



SLOVENSKI STANDARD SIST EN 60745-2-15:2009

01-december-2009

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Hand-held motor-operated electric tools - Safety -- Part 2-15: Particular requirements for hedge trimmers

Handgeführte motorbetriebene Elektrowerkzeuge - Sicherheit -- Teil 2-15: Besondere Anforderungen für Heckenscheren

Outils électroportatifs à moteur - Sécurité -- Partie 2-15: Règles particulières pour les taille-haies

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Ta slovenski standard je istoveten z: EN 60745-2-15:2009

ICS:

25.140.20	Ò\^ dã } æ!] àæ	Electric tools
65.060.70	Vrtnarska oprema	Horticultural equipment

SIST EN 60745-2-15:2009 en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60745-2-15

July 2009

ICS 25.140.20; 65.060.80

Supersedes EN 60745-2-15:2006

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)

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This European Standard was approved by CENELEC on 2009-06-01. 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, Bulgaria, 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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 61F/626/FDIS, future edition 2 of IEC 60745-2-15, prepared by IEC SC 61F, (transformed into IEC TC 116, Safety of hand-held motor-operated electric tools), was submitted to the IEC-CENELEC parallel vote. A draft amendment (prAA), prepared by the Technical Committee CENELEC TC 61F (transformed into TC 116), Safety of hand-held 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.

A further draft amendment (prAB), extending Annex ZZ to include the new MD 2006/42/EC, was submitted to the formal vote.

The combined texts were approved by CENELEC as a new edition of EN 60745-2-15 on 2009-06-01.

This European Standard supersedes EN 60745-2-15:2006.

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) 2009-12-29
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2009-12-29

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 CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directive 98/37/EC (Machinery Directive), amended by EC Directive 98/79/EC and 2006/42/EC. See Annexes ZZA and ZZB.

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 Directives 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 60745-1:2009. 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".

Annexes ZA, ZZA and ZZB have been added by CENELEC.

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.

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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 as given below.

COMMON MODIFICATIONS

1 Scope

1.1 Add:

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

2 Normative references

Add the following normative reference:

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 Definitions

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Replace 3.110 by the following:

3.110

maximum speed

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

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6 Void

Replace by:

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 (building, 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

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

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.

For the hemispherical measurement surface, the area S of the measurement surface is calculated as follows:

$$S = 2\pi r^2, \text{ in } \text{m}^2. \quad (\text{Z102})$$

where r , the radius of the hemisphere, is 4 m for all hedge trimmers with a cutting length up to 1,2 m as specified in 7.1 of ISO 11094.

6.1.2.4 Modification:

The hedge trimmer shall be held as for normal use either by a person or by a suitable device in such a way that its cutting device is horizontal above the centre of the hemisphere.

The climatic conditions shall be as specified in 4.3 of ISO 11094.

6.1.2.5 Modification:

The hedge trimmer is tested at no-load.

6.2.4.2 Location of the measurement

Addition:

Figure Z101 shows the position for hedge trimmers.

6.2.6.3 Operating conditions

Modification:

Table Z101 — Operating conditions for hedge trimmers

Orientation	Hedge trimmers are tested at no-load the tool being held as in normal use with the cutting device horizontal
Tool bit	If different cutting devices can be mounted on the hedge trimmer, the longest device shall be mounted
Hand force	Normal gripping force shall be applied, avoiding excessive gripping forces
Test cycle	One test cycle is given when the tool is switched on for no load at max. speed for more than 10 s and then switched off again. The measurement is conducted during 10 s within this period

NOTE As it is difficult to apply or simulate load to hedge trimmers in laboratories and test results have shown that the load has no significant influence on the vibration results, the measurements are conducted with no-load only.

6.2.7.2 Declaration of the vibration total value

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Addition:

The vibration total value a_h of the handle with the highest emission and the uncertainty K shall be declared.

19 Mechanical hazards

Replace 19.103 by the following:

19.103 Cutting device

To safeguard against contact with the cutter blade, hedge trimmers shall be constructed to meet the requirements of one of the categories given in Table 101.

