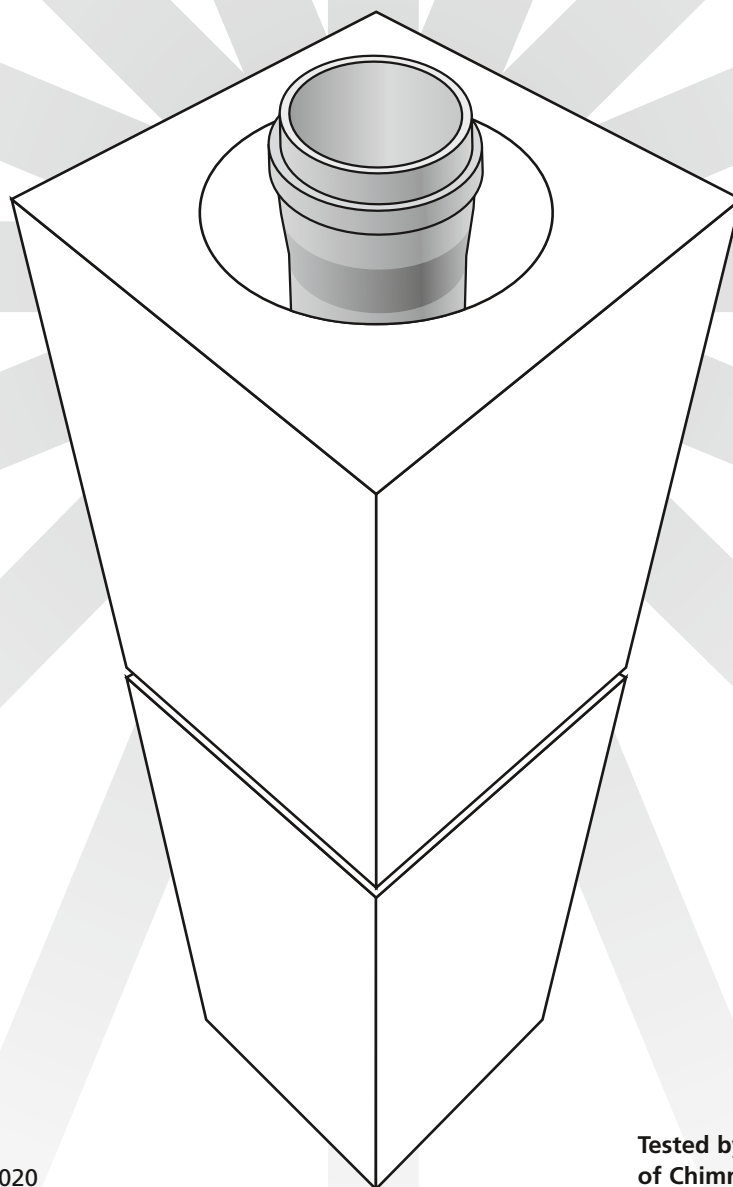


*Technical information  
and assembly instructions*

**PORIFIX®**  
as "condensing chimney"  
(complete system)



Last amended: February 2020



Tested by the Federal Association  
of Chimney Sweeps (ZIV)

# Description

## *The system*

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PORIFIX® is a shaft system with a fire resistance of 90 minutes in compliance with General Building Inspection Certificate Z-7.4-3433. The exhaust gases are guided into the PP (polypropylene, flame-retardant) exhaust gas pipe. The suitability certification of the exhaust gas line is obtained via EC conformity declaration 0036 CPD 9184 001. Polypropylene overpressure exhaust gas pipes have a diameter of up to Ø 80 mm in PORIFIX®. The advantage of this system lies in its combination of two outstanding materials. The PORIFIX® shaft made from aerated concrete encases the pipe and provides fire resistance protection. The annular gap between the plastic exhaust gas pipe and the shaft back-ventilates the system. Depending on the way that the fireplace is used, air is sucked into the annular gap for combustion, or ambient air is discharged parallel to the direction of the exhaust gas.

## *Usage location*

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PORIFIX® can be used in low- and medium-height buildings, regardless of their building classification. Your local building regulations office is always available for region-specific coordination. PORIFIX® can be used in lengths of up to 30 m.

