

Decision

**amending the national technical approval /
general construction technique permit
of 6 Mai 2019**

**Zulassungsstelle für Bauprodukte und Bauarten
Bautechnisches Prüfamt**

Eine vom Bund und den Ländern
gemeinsam getragene Anstalt des öffentlichen Rechts

Mitglied der EOTA, der UEAtc und der WFTAO

Date:

6 Aug 2019

Reference number:

III 51-1.7.4-41/19

Approval number:

Z-7.4-3433

Validity

from: **6 August 2019**

to: **6 May 2024**

Applicant:

Skoberne Schornsteinsysteme GmbH

Ostendstraße 1

64319 Pfungstadt, Germany

Subject of approval:

**Autoclaved aerated concrete ducts with a fire resistance duration of 90 minutes to
accommodate flue liners T160 O00 LA90**

This decision renews national technical approval (*allgemeine bauaufsichtliche Zulassung*) / general construction permit (*allgemeine Bauartgenehmigung*) no. Z-7.4-3433 of 6 May 2019.

This decision contains one page. This decision applies only in conjunction with the above-mentioned national technical approval / general construction technique permit and shall not be used without it.

Rudolf Kersten
Head of Section

Drawn up by
Hajdel

Translation authorised by DIBt

DIBt

**National technical
approval /
General construction
technique permit**

**Zulassungsstelle für Bauprodukte und Bauarten
Bautechnisches Prüfamt**

Eine vom Bund und den Ländern
gemeinsam getragene Anstalt des öffentlichen Rechts

Mitglied der EOTA, der UEAtc und der WFTAO

Date:

06 May 2019

Reference:

III 51-1.7.4-35/18

Number:

Z-7.4-3433

Applicant:

Skoberne Schornsteinsysteme GmbH
Ostendstraße 1
64319 Pfungstadt, Germany

Validity

from: **6 May 2019**

to: **6 May 2023**

Subject of decision:

**Autoclaved aerated concrete ducts with a fire resistance duration of 90 minutes to
accommodate flue liners T160 O00 LA90**

The subject named above is herewith granted a national technical approval (*allgemeine bauaufsichtliche Zulassung*) / general construction technique permit (*allgemeine Bauartgenehmigung*). This decision contains six pages and seven annexes.

Translation authorised by DIBt

DIBt

I GENERAL PROVISIONS

- 1 This decision confirms the fitness for use and application of the subject concerned in accordance with the Building Codes of the federal states (*Landesbauordnungen*).
- 2 This decision does not replace the permits, approvals and certificates required by law for carrying out construction projects.
- 3 This decision is granted without prejudice to the rights of third parties, in particular private property rights.
- 4 Notwithstanding further provisions in the 'Special Provisions', copies of this decision shall be made available to the user and installer of the subject concerned. The user and installer of the subject concerned shall also be made aware that this decision must be made available at the place of use or place of application. Upon request, copies of the decision shall be provided to the authorities involved.
- 5 This decision shall be reproduced in full only. Partial publication requires the consent of DIBt. Texts and drawings in promotional material shall not contradict this decision. In the event of a discrepancy between the German original and this authorised translation, the German version shall prevail.
- 6 This decision may be revoked. The provisions contained herein may subsequently be supplemented and amended, in particular if this is required by new technical findings.
- 7 This decision is based on the information and documents provided by the applicant. Alterations to this basis are not covered by this decision and shall be notified to DIBt without delay.
- 8 The general construction technique permit included in this decision also serves as a national technical approval for the construction technique.

II SPECIAL PROVISIONS

1 Subject concerned and field of use and application

The subject concerned is rectangular outer walls (ducts) for chimneys with the designation "Skoberne UNIFIX" made of non-combustible autoclaved aerated concrete formed bricks and designed for accommodating flue liners with round cross-sections. The outer walls (ducts) are manufactured from the above-mentioned concrete blocks at the applicant's manufacturing plant.

The outer walls may be used for chimneys with round flue liners in accordance with DIN V 18160¹.

The characteristics of the outer walls (ducts) made of autoclaved aerated concrete formed bricks correspond to classification T160 O00 LA90². The temperature class of the duct shall only apply if a class T160 flue liner is used. The temperature class of the duct shall be determined by the temperature class of the flue liner used. Class O00 requires a ventilated annular gap between the flue liner and the duct of at least 20 mm. The tightness of the installed chimney shall correspond to the tightness class of the flue liner used.