Table 101 – Hedge trimmer categories

Items with requirements	Category No. and requirements			
	1	2	3	4
Cutting length	≤ 200 mm	> 200 mm	-	> 200 mm
Number of handles	1	2	-	2
Number of handles with blade control	1 (rear handle)	1 (rear handle)	-	2
Maximum blade stopping time (Subclause 19.104)	No	No	-	1 s
Blade configuration figure	106	106	-	108

Blunt extensions shall extend over the full length of the shear plate for the blade configurations according to Figure 106. For cutting devices with blade configurations as shown in Figure 108, the blunt extensions of the shear plate shall reach a distance of at least 400 mm from any point of the rear face of the front handle (see Figure 109). If the front handle is located part way along the cutting device the blunt extensions shall start at the first shear plate tooth and continue until the 400 mm minimum distance beyond the rear of the front handle is reached.

Blunt extensions are not required for tools of category 4 with a blade configuration as shown in Figure 108 where there are only two handles and the front handle is permanently fixed to the smooth side of a single sided cutting device.

Compliance is checked by inspection and measurement.

19.105

Replace 19.105 by the following:

19.105 Void

21 Construction

Add the following new subclause:

21.Z1 This clause of Part 1 is not applicable.

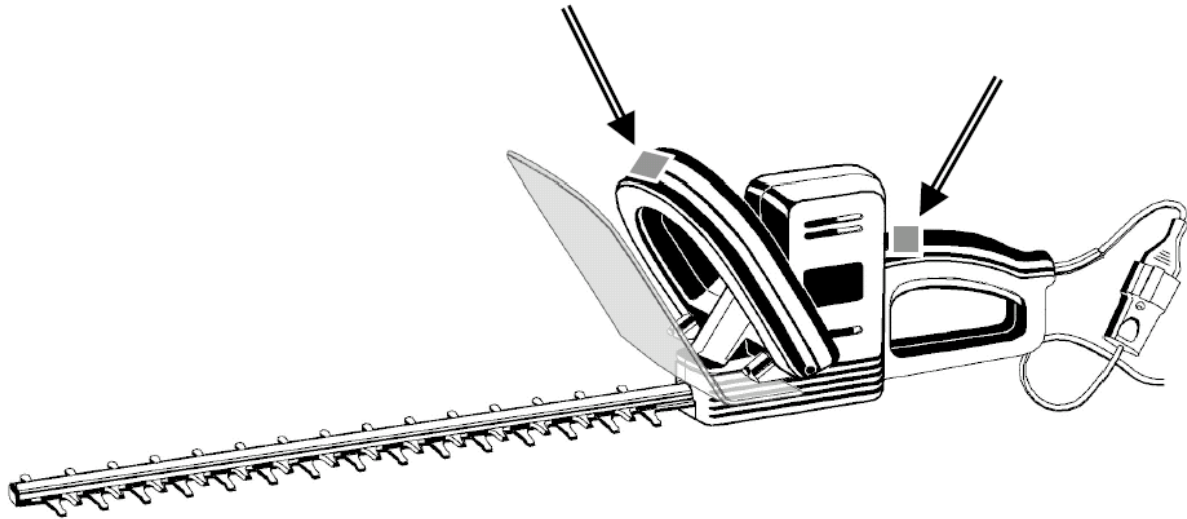
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Remove Figure 107 and Figure 111.

Add the following new figure:



Detail of transducers
(measurement in axes X, Y, Z)

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SIST EN 60745-2-15:2009

Figure Z101 - Positions of transducers for hedge trimmers
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Add the following annexes:

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 3864-3	2006	Graphical symbols - Safety colours and safety signs - Part 3: Design principles for graphical symbols for use 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	-	-

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Annex ZZ
(informative)

Coverage of Essential Requirements of EC Directives

Annex ZZA
(informative)

Coverage of Essential Requirements of Directive 98/37/EC

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Compliance with this standard provides one means of conformity with the specified essential requirements of the Directives concerned.

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Annex ZZB
(informative)

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Coverage of Essential Requirements of Directive 2006/42/EC

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