

**Käeshoitavad mootorajamiga elektritööriistad. Ohutus.
Osa 2-13: Erinõuded kettsaagidele**

Hand-held motor-operated electric tools - Safety -- Part 2-13:
Particular requirements for chain saws

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60745-2-13:2009 sisaldab Euroopa standardi EN 60745-2-13:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.09.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 29.07.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 60745-2-13:2009 consists of the English text of the European standard EN 60745-2-13:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.09.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 29.07.2009.

The standard is available from Estonian standardisation organisation.

ICS 25.140.20, 65.060.80

Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

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English version

**Hand-held motor-operated electric tools -
Safety -
Part 2-13: Particular requirements for chain saws
(IEC 60745-2-13:2006, modified)**

Outils électroportatifs à moteur -
Sécurité -
Partie 2-13: Règles particulières
pour les scies à chaîne
(CEI 60745-2-13:2006, modifiée)

Handgeführte motorbetriebene
Elektrowerkzeuge -
Sicherheit -
Teil 2-13: Besondere Anforderungen
für Kettensägen
(IEC 60745-2-13:2006, modifiziert)

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 the International Standard IEC 60745-2-13:2006, prepared by IEC SC 61F (transformed into IEC TC 116, Safety of hand-held motor-operated electric tools), together with the common modifications prepared by the Technical Committee CENELEC TC 61F (transformed into TC 116), was submitted to the CENELEC Unique Acceptance Procedure and was approved by CENELEC as EN 60745-2-13 on 2007-03-01.

A 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 60745-2-13 on 2009-06-01.

This European Standard supersedes EN 60745-2-13:2007.

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 Directives 98/37/EC (Machinery Directive), amended by 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 chain saws (EN 608).

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 2-13 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, items, tables and figures which are additional to those in Part 1 are numbered starting from 101.

Subclauses, notes, tables and figures which are additional to those in IEC 60745-2-13:2006 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.
-

Endorsement notice

The text of the International Standard IEC 60745-2-13:2006 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

1 Scope

Add:

The chain saws covered by this standard are designed only to be operated with the right hand on the rear handle and the left hand on the front handle.

2 Normative references

Replace the reference to ISO 3864-3 by:

ISO 3864-3:2006, *Graphical symbols – Safety colours and safety signs – Part 3: Design principles for graphical symbols for use in safety signs*

Add:

ISO 22868:2005, *Forestry machinery – Noise test code for portable hand-held machines with an internal combustion engine – Engineering method (Grade 2 accuracy)*

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.

The sound power level shall be determined according to Clause 5 of EN ISO 22868, with the test environment, measurement surface and six microphone positions specified there and in Clause 6 of EN ISO 22868.

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

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

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

$\overline{L_{pfA}}$ is the 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

$S_0 = 1 m^2$

If the test environment meets the requirements of EN ISO 22868, then the environmental correction factor K_{2A} shall be considered as negligible.

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

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

where r , the radius of the hemisphere, is 4 m as specified in Clause 5 of EN ISO 22868.

6.1.2.4 Modification:

The installation and mounting conditions shall be in accordance with A.1 and A.2 of EN ISO 22868, as far as applicable to electric chain saws.

The ambient conditions shall be as specified in 6.1 of EN ISO 22868.

6.1.2.5 Modification:

Chain saws are tested under the two operating conditions "idling" and "full load" in accordance with A.3.1 of EN ISO 22868.

"Idling" shall be operation at no-load, with maximum speed settings.

"Full load" shall be in accordance with A.3.3 of EN ISO 22868, with maximum speed settings.

Four consecutive tests for “idling” and four for “full load” shall be carried out, with each sound power level determined in accordance with the procedure stated in A.3.1 of EN ISO 22868. With L_{W1} and L_{W2} being the average sound power levels of the two different modes of operation defined above, the resulting sound power level L_{WA} is calculated by:

$$L_{WA} = 10 \lg \frac{1}{2} \left[10^{0,1L_{W1}} + 10^{0,1L_{W2}} \right]$$

6.2.4.2 Location of the measurement

Addition:

Figure Z101 shows the positions on the front handle and rear handle.

6.2.6.3 Operating conditions

Chain saws are tested under load observing the conditions shown in Table Z101.

Table Z101 – Test conditions

Material	Freshly felled softwood log of local timber, not frozen. Width of the log to be trimmed to 75 % of the usable cutting length of the guide bar
Orientation	Log to be rigidly clamped horizontally so that the centre line of the log is at 0,6 m from the ground
Tool bit	Saw chain to be as supplied or recommended by the manufacturer
Feed force	Sufficient force, using the spiked bumper, to achieve rated input ± 10 %
Test cycle	Cutting across the width of the log in a part substantially free of knots

6.2.7.2 Declaration of the vibration total value

Addition:

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

8 Marking and instructions

8.12.1.1

Remove the note after the 2nd indent.

