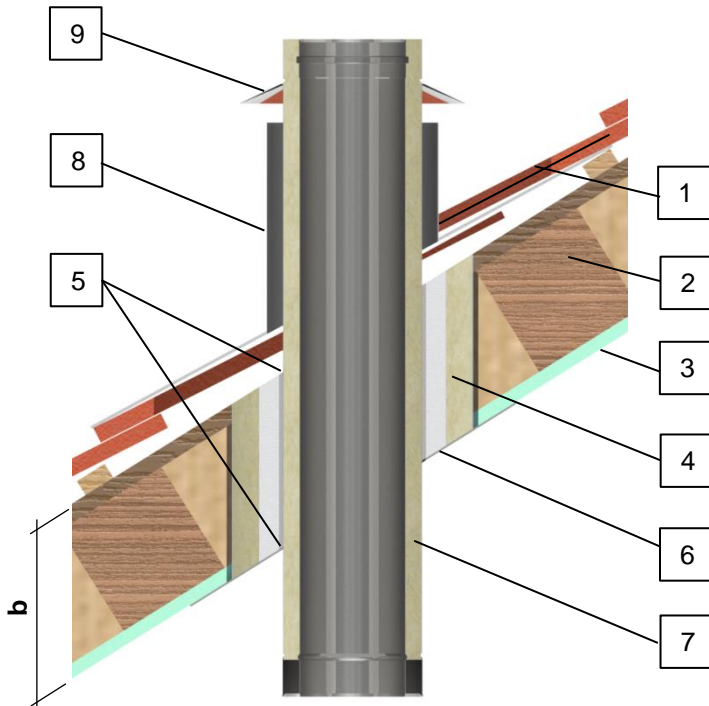
Pos. 3 Filling material at the inlet & outlet
 - Mineral wool, A1-DIN 4102
 - Ceramic insulation, A1-DIN 4102
 - Promaglaf
 - Sealing cord

Pos. 4 Double wall chimney system
 - Chimney system / connecting pipe with min. 25 mm heat insulation

Pos. 5 Ceiling cover
 - Stainless steel



13 DETAILS PITCHED ROOF DUCT LUX-ECO



Components depth $b \leq 500$ mm

Pos. 1 Roof covering
- Brick roofing / roof battens / formwork interrupted in the area of roof duct

Pos. 2 Rafter roof
- insulated
- uninsulated

Pos. 3 Ceiling boards
- Gypsum plasterboard
- Gypsum fiber board
- Wooden frame
- and others

Pos. 4 Pitched roof duct
- Adapt LUX-ECO to the roof pitch

Pos. 5 Filling material at the inlet & outlet
- Mineral wool, A1-DIN 4102
- Ceramic insulation, A1-DIN 4102
- Promaglaf
- Sealing cord

Pos. 6 Ceiling cover
- Wall cover / covering collar

Pos. 7 Double wall chimney system
- Chimney system with min. 25 mm heat insulation

Pos. 8 Stainless steel roof duct

Pos. 9 Storm collar

