

Hand-held motor-operated electric tools — Safety —

Part 2-15: Particular requirements for hedge trimmers

The European Standard EN 60745-2-15:2006 has the status of a
British Standard

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National foreword

This British Standard was published by BSI. It is the UK implementation of EN 60745-2-15:2006. It was derived by CENELEC from IEC 60745-2-15:2006. It supersedes BS EN 50144-2-15:2001, which will be withdrawn on 1 May 2009.

The CENELEC common modifications have been implemented at the appropriate places in the text and are indicated by tags (e.g. [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/61/6, Portable motor-operated tools.

A list of organizations represented on CPL/61/6 can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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English version

**Hand-held motor-operated electric tools –
Safety
Part 2-15: Particular requirements for hedge trimmers
(IEC 60745-2-15:2006, modified)**

Outils électroportatifs à moteur –
Sécurité
Partie 2-15: Règles particulières
pour les taille-haies
(CEI 60745-2-15:2006, modifiée)

Handgeführte motorbetriebene
Elektrowerkzeuge –
Sicherheit
Teil 2-15: Besondere Anforderungen
für Heckenscheren
(IEC 60745-2-15:2006, modifiziert)

This European Standard was approved by CENELEC on 2006-05-01. CENELEC 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 Central Secretariat or to any CENELEC 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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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

CENELEC

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

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Foreword

The text of document 61F/626/FDIS, future edition 2 of IEC 60745-2-15, prepared by SC 61F, Safety of hand-held motor-operated electric tools, of IEC TC 61, Safety of household and similar electrical appliances, was submitted to the IEC-CENELEC parallel vote.

A draft amendment, prepared by the Technical Committee CENELEC TC 61F, Safety of hand-held and transportable motor-operated electric tools, to bring the European Standard in line with the essential health and safety requirements of the Machinery Directive, was submitted to the formal vote.

The combined texts were approved by CENELEC as EN 60745-2-15 on 2006-05-01.

This European Standard supersedes EN 50144-2-15:2001.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2007-03-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2009-05-01

Other standards referred to in this European Standard are listed in Clause 2. Clause 2 lists the valid edition of those documents at the time of issue of this EN.

This standard is divided into two parts:

Part 1: General requirements which are common to most hand-held electric motor operated tools (for the purpose of this standard referred to simply as tools) which could come within the scope of this standard;

Part 2: Requirements for particular types of tools which either supplement or modify the requirements given in Part 1 to account for the particular hazards and characteristics of these specific tools.

This European Standard has been prepared under a mandate given to CEN and CENELEC by the European Commission and the European Free Trade Association and covers essential health and safety requirements of EC Directive 98/37/EC, amended by EC Directive 98/79/EC. See Annex ZZ.

Compliance with the clauses of Part 1 together with this Part 2 provides one means of conforming with the essential health and safety requirements of the Directive concerned.

CEN/TC 144 is producing standards for non-electric hedge trimmers (EN 774).

Warning: Other requirements and other EC Directives can be applicable to the products falling within the scope of this standard.

This standard follows the overall requirements of EN ISO 12100-1 and EN ISO 12100-2.

This Part 2-15 is to be used in conjunction with EN 60745-1:2006. When this standard states "addition", "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

Subclauses and figures which are additional to those in Part 1 are numbered starting from 101.

Subclauses, tables and figures which are additional to those in IEC 60745-2-15 are prefixed "Z".

NOTE In this standard the following print types are used:

- requirements proper; in roman type
- *test specifications: in italic type;*
- explanatory matter: in smaller roman type.

Endorsement notice

The text of the International Standard IEC 60745-2-15:2006 was approved by CENELEC as a European Standard with agreed common modifications.

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HAND-HELD MOTOR-OPERATED ELECTRIC TOOLS – SAFETY –

Part 2-15: Particular requirements for hedge trimmers

1 Scope

This clause of Part 1 is applicable, except as follows:

1.1 Addition:

This standard applies to hedge trimmers which are designed for use by one operator for trimming hedges and bushes, utilizing one or more linear reciprocating cutter blades.

This standard is not applicable to hedge trimmers with a rotating blade.