## *The “boiler”*

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PORIFIX® should only be used in combination with condensing appliances. The feeding of exhaust gases with temperatures up to 120°C is allowed. Both oil- and gas-fueled appliances can be connected. Both positive and negative pressure can be used to direct exhaust gases to terminate at the roof. The system is specially designed for Room Sealed Fan flued appliance operation. This means that there is no need for separate ventilation openings, slots in doors or even safety devices for different exhaust air fans. The drawn in combustion air is pre-warmed, condensing mode is increased and system efficiency is therefore boosted.

## *The ceiling connection element*

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The patented ceiling connection element makes installing and operating the PORIFIX® system particularly easy.

The height of the connection from the condensing appliance to the shaft can be varied. The connection can be steplessly adjusted horizontally thanks to its circular cross-section. This means that the connection can be installed precisely in line with the connecting line. Time-consuming, costly elbows and ascenders are no longer needed. This will also make your chimney sweep happy, as he can now carry out a visual inspection very simply.

The ceiling connection element has a supply air inspection opening. A chimney sweep can check the outer annular gap by simply pulling off the supply air cover.

This means that all of the tests can be performed from the room in which the fireplace is installed. Additional cleaning openings, roof hatches, stepping grates, standing areas, etc. can thus be eliminated.

## *The roof duct*

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The coaxial roof duct allows the outlet to be quickly made and integrated into the roof surface. The universal adjustable roof tile seals roofs with 25°–45° pitches. This eliminates expensive edging, scaffolding and cranes. The roof is also rapidly sealed up, which is particularly advantageous in bad weather.

# Planning instructions

## Regulations governing execution

The execution and installation are subject to DIN V18160-1, building regulations of the respective state, test certificate Z-7.4-3433 and EC conformity declaration 0036 CPD 9184 001. Before installing PORIFIX®, the planned construction must be agreed with the chimney sweep / local planning authority.

The original components provided have to be used. The following installation instructions and regulations must be observed.

Bespoke solutions must be drawn up in accordance with the recognised rules of technology and in coordination with other maintenance groups.

## Heights above the roof

The information in the fire protection regulations of the respective federal states (LFeuVo) and the TRGI/TRÖL (Technical Rules for Gas-Oil Installations) are particularly relevant here. As a rule, a distance of 40 cm from the roof surface is sufficient for room sealed appliances up to 50 kW output. For room air-dependent operation (open vent), the distance to the roof surface must be 1 m or the distance over the roof ridge must be at least 40 cm.

Distances from openings in rooms and roof structures must be observed in accordance with the above regulations. As a rule, windows within a radius of up to 1.5 m (8.0 m in Bavaria) must have an overhang of 1.0 m.

## Firing dimensioning

EN 13384 is applicable for this dimensioning. The maximum nominal output depends on the design of the condensing fireplace as well as the delivery pressure available.

As a rule, commercially available devices with an output of up to 35 kW (exhaust gas line D 80) or 19 kW (exhaust gas line D 60) can be installed. Fireplace delivery pressures exceeding 90 Pa must be fulfilled with recognised devices. A proof of calculation in accordance with DIN EN 13384 must certify the correct dimensioning in all other cases (Skoberne calculation service).

## Cleaning and inspection openings

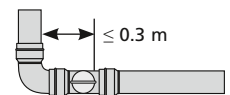
Cleaning and inspection openings for the chimney sweep trade are discussed in DIN V 18160-1. A lower inspection opening makes it possible to dispense with an additional cleaning and inspection opening. Similarly, the check from the outlet can be omitted. Elaborate and cost-intensive safety devices are not necessary.

In exhaust gas lines with a vertical pipe length of up to 15 m, the lower cleaning opening can be arranged...

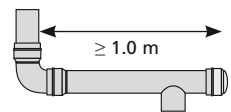
**Version 1** In the vertical part of the exhaust gas system directly above the insertion of the connector piece,



**Version 2** Laterally in the connector piece, 0.3 m at most away from the elbow in the vertical part of the exhaust gas system, or



**Version 3** At the front of a straight connector piece, 1.0 m at most away from the elbow in the vertical part of the exhaust gas system.



The execution has to be performed according to the regulations of the local planning authorities.