For an application comprising positive pressure flue liners, the outer wall shall always be ventilated.

2 Provisions for the construction product

2.1 Properties and composition

The ducts essentially consist of the duct elements (autoclaved aerated concrete formed bricks) including jointing materials, the ceiling connection fitting and the ceiling penetration. They shall meet the specifications given in Annexes 1 to 6.

2.1.1 Duct elements

The outer walls (ducts) made of steam-cured autoclaved aerated concrete masonry units in accordance with DIN EN 771-4³ shall correspond to strength classes 2 or 4 and density class 0.50 in accordance with DIN V 20000-404:2006-01⁴ and to declarations of performance no. 49000921, 49000922 or 49000102.

The wall thickness of the ducts shall be at least 37.5 mm for clear cross-sections up to 165 mm, at least 45 mm for clear cross-sections up to 210 mm, at least 60 mm for clear cross-sections up to 280 mm and at least 62.5 mm for clear cross-sections up to 325 mm. The maximum height of the duct elements shall be 1000 mm, the maximum floor height shall be 5000 mm.

2.1.2 Jointing material

The individual duct elements shall be jointed using group III mortars or thin-layer mortars in accordance with DIN EN 998-2⁵ and declaration of performance no. 110201-04-EN998-2-T.

1	DIN V 18160-1:2006-01	Chimneys – Part 1: Design and execution
2	LA90	Marking of the fire resistance of chimneys in accordance with DIN V 18160-60:2014-02 Chimneys – Part 60: Assessment of fire resistance for chimneys and components of chimneys – Definitions, requirements and test methods
3	DIN EN 771-4: 2011-07	Specification for masonry units – Part 4: Autoclaved aerated concrete masonry units
4	DIN V 20000-404:2006-01	Application of building products in structures – Part 404: Rules for the application of autoclaved aerated concrete masonry units according to DIN EN 771-4:2005-05
5	DIN EN 998-2:2017-02	Specification for mortar for masonry – Part 2: Masonry mortar, German version EN 998-2:2016

2.1.3 Ceiling connection fitting

The ceiling connection fitting in accordance with the specifications given in Annex 4 consists of 0.6 mm thick galvanised sheet steel or 1.0 mm thick aluminium and provides the outer wall of the chimney in the heating room.

2.1.4 Ceiling penetration

To create the ceiling penetration, a sleeve of 0.6 mm thick galvanised sheet steel fitted with a 20 mm thick mineral fibre insulation layer in accordance with national technical test certificate P-MPA-E-98-011 of 31 March 1999 by the Materials Testing Office of North Rhine-Westphalia (MPR NRW) shall be used.

2.2 Manufacture and marking

2.2.1 Manufacture

The outer walls (ducts) shall be prefabricated in the manufacturing plant of the applicant.

2.2.2 Marking

The delivery note of the duct elements shall be marked by the manufacturer with the national conformity mark (*Ü-Zeichen*), specifying the classification T160 LA90 O00 in accordance with the Conformity Marking Ordinances (*Übereinstimmungszeichen-Verordnungen*) of the federal states.

The mark shall only be applied if the provisions set out in Section 2.3 'Confirmation of conformity' are met. The duct elements shall be marked by the manufacturer in a clearly legible and permanent manner with the manufacturer name and plant or plant code.

2.3 Confirmation of conformity

2.3.1 General

The manufacturer shall confirm for each manufacturing plant that the construction product complies with the provisions of the national technical approval included in this decision by way of a confirmation of conformity based on factory production control and a certificate of conformity issued by a certification body recognised for these purposes as well as on regular external surveillance carried out by a recognised inspection body in accordance with the following provisions.

To issue the certificate of conformity and for external surveillance including the associated product testing, the manufacturer of the construction product shall use a certification body and an inspection body recognised for these purposes.

The declaration of conformity shall be submitted by the manufacturer through marking of the construction product with the national conformity mark including statement of the intended use.

The certification body shall send a copy of the certificate of conformity issued by it to DIBt.

