

DIN EN 1858

DIN

ICS 91.060.40; 91.100.30

Supersedes
DIN EN 1858:2009-02
See start of application

**Chimneys –
Components –
Concrete flue blocks
English translation of DIN EN 1858:2011-09**

Abgasanlagen –
Bauteile –
Betonformblöcke
Englische Übersetzung von DIN EN 1858:2011-09
Conduits de fumée –
Composants –
Conduits de fumée simple et multiparois en béton
Traduction anglaise de DIN EN 1858:2011-09

Document comprises 57 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.



A comma is used as the decimal marker.

Start of application

The start of application of this standard is due to be 1 March 2012.

DIN EN 1858:2009-02 may be used in parallel until 31 March 2013 (see deadline in the EU Official Journal).

It should be noted that, in Germany, CE conformity marking of construction products will be permitted once this standard has been listed in the *Bundesanzeiger* (German Federal Gazette) and from the date given therein.

National foreword

This standard has been prepared by Technical Committee CEN/TC 166 “Chimneys” (Secretariat: ASI, Austria).

The responsible German body involved in its preparation was the *Normenausschuss Bauwesen* (Building and Civil Engineering Standards Committee), Working Committee NA 005-11-36 AA *Abgasanlagen aus Keramik und Beton* (SpA CEN/TC 166/WG 3 und WG 5).

Amendments

This standard differs from DIN EN 1858:2009-02 as follows:

- a) in Clause 1 “Scope”, first sentence, the word “system” has been deleted before “chimneys”;
- b) in Clause 2 “Normative references”, the date of issue of ISO 7500-1 has been corrected to read ISO 7500-1:2004.

Previous editions

DIN EN 1858: 2003-10, 2009-02

English Version

Chimneys - Components - Concrete flue blocks

Conduits de fumée - Composants - Conduits de fumée
simple et multiparois en béton

Abgasanlagen - Bauteile - Betonformblöcke

This European Standard was approved by CEN on 1 November 2008 and includes Amendment 1 approved by CEN on 14 May 2011.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels



Contents

Page

Foreword.....	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Materials	7
4.1 General.....	7
4.2 Reaction to fire.....	7
5 Reinforcement for handling.....	8
6 Surface treatment	8
7 Form, dimensions and tolerances	8
7.1 Form	8
7.2 Type B flue blocks	8
7.3 Tolerances	9
7.4 Straightness	10
7.5 Squareness of ends.....	10
8 Performance	10
8.1 Heat stress resistance.....	10
8.2 Heat shock resistance	10
8.3 Thermal resistance	11
8.4 Gas tightness	11
8.5 Abrasion resistance	12
8.6 Compressive strength.....	12
8.7 Corrosion resistance	12
8.8 Condensate resistance	13
8.9 Bulk density.....	13
8.10 Flexural strength under wind loading	13
8.11 Flow resistance	13
8.12 Freeze-thaw resistance	14
8.13 Resistance to fire external to external.....	14
8.14 Dangerous substances	14
9 Designation	14
9.1 General.....	14
9.2 Temperature class	15
9.3 Pressure class.....	15
9.4 Resistance to fire class	16
9.5 Resistance to condensate class	16
9.6 Corrosion resistance class.....	16
10 Marking	17
11 Product information.....	17
12 Evaluation of conformity.....	17
12.1 General.....	17
12.2 Initial type testing	18
12.3 Further type tests.....	18
12.4 Factory production control.....	18
Annex A (normative) Test methods	19

A.1	Squareness of ends test.....	19
A.2	Straightness test	21
A.3	Heat stress resistance and heat shock test.....	22
A.4	Thermal resistance	27
A.5	Gas tightness test	29
A.6	Abrasion resistance test.....	31
A.7	Compressive strength test	32
A.8	Corrosion and condensate resistance test.....	33
A.9	Flexural strength under wind load.....	36
A.10	Bulk density	37
A.11	Ultimate compressive strength.....	38
Annex B	(informative) Examples of concrete flue block shapes	39
B.1	Straight flue blocks	39
B.2	Flue block fittings - Tee/access/connection unit	40
B.3	Examples of Type B flue block shapes	41
Annex C	(normative) Thermal resistance calculation method	43
C.1	Thermal resistance of the individual element	43
C.2	Thermal resistance of the chimney and of enclosures	43
Annex D	(normative) Requirements of sampling plan according to ISO 2859-1:1999 at an Acceptable Quality Level (AQL) of 10 % and inspection level S2	44
D.1	Acceptability determination	44
D.2	Normal inspection	44
D.3	Reduced Inspection	46
D.4	Reduced to normal inspection.....	47
D.5	Tightened inspection	47
D.6	Tightened to normal inspection.....	47
D.7	Discontinuation of inspection.....	47
Annex E	(informative) Recommended test sequence	48
Annex ZA	(informative) Clauses of this European standard addressing the provisions of the EU Construction Products Directive	49
ZA.1	Relationship between EU Directives and this European Standard	49
ZA.2	Procedure of attestation of conformity of concrete flue blocks.....	51
ZA.3	CE Marking and labelling	52
Bibliography	55

Foreword

This document (EN 1858:2008+A1:2011) has been prepared by Technical Committee CEN/TC 166 “Chimneys”, the secretariat of which is held by  ASI .



This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2011, and conflicting national standards shall be withdrawn at the latest by March 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

For the relationship with the EU Directives, see informative Annex ZA, which is an integral part of this standard.

In this European Standard, the Annexes A, C and D are normative (not forming part of the product specification) and Annexes E and ZA are informative.

This document includes Amendment 1 approved by CEN on 14 May 2011.

The start and finish of text introduced or altered by amendment is indicated in the text by tags  .

This document supersedes  EN 1858:2008 .

This Standard is one of a series of co-ordinated standards dealing with specification, design, testing and installation of chimneys, both single and multi wall.

The co-ordinated package of standards is further divided by material of construction and this European Standard is one of a series of specifications and execution documents dealing with design and installation of concrete chimney products and systems.

The standards in this series for concrete chimney products and systems are:

EN 1857, *Chimneys — Components — Concrete flue liners*;

EN 1858, *Chimneys — Components — Concrete flue blocks*;

EN 12446, *Chimneys — Components — Concrete outer wall elements*.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.