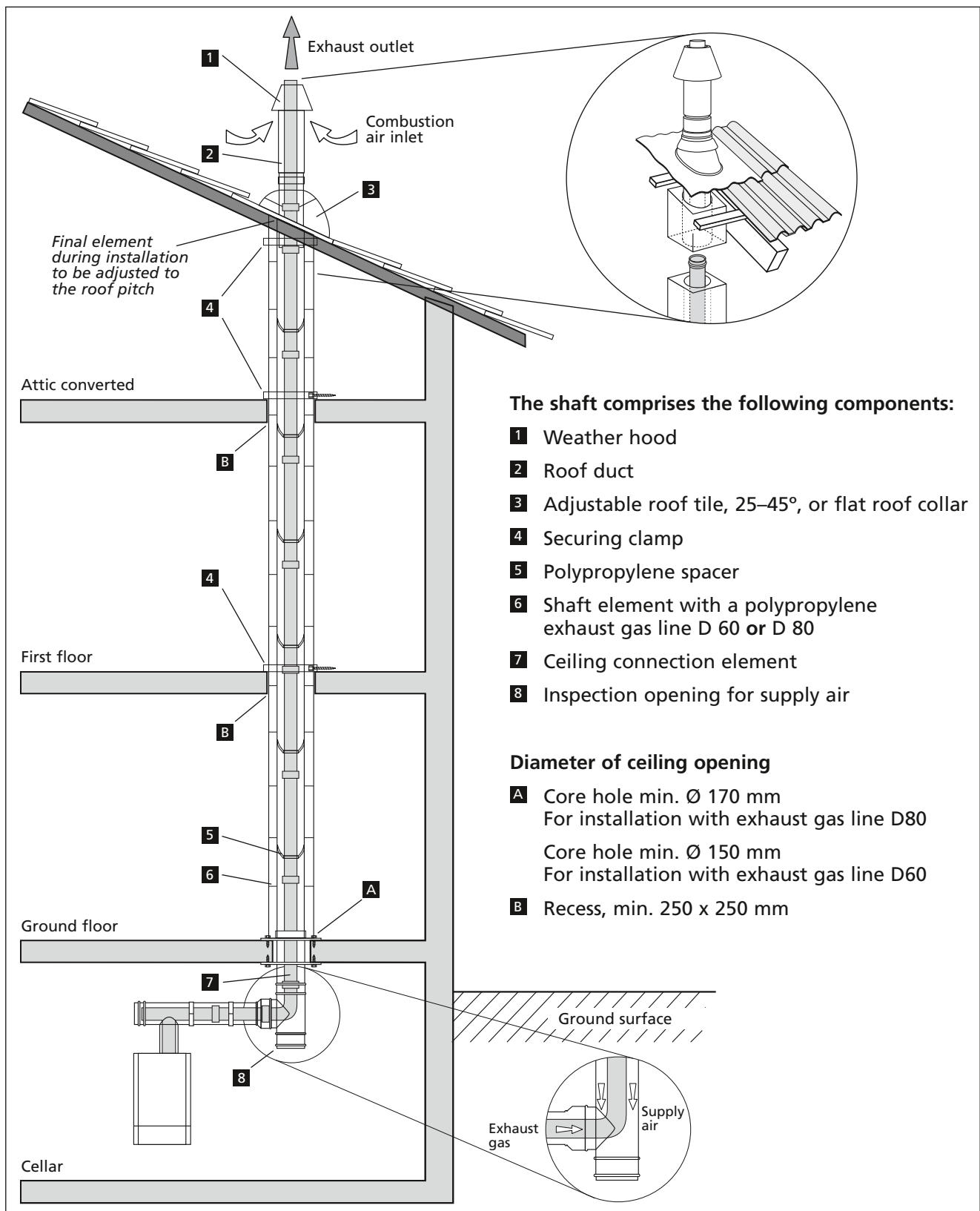
## Distances to combustible component parts

No particular distances from combustible component parts need to be observed when using PORIFIX®. Thanks to its low exhaust gas temperatures and integral ventilation, DIN V18160 allows PORIFIX® elements to be directly adjacent to components with or made of flammable materials.