2.3.2 Factory production control

A factory production control system shall be set up and implemented in the manufacturing plant. Factory production control shall be understood to be continuous surveillance of production by the manufacturer to ensure that the manufactured construction products satisfy the provisions of the national technical approval included in this decision. The factory production control shall at least include the following checks:

Section	Component	Property	Frequency	Basis
2.1.1	Duct element	Composition Dimensions	with each delivery	DIN EN 771-4 Annexes 1 to 6
2.1.2	Jointing material	Delivery specifications	with each delivery	DIN 998-2
2.1.3	Ceiling connection	Material	with each fabrication	Delivery specifications
2.1.4	Ceiling penetration	Conformity verification	with each delivery	National technical test certificate P-MPA-E-98-011

The results of factory production control shall be recorded and evaluated. The records shall include at least the following information:

- designation of the construction product or the starting material and the components
- type of check or test
- date of manufacture and testing of the construction product and the components
- results of the checks and tests as well as, if applicable, comparison with requirements
- signature of the person responsible for factory production control.

The records shall be kept for at least five years and shall be submitted to the inspection body used for external surveillance. They shall be submitted to DIBt and the competent supreme building authority upon request. If the test result is unsatisfactory, the manufacturer shall immediately take the necessary measures to resolve the defect. Construction products which do not meet the requirements shall be handled in such a way that they cannot be confused with compliant products. After the defect has been remedied, the relevant test shall be repeated immediately – where technically feasible and necessary to show that the defect has been eliminated.

2.3.3 External surveillance

The factory production control system at the manufacturing plant shall be inspected regularly, i.e. at least twice a year, by means of external surveillance. Initial type-testing of the construction product shall be carried out within the scope of external surveillance. In addition, samples shall be taken for random testing. The following tests shall be carried out on at least five samples:

Section	Component	Property	Frequency	Basis
2.1.1	Duct element	Composition Dimensions	twice a year	DIN EN 771-4 Annexes 1 to 6
2.1.2	Jointing material	Delivery specifications		DIN 998-2
2.1.3	Ceiling connection fitting	Material		Delivery specifications
2.1.4	Ceiling penetration	Conformity verification		National technical test certificate P-MPA-E-98-011

Sampling and testing shall be the responsibility of the recognised inspection body. The results of certification and external surveillance shall be kept for at least five years. They shall be submitted by the certification or inspection body to DIBt and the competent supreme building authority upon request.

3 Provisions for planning, design and execution

3.1 Planning

The provisions of DIN V 18160-1¹ shall apply to the planning of the outer walls (ducts) for chimneys accommodating the flue liners.

3.2 Design

The provisions of DIN V 18160-1¹, Clause 13 shall apply to the stability verification.

3.3 Execution

The manufacturer's jointing and installation instructions in conjunction with the provisions of DIN V 18160-1¹ shall apply. The duct elements shall only be jointed by trained personnel.

The outer walls (ducts) for chimneys executed in accordance with this general construction technique permit require confirmation of conformity with the specifications of this general construction technique permit.

The contractor executing the chimney shall issue a written declaration of conformity to the client which confirms that this general construction technique permit has been adhered to during the execution of the chimney. The contractor shall verify the chimney marking in light of the specific construction elements used. The template provided in Annex 7 may be used for this purpose.