21 Construction

Add the following subclause:

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

Add the following new figure:

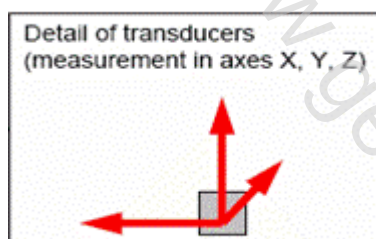
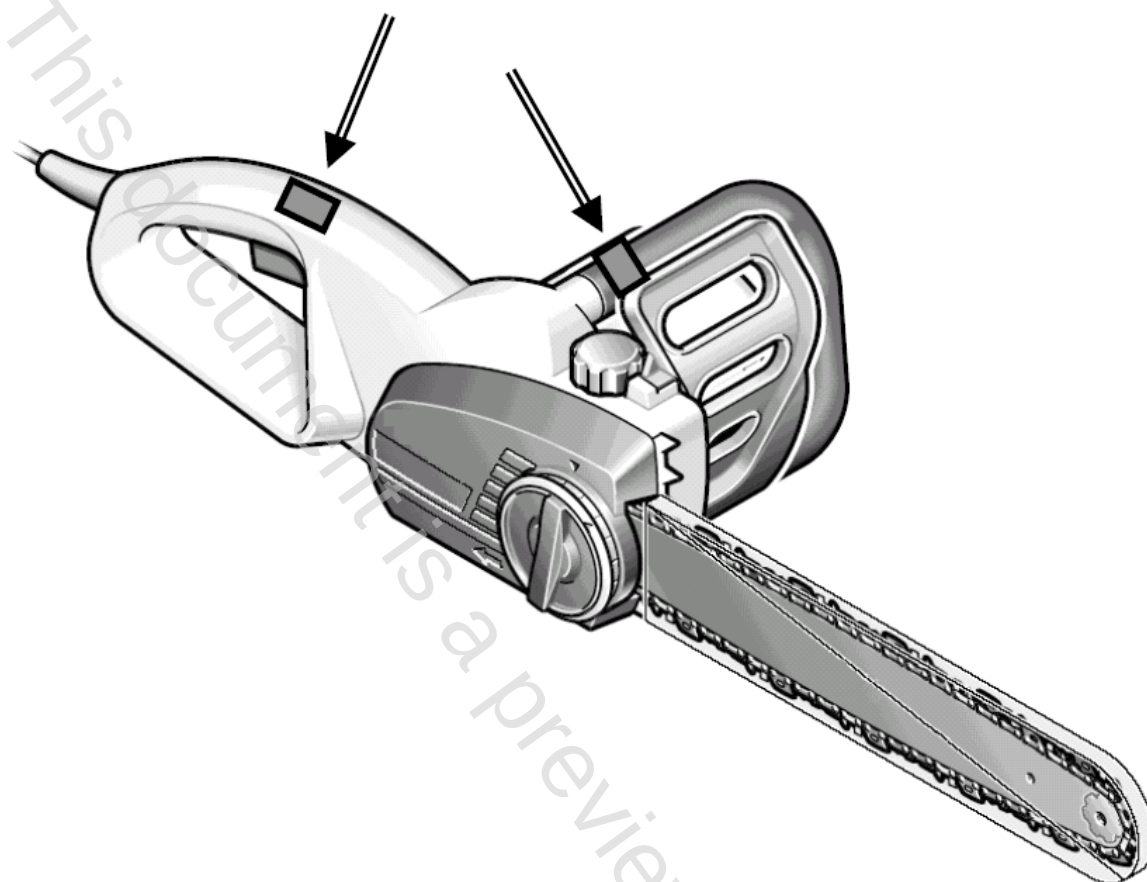


Figure Z101 - Position of transducers

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 Where 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 6533	2001	Forestry machinery - Portable chain-saw front hand-guard - Dimensions and clearances	-	-
ISO 6534	1992	Portable chain-saw - Hand-guards - Mechanical strength	-	-
ISO 7914	2002	Forestry machinery - Portable chain-saws - Minimum handle clearance and sizes	-	-
ISO 7915	1991	Forestry machinery - Portable chain-saws - Determination of handle strength	-	-
ISO 8334	1985	Forestry machinery - Portable chain-saws - Determination of balance	-	-
ISO 9518	1998	Forestry machinery - Portable chain-saws - Kickback test	-	-
ISO 10726	1992	Portable chain saws - Chain catcher - Dimensions and mechanical strength	-	-
ISO 11681-2	1998	Machinery for forestry - Portable chain-saws - Safety requirements and testing - Part 2: Chain-saws for tree service	EN ISO 11681-2	1998
ISO 22868	2005	Forestry machines - Noise test code for portable hand-held machines with an internal combustion engine - Engineering method (Grade 2 accuracy)	EN ISO 22868	2008