## Snow protection above the roof

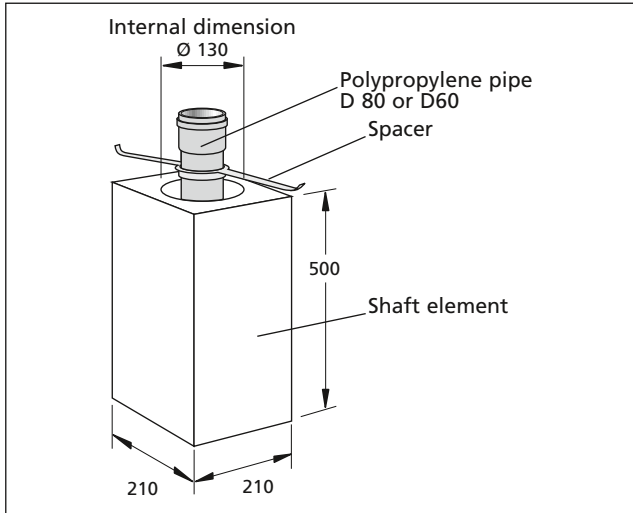
Depending on the position of the exhaust gas outlooks, it must be ensured that the roof duct is protected against extreme snow masses and avalanches. We recommend installing a snow guard above the concentric terminal.