4 Provisions for use, maintenance and repair

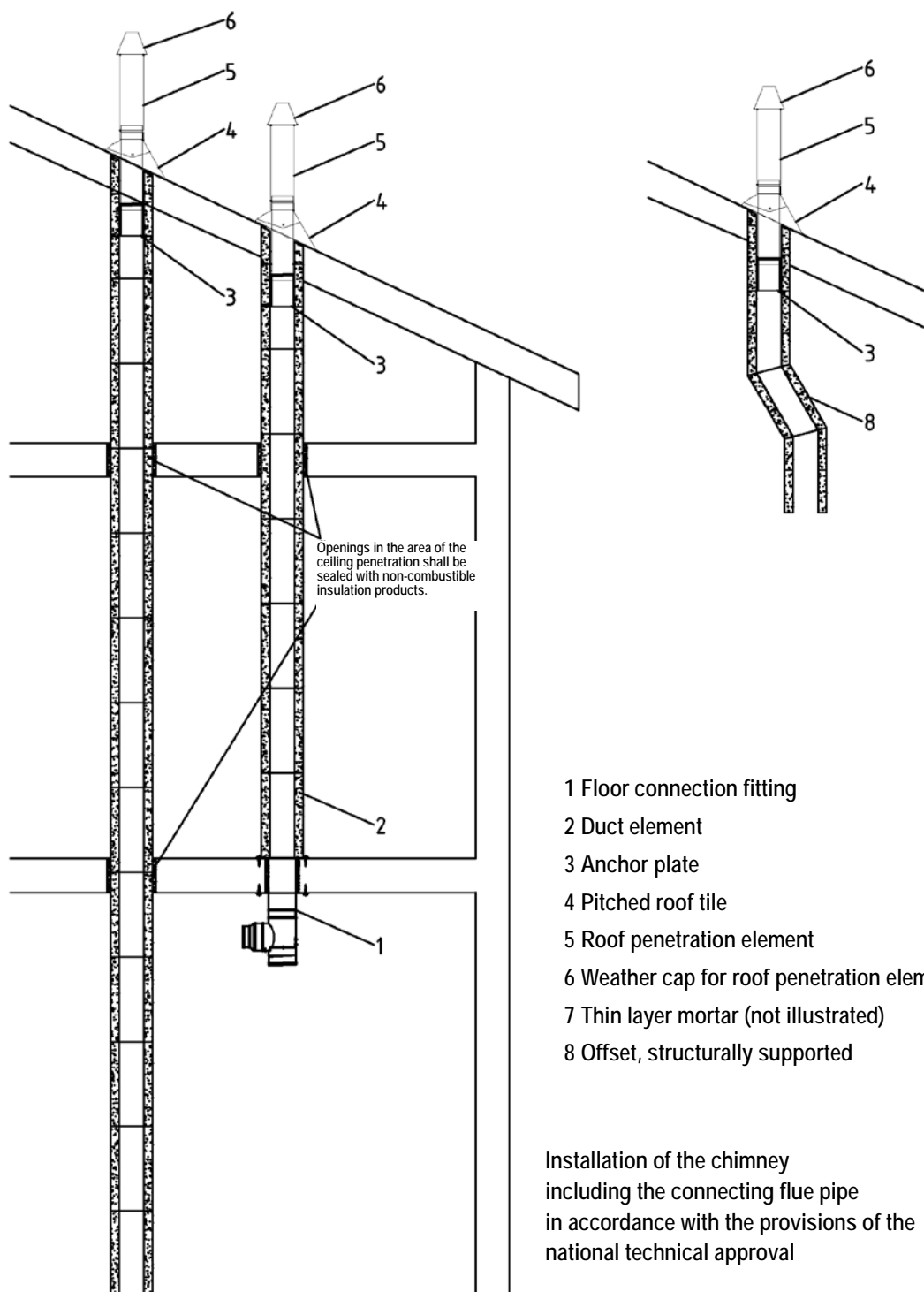
The ducts shall be constructed from duct elements supplied by the same manufacturer. For the execution of the chimneys, the requirements of DIN V 18160-1¹ shall apply.

For the connection of the heating appliances as well as the cleaning openings, only specific duct elements shall be used. The required openings may also be cut out to size from the duct elements on site. Plugs for connections which are not used temporarily shall be supplied and shall meet the requirements for the duct elements.