Annex ZZ
(informative)

Coverage of Essential Requirements of EC Directives

Annex ZZA
(informative)

Coverage of Essential Requirements of Directive 98/37/EC

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers all relevant Essential Requirements as given in EC Directive 98/37/EC (Machinery Directive), amended by Directive 98/79/EC.

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

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

Annex ZZB
(informative)

Coverage of Essential Requirements of Directive 2006/42/EC

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers all relevant Essential Requirements as given in EC Directive 2006/42/EC (Machinery Directive).

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

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

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OUTILS ÉLECTROPORTATIFS À MOTEUR – SÉCURITÉ –

Partie 2-13: Règles particulières pour les scies à chaîne

1 Domaine d'application

L'article de la Partie 1 est applicable avec l'exception suivante:

Addition:

Cette norme s'applique aux scies à chaîne destinées à couper du bois et conçues pour être utilisées par une seule personne. Cette norme ne s'applique pas aux scies à chaîne conçues pour être utilisées conjointement avec un guide-chaîne et un couteau diviseur ou de toute autre manière telle qu'avec un support ou comme une machine fixe ou transportable.

Cette norme ne s'applique pas aux scies à chaîne pour l'élagage des arbres comme défini dans l'ISO 11681-2, les scies à perche et les perches élagueuses.

2 Références normatives

L'article de la Partie 1 est applicable avec l'exception suivante:

Addition:

ISO 3864-3¹, *Symboles graphiques – Couleurs de sécurité et signaux de sécurité – Partie 3: Critères de conception des symboles graphiques utilisés dans les signaux de sécurité*

ISO 6533:2001, *Machines forestières – Protecteur de la main tenant la poignée avant des scies à chaîne portatives – Dimensions et dégagements*

ISO 6534:1992, *Scies à chaîne portatives – Protections des mains – Résistance mécanique*

ISO 7914:2002, *Machines forestières – Scies à chaîne portatives – Dimensions minimales des poignées et des espaces libres autour des poignées*

ISO 7915:1991, *Matériel forestier – Scies à chaîne portatives – Détermination de la solidité des poignées*

ISO 8334:1985, *Matériel forestier – Scies à chaîne portatives – Détermination de l'équilibre*

ISO 9518:1998, *Matériel forestier – Scies à chaîne portatives – Essai de rebond*

ISO 10726:1992, *Scies à chaîne portatives – Enrouleur de chaîne – Dimensions et résistance mécanique*

ISO 11681-2:1998, *Matériel forestier – Scies à chaîne portatives – Exigences de sécurité et essais – Partie 2: Scies à chaîne pour l'élagage des arbres*

¹ ISO 3864-3 est actuellement au stade DIS.

HAND-HELD MOTOR-OPERATED ELECTRIC TOOLS – SAFETY

Part 2-13: Particular requirements for chain saws

1 Scope

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

Addition:

This standard applies to chain saws for cutting wood and designed for use by one person. This standard does not cover chain saws designed for use in conjunction with a guide-plate and riving knife or in any other way such as with a support or as a stationary or transportable machine.

This standard does not apply to chain saws for tree service as defined in ISO 11681-2, pole cutters and pruners.

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 6533:2001, *Forestry machinery – Portable chain-saw front hand-guard – Dimensions and clearances*

ISO 6534:1992, *Portable chain-saws – Hand-guards – Mechanical strength*

ISO 7914:2002, *Forestry machinery – Portable chain-saws – Minimum handle clearance and sizes*

ISO 7915:1991, *Forestry machinery – Portable chain-saws – Determination of handle strength*

ISO 8334:1985, *Forestry machinery – Portable chain-saws – Determination of balance*

ISO 9518:1998, *Forestry machinery – Portable chain-saws – Kickback test*

ISO 10726:1992, *Portable chain-saws – Chain catcher – Dimensions and mechanical strength*

ISO 11681-2:1998, *Machinery for forestry – Portable chain-saws – Safety requirements and testing – Part 2: Chain-saws for tree service*

¹⁾ ISO 3864-3 is currently at the DIS stage.