Ⓒ This standard does not apply to long reach and extended reach hedge trimmers. Ⓒ

2 Normative references

This clause of Part 1 is applicable, except as follows:

Addition:

ISO 3864-3¹, *Graphical symbols – Safety colours and safety signs – Part 3: Design criteria for graphical symbols used in safety signs*

Ⓒ ISO 11094:1991, *Acoustics – Test code for the measurement of airborne noise emitted by power lawn mowers, lawn tractors, lawn and garden tractors, professional mowers, and lawn and garden tractors with mowing attachments* Ⓒ

3 Terms and definitions

This clause of Part 1 is applicable, except as follows:

3.101

blade tooth

part of the cutter blade which is sharpened or has sharp edges to perform the shearing action (see Figures 101 and 102)

3.102

cutter blade

part of the cutting device having blade teeth which cut by shearing action either against other blade teeth or against a shear plate (see Figures 101 and 102)

¹ ISO 3864-2 is currently in DIS state.

3.103

cutting device

part of the assembly of cutter blade and shear plate or of two cutter blades together with any supporting part which performs the cutting action. This may be either single or double sided (see Figures 101 and 102)

3.104

cutting length

effective cutting length of the cutting device measured from the inside edge of the first blade tooth or shear plate tooth to the inside edge of the last blade tooth or shear plate tooth (see Figure 103). Where both blades move, the cutting length is measured when the first and last teeth are furthest apart

3.105

front handle

handle located at or towards the cutting device (see Figure 104)

3.106

rear handle

handle located furthest from the cutting device (see Figure 104)

3.107

blade control

device activated by the operator's hand or fingers for controlling the blade movement

3.108

blunt extension

blunt part of the cutting device or a part of an unsharpened plate fitted to the cutting device which extends beyond the blade teeth (see Figures 101 and 102)

3.109

blade stopping time

elapsed time from the release of the blade control until the cutter blade stops

3.110

maximum speed

highest motor speed obtainable when adjusted in accordance for normal use with the cutting device engaged 

3.111

shear plate

part of the cutting device which assists cutting by shearing action against a cutter blade (see Figure 101)

4 General requirements

This clause of Part 1 is applicable.

5 General conditions for the tests

This clause of Part 1 is applicable, except as follows:

5.2 Addition:

For the test of 19.104, one additional sample may be provided.

6 Environmental requirements

This clause of Part 1 is applicable, except as follows:

6.1.2.2 Replacement:

The sound power level shall be measured according to EN ISO 3744, where the acoustic environment, instrumentation, quantities to be measured, quantities to be determined, and the measurement procedure are specified.

The sound power level shall be given as A-weighted sound power level in dB reference 1 pW. The A-weighted sound pressure levels, from which the sound power is to be determined, shall be measured directly, and not calculated from frequency band data. Measurements shall be made outdoors or indoors both requiring an acoustical free field.

The sound power level shall be determined according to 7.1 of ISO 11094, with the measurement surface and six microphone positions specified there.

The test environment outdoors shall be a flat open space (a slope, if any, not exceeding 5/100), visibly free of sound-reflecting objects (buildings, trees, poles, sign boards, etc.) within a circular area with a radius equal to approximately three times the radius of the hemispherical measurement surface used.

For indoor measurements the environment shall be according to EN ISO 3744, with the environmental correction $K_{2A} \leq 2$ dB determined without an artificial surface. However, for outdoor as well as for indoor measurements, the surface of the test environment shall be the artificial surface according to 4.1.2 of ISO 11094.

The A-weighted sound power level, L_{WA} , shall be calculated, in accordance with 8.6 of EN ISO 3744, as follows:

$$L_{WA} = \overline{L_{pfA}} + 10 \lg \left(\frac{S}{S_0} \right), \text{ in dB} \quad (\text{Z101})$$

with $\overline{L_{pfA}}$ determined from

$$\overline{L_{pfA}} = 10 \lg \left[\frac{1}{6} \sum_{i=1}^6 10^{0,1 L'_{pA,i}} \right] - K_{1A} - K_{2A}$$

where

$\overline{L_{pfA}}$	A-weighted surface sound pressure level according to EN ISO 3744
$L'_{pA,i}$	A-weighted sound pressure level measured at the i-th microphone position, in decibels
K_{1A}	Background noise correction, A-weighted
K_{2A}	Environmental correction, A-weighted
S	Area of the measurement surface, in m ²
S_0	1 m ²

With the test environments as described above the environmental correction factor K_{2A} shall be considered as negligible and therefore shall be disregarded. 