Rudolf Kersten
Head of Section

Drawn up by
Hajdel

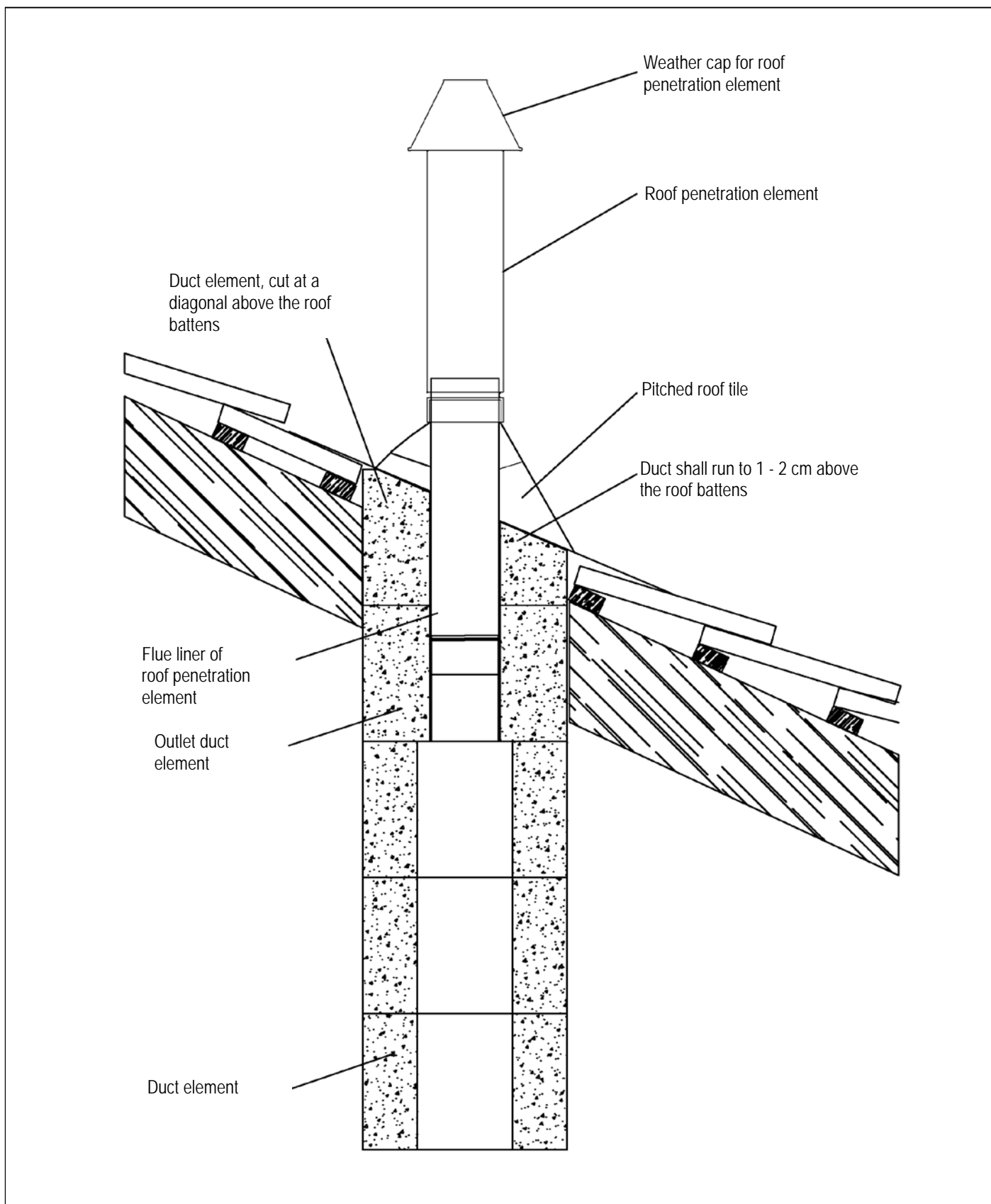
>> SKOBERNE – Duct <<



Autoclaved aerated concrete ducts with a fire resistance duration of 90 minutes to accommodate T160 O00 LA90 flue liners