# Overview of components

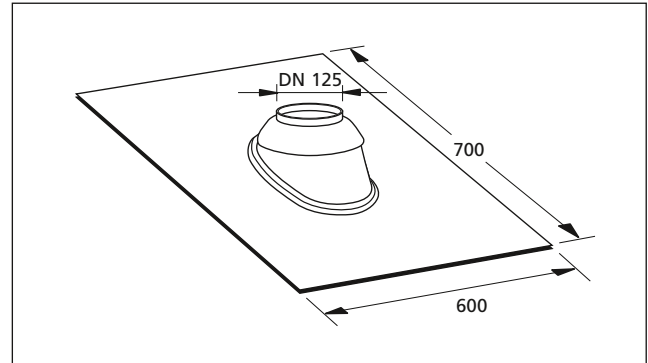


# Overview of components

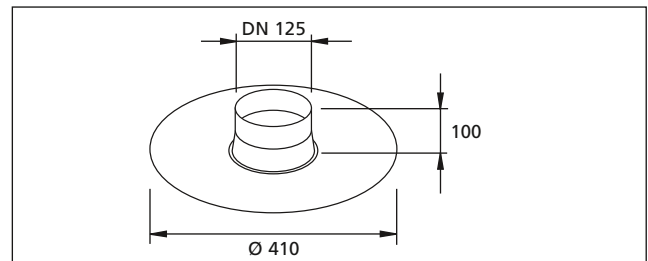
## PORIFIX® shaft element



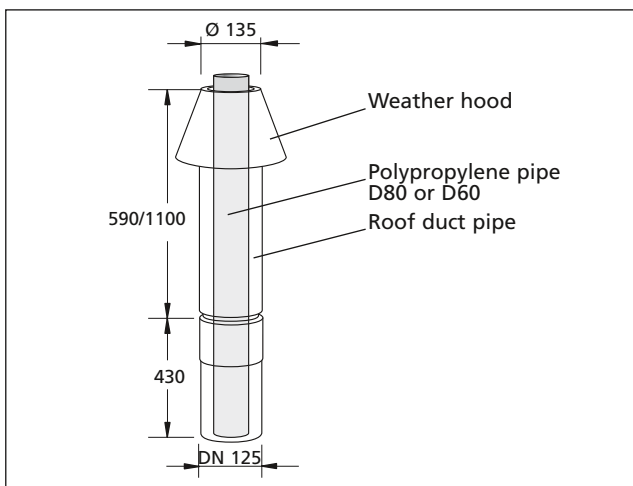
## Adjustable roof tile, 25–45°



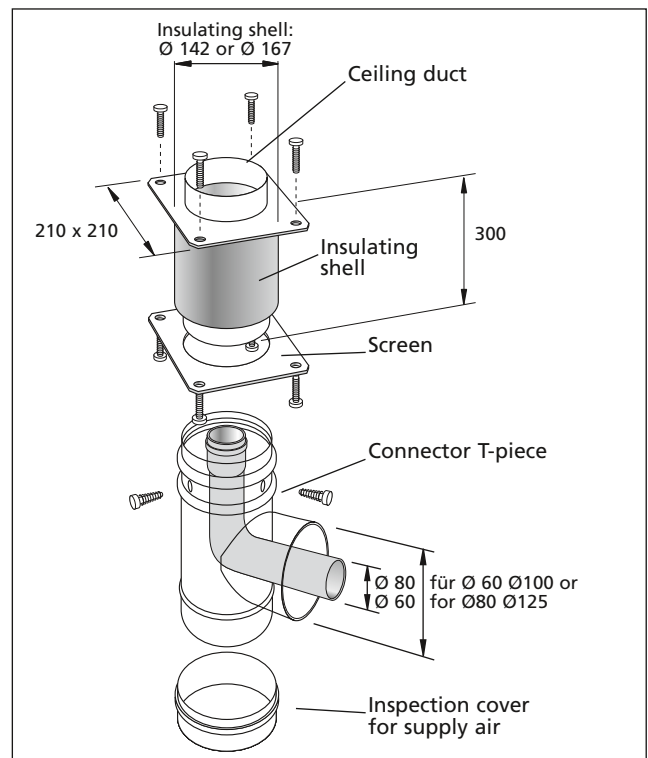
## Flat roof flashing



## Roof terminal



## Ceiling connection element

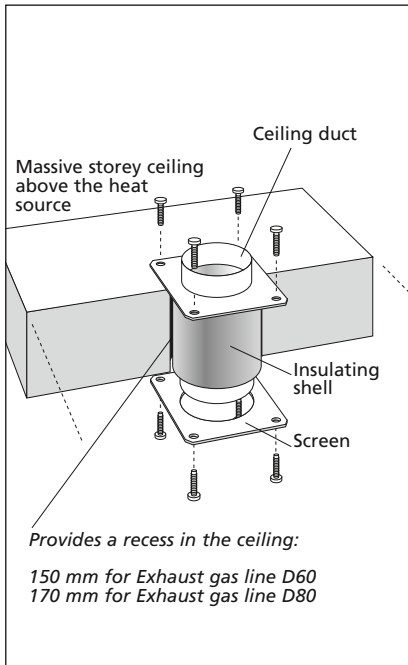


## PORIFIX® Basic package, consisting of:

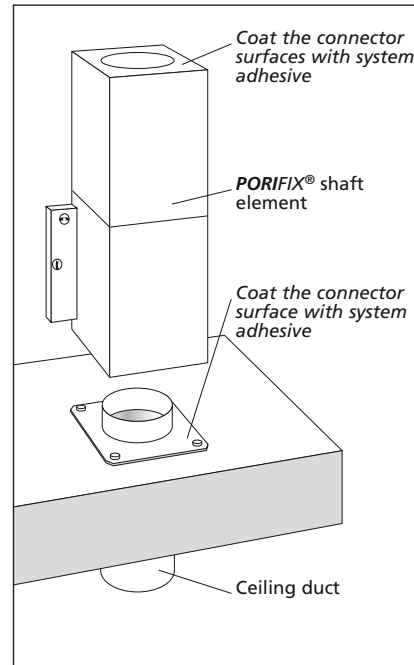
- Roof duct
- Adjustable roof tile, 25-45°, or flat roof collar
- Ceiling connection element

