

BS EN 60335-2-8:2015+A1:2016



BSI Standards Publication

Household and similar electrical appliances — Safety

Part 2-8: Particular requirements for shavers, hair clippers and similar appliances

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National foreword

This British Standard is the UK implementation of EN 60335-2-8:2015+A1:2016. It is derived from IEC 60335-2-8:2012, incorporating amendment 1:2015. It supersedes BS EN 60335-2-8:2015, which will be withdrawn on 28 December 2018.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to IEC text carry the number of the IEC amendment. For example, text altered by IEC amendment 1 is indicated by A1 A1.

The CENELEC common modifications have been implemented at the appropriate places in the text. The start and finish of each common modification is indicated in the text by tags C C.

The UK participation in its preparation was entrusted by Technical Committee CPL/61, Safety of household and similar electrical appliances, to Subcommittee CPL/61/1, Motorised appliance group.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

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Amendments/corrigenda issued since publication

Date	Text affected
30 April 2016	Implementation of IEC amendment 1:2015 with CEN endorsement A1:2016

English Version

Household and similar electrical appliances - Safety -
Part 2-8: Particular requirements for shavers, hair clippers and
similar appliances
(IEC 60335-2-8:2012 , modified)

Appareils électrodomestiques et analogues - Sécurité -
Partie 2-8: Exigences particulières pour les rasoirs, les
tondeuses et appareils analogues
(IEC 60335-2-8:2012 , modifiée)

Sicherheit elektrischer Geräte für den Hausgebrauch und
ähnliche Zwecke - Teil 2-8: Besondere Anforderungen für
Rasiergeräte, Haarschneidemaschinen und ähnliche Geräte
(IEC 60335-2-8:2012 , modifiziert)

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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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

This document (EN 60335-2-8:2015) consists of the text of IEC 60335-2-8:2012 prepared by IEC/TC 61 "Safety of household and similar electrical appliances", together with the common modifications prepared by CLC/TC 61 "Safety of household and similar electrical appliances".

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-05-20
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-07-20

This document supersedes EN 60335-2-8:2003.

This Part 2-8 is to be used in conjunction with EN 60335-1:2012 and its amendments.

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 60335-2-8:2012 or in IEC 60335-1:2010 are prefixed "Z".

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

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s), see informative Annex ZZ, which is an integral part of this document.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 60335-2-8:2012 was approved by CENELEC as a European Standard with agreed common modifications.

Foreword to amendment A1

The text of document 61/5000/FDIS, future IEC 60335-2-8:2012/A1, prepared by IEC/TC 61 "Safety of household and similar electrical appliances" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60335-2-8:2015/A1:2016.

The following dates are fixed:

- latest date by which the document has to be implemented at (dop) 2016-09-28
national level by publication of an identical national
standard or by endorsement
- latest date by which the national standards conflicting with (dow) 2018-12-28
the document have to be withdrawn

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

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive 2006/42/EC, see informative Annex ZZ, included in EN 60335-2-8:2015.

Endorsement notice

The text of the International Standard IEC 60335-2-8:2012/A1:2015 was approved by CENELEC as a European Standard without any modification.

Annex ZE (normative)

Specific additional requirements for appliances and machines intended for commercial use

Annex ZE of Part 1 is applicable with the following modifications:

1 Scope

Replacement:

This Annex ZE deals with additional requirements concerning appliances and machines intended to be used by expert or trained users in shops, in hairdressers, in light industry, on farms and appliances and machines which are declared to be for commercial use by lay persons.

NOTE ZE1 The statement from the manufacturer in the product information concerning the specific product is the criterion that has to be considered to determine the intended use of the appliance. The statement needs to reflect accurately the reasonably foreseeable use of the product.

After the last paragraph, add the following:

All products covered by this European Standard, except **animal shearers**, do not create a relevant noise hazard, therefore no specific provisions concerning noise emitted by such products are given.

NOTE ZE2 The comparable short-term noise exposure for the animal is considered to cause no relevant hazard.

2 Normative references

Replace the text by the following:

This clause of Part 1 is applicable except as follows.

Add the following standards:

EN ISO 5349-1, *Mechanical vibration – Measurement and evaluation of human exposure to hand-transmitted vibration – Part 1: General requirements* (ISO 5349-1)

EN ISO 5349-2, *Mechanical vibration – Measurement and evaluation of human exposure to hand-transmitted vibration – Part 2: Practical guidance for measurement at the workplace* (ISO 5349-2)

3 Terms and definitions

This clause of Annex ZE of Part 1 is applicable.

4 General requirement

This clause of Annex ZE of Part 1 is applicable.

7 Marking and instructions

This clause of Annex ZE of Part 1 is applicable except as follows:

7.12 Addition:

The instructions shall indicate the substance of the following:

“This appliance is designed to be used in commercial areas”.