Duct for accommodating flue liners

Annex 1

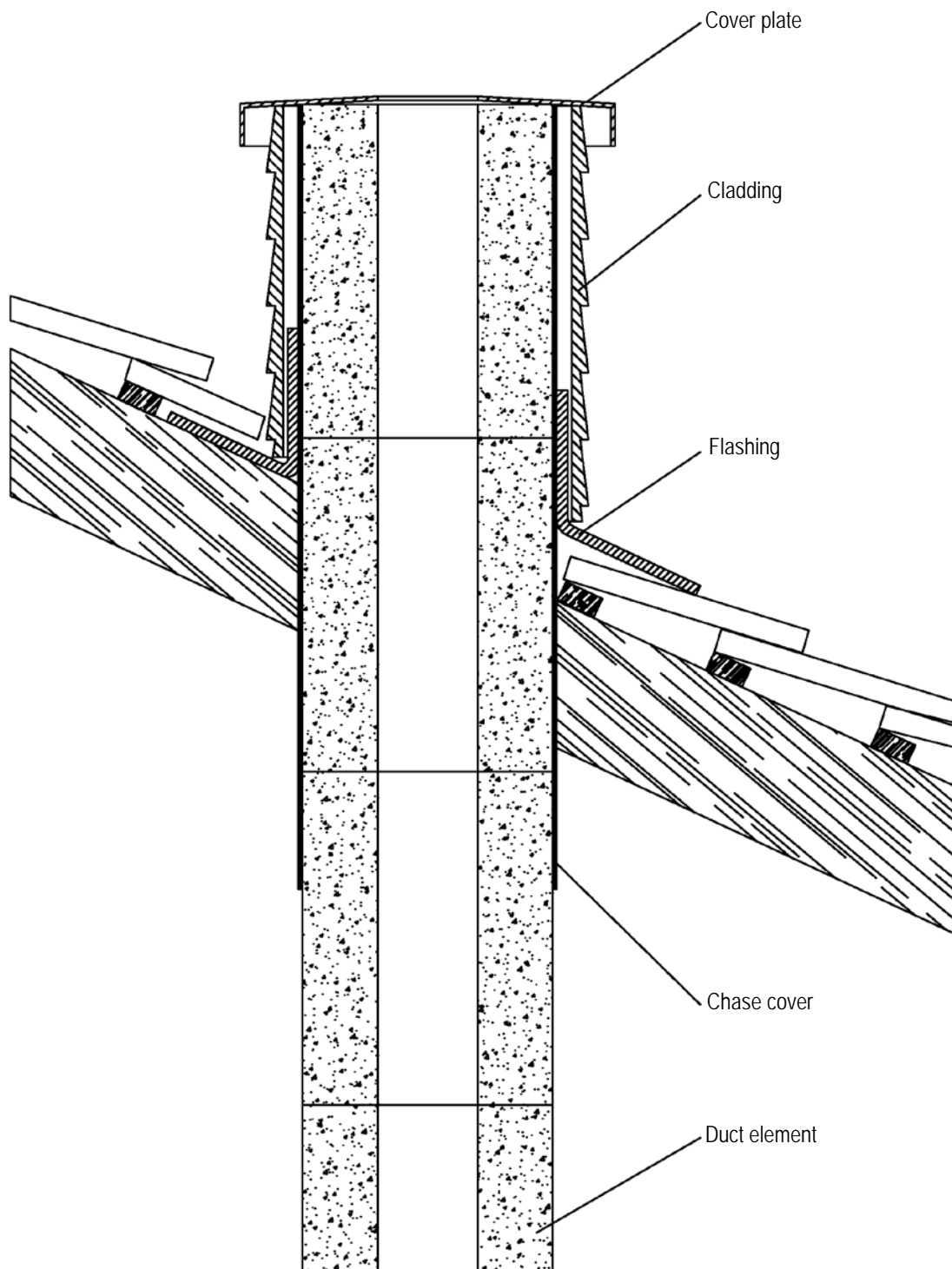


Autoclaved aerated concrete ducts with a fire resistance duration of 90 minutes to accommodate T160 O00 LA90 flue liners

Duct for accommodating flue liners – roof penetration example 1

Annex 2

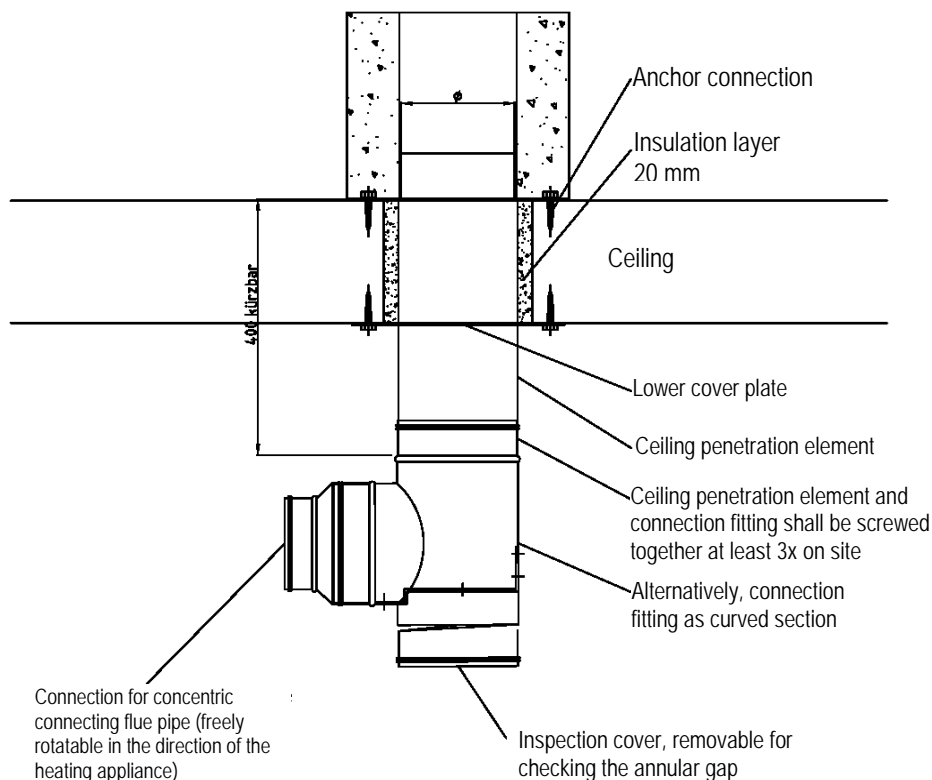
Chimney, roof penetration, extensions and terminals in accordance with the provisions of the approval for the chimney.