# Installation procedure

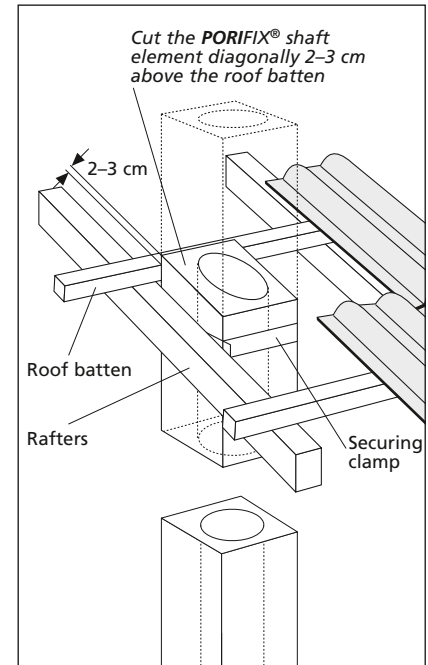
## 1 Installing the ceiling duct



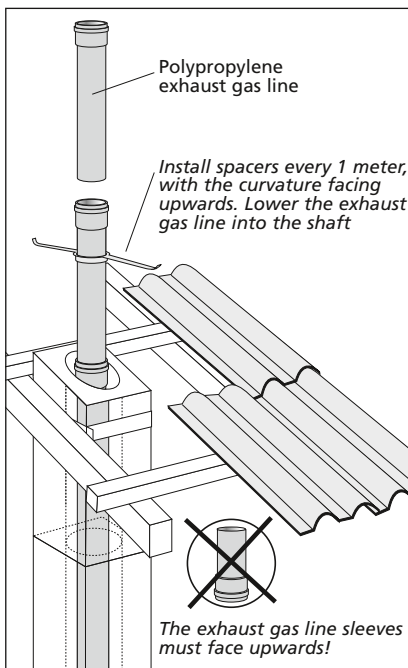
## 2 Installing the shaft elements



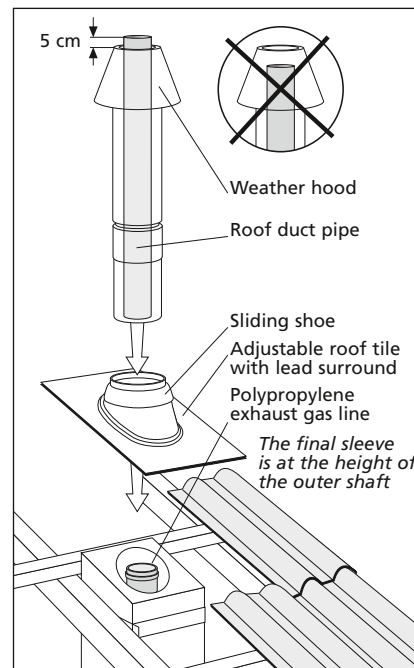
## 3 Installing the shaft in the roof area



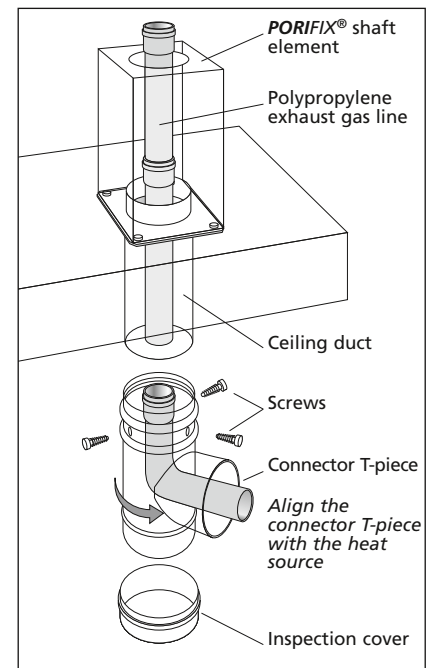
## 4 Installing the exhaust gas line



## 5 Installing the roof duct and adjustable roof tile



## 6 Installing the connector T-piece



### Important steps after completion of installation

- The approval sticker must be applied in a legible position in the area of the ceiling connector element.
- The installation documents, approval certificate and the test certificate must be made available to the chimney sweep.
- Before filling storey ceilings with screed, a border strip must also be fitted to the PORIFIX®.
- The surfaces of the PORIFIX® can be decorated as desired. Because of the low longitudinal expansion of the material, plaster, plaster-board and tiles can be applied directly to the shaft.
- The required expansion joints must be used when in contact with other components.

## Technical data

### PORIFIX® element

Material	Steam-hardened aerated concrete with integrated polypropylene plastic pipe, flame retardant
Exterior dimensions	210 x 210 mm
Cross-section	Ø 130 mm incl. D60 or D80 exhaust gas line
Height	500 mm
Weight per item	8.6 kg
Fire resistance	90 minutes
Gross density class	~ 0.45 – 0.5 kg/dm <sup>3</sup>
Heat source operating mode	Exhaust gas temperatures up to 120 °C for oil and gas operation Positive and negative exhaust gas flow
Calculated thermal conductivity value	0.12 W/(mK)

### System adhesive (processing instructions)

Form of delivery	Sack, 12 kg
Required amount of water for 14.5 kg	Approx. 5 litres
Processing temperature (ideal)	+5°C to +25°C
Shelf life	Min. 6 months, closed and dry
Storage temperature	Not below 5°C (sensitive to frost)
Adhesive surfaces	Dry, clean and free from grease
Curing	12 h

Presented by:

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*Subject to technical modifications*

Skoberne  
Schornsteinsysteme GmbH  
Ostendstraße 1  
64319 Pfungstadt  
Tel. +49 (0) 6157 8070-0  
Fax +49 (0) 6157 8070-70  
Email [info@skoberne.de](mailto:info@skoberne.de)  
[www.skoberne.de](http://www.skoberne.de)

*Last amended April 2020. item no. 791059EN*