7.12.ZE1

Replace the sixth bullet item by the following:

- On airborne noise emissions, determined and declared in accordance with Annex ZAA:
 - For all products except **animal shearers**, it shall be stated that the A-weighted sound pressure level is below 70 dB;
 - For **animal shearers**, the A-weighted emission sound pressure level where this exceeds 70 dB(A) shall be stated. If the A-weighted sound pressure level is below 70 dB, no value need be given, but the instructions shall state that the A-weighted sound pressure level is below 70 dB,"

Add a new seventh bullet item as follows:

- "The instructions shall give the following information concerning vibrations transmitted by the appliance to the hand-arm system:
 - the vibration total value to which the hand-arm system is subjected, measured according to EN ISO 5349-1 and EN ISO 5349-2, if it exceeds or equals 2,5 m/s², the uncertainty of measurement shall also be stated. If the value does not exceed 2,5 m/s², the instructions shall state that the vibration level is below 2,5 m/s²;

These values shall be either those actually measured for the machinery in question or those established on the basis of measurements taken for technically comparable machinery which is representative of the machinery to be produced."

19 Abnormal operation

This clause of Annex ZE of Part 1 is not applicable

20 Stability and mechanical hazards

This clause of Annex ZE of Part 1 is applicable.

21 Mechanical strength

This clause of Annex ZE of Part 1 is applicable.

22 Construction

This clause of Annex ZE of Part 1 is applicable except as follows:

22.ZE.6

This sub-clause is not applicable.

Annex ZAA (normative)

Emission of acoustical noise

ZAA.1 Noise reduction

Noise reduction at **animal shearers** is an integral part of the design process and shall be achieved by particularly applying measures at source to control noise, see for example EN ISO 11688-1. The success of the applied noise reduction measures is assessed on the basis of the actual noise emission values in relation to other appliances of the same type with comparable non-acoustical technical data.

ZAA.2 Noise test code

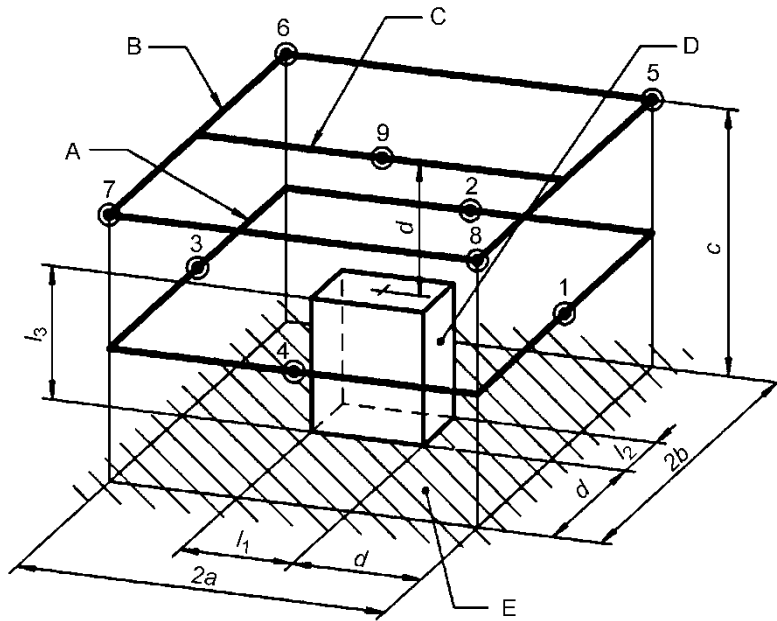
ZAA.2.1 Emission sound pressure level determination

The A-weighted emission sound pressure level is determined in accordance with EN ISO 11203 for appliances with $L = 8 \text{ dB(A)}$

ZAA.2.2 Sound power level determination

For the determination of the A-weighted sound power level, EN ISO 3744 shall be used, subject to the following modifications or additions:

- a) the microphones shall be arranged in accordance with Figure ZAA.101;
- b) the measurement surface shall be a parallelepiped with a measurement distance of $d = 1 \text{ m}$ from the reference box as defined in EN ISO 3744.



Key

- A measuring path 1
- B measuring path 2
- C measuring path 3
- D reference box
- E reflecting surface
- l_1, l_2, l_3 dimension of the parallelepiped
- d measurement distance
- 1 ... 9 microphone positions lateral position of microphone (for operator's position)

Figure ZAA.101 — Measurement area and positions of the microphones for appliances

ZAA.2.3 Mounting and installation conditions

The **animal shearer** under test shall be new. It shall be equipped with the shearing blade, as recommended by the manufacturer, which affects the acoustic properties causing the highest noise level.

The **animal shearer** shall be positioned so that its axis is at 45° between the microphone positions 1 – 4 and 2 – 3; its geometrical centre shall be 1 m above the ground (reflecting plane).

For measurement the animal shearer shall be fixed horizontally in a stable condition using the arrangement of Figure ZAA.102.