Autoclaved aerated concrete ducts with a fire resistance duration of 90 minutes to accommodate T160 O00 LA90 flue liners

Duct for accommodating flue liners – roof penetration example 2

Annex 3

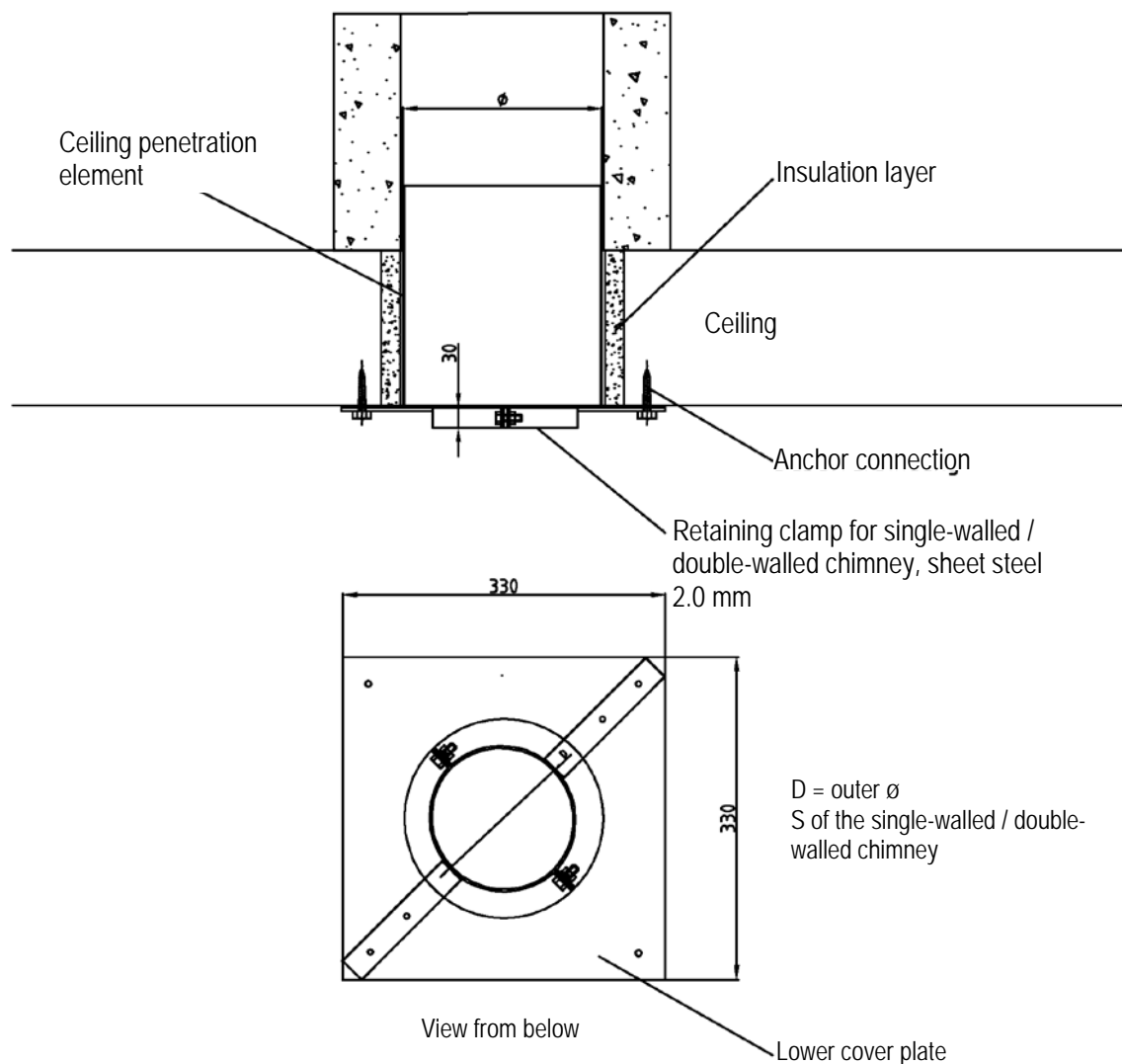


Ceiling penetration element with connection fitting
 for duct elements up to \varnothing 210 mm

Autoclaved aerated concrete ducts with a fire resistance duration of 90 minutes to accommodate T160 O00 LA90 flue liners

Duct for accommodating flue liners – ceiling penetration element with connection fitting for duct elements up to \varnothing 210 mm

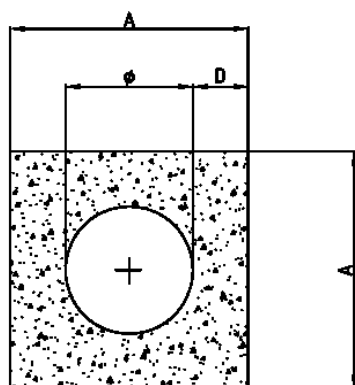
Annex 4



Ceiling penetration with retaining clamp for duct elements up to $\varnothing 210$ mm

Autoclaved aerated concrete ducts with a fire resistance duration of 90 minutes to accommodate T160 O00 LA90 flue liners	Annex 5
Duct for accommodating flue liners – ceiling penetration with retaining clamp for duct elements up to $\varnothing 210$ mm	

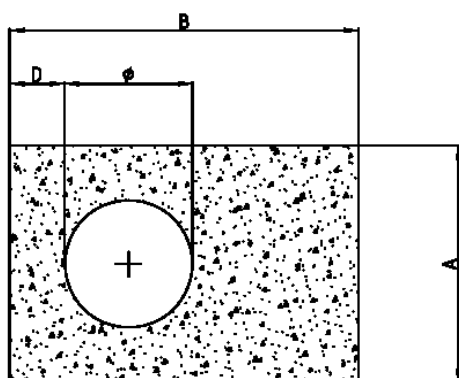
\varnothing (mm)	A (mm)	D (mm)	Remarks
130	210	37.5	Duct can be mounted on ceiling above heating appliance
155	240	42.5	
165	240	37.5	
210	300	45	
240	360	60	Duct starts at basement floor
250	400	75	
280	400	60	
325	450	62.5	



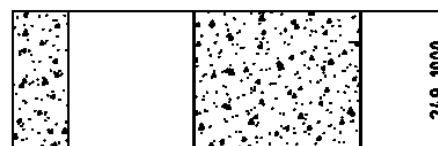
The duct elements may be equipped with tongue and groove profiles. The minimum wall thickness shall be adhered to.



\varnothing (mm)	A (mm)	B (mm)	D (mm)
155	240	624	42.5
165	240	624	37.5
150	300	624	75
150	360	332	105
210	300	624	45
210	360	332	75



The duct elements may be equipped with tongue and groove profiles. The minimum wall thickness shall be adhered to.



Autoclaved aerated concrete ducts with a fire resistance duration of 90 minutes to accommodate T160 O00 LA90 flue liners

Duct for accommodating flue liners – duct elements and dimensions

Annex 6

Information for the owner

Declaration of the executing company on the installation of the chimney

This declaration shall be completed by the executing company / specialised company after completion of the chimney and submitted to the building owner (client). Technical data sheets (accompanying leaflets) for the components used may be included for further information.

Building address:

Street / number:
 Postcode / place:

Description of the installed / executed chimney

Approval number: Z-7.4-3433

Type / trade name / system:

Classification of chimney in accordance with DIN V 18160-1:2006-01:
 (e.g. T160 N1 D 3 O00 LA 90)

Operation mode:

Components used

Duct element: "Skoberne" in accordance with this general construction technique permit
 Type: Skoberne

Classification: T160 LA90 G00

Flue liner: in accordance with standard:
 (Type, material)
 Classification:

Thermal insulation layer: in accordance with standard:
 (Type, material)
 Classification:

Thermal insulation layer: in accordance with approval no.:
 Classification:

Flue sizing by

Verification of stability by/using

Address of executing company / specialised company:

Company name: Street / number:
 Postcode / place:
 Country:

We hereby declare that we have installed the chimney in accordance with the provisions of the above-mentioned national technical approval / general construction technique permit and the installations instructions provided by the chimney manufacturer.

Place, date (Signature of responsible representative of the executing company)

Porenbetonschächte mit einer Feuerwiderstandsdauer von 90 Minuten zur Aufnahme von Abgasleitungen T160 O00 LA90

Example for the confirmation of conformity

Annex 7