KÄESHOITAVAD ELEKTRIMOOTORIGA TÖÖRIISTAD, TRANSPORDITAVAD TÖÖRIISTAD JA MURU- NING AIATÖÖMASINAD. OHUTUS. OSA 4-1: ERINÕUDED KETTSAAGIDELE

Electric Motor-Operated Hand-Held Tools, Transportable Tools and Lawn and Garden Machinery - Safety - Part 4-1: Particular requirements for chain saws

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 62841-4-1:2020 sisaldab Euroopa standardi EN 62841-4-1:2020 ingliskeelset teksti.	This Estonian standard EVS-EN 62841-4-1:2020 consists of the English text of the European standard EN 62841-4-1:2020.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 13.03.2020.	Date of Availability of the European standard is 13.03.2020.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 25.140.20

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62841-4-1

March 2020

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Supersedes EN 60745-2-13:2009 and all of its amendments and corrigenda (if any)

English Version

Electric Motor-Operated Hand-Held Tools, Transportable Tools and Lawn and Garden Machinery - Safety - Part 4-1: Particular requirements for chain saws (IEC 62841-4-1:2017 , modified)

Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses - Sécurité - Partie 4-1: Exigences particulières pour les scies à chaîne (IEC 62841-4-1:2017 , modifiée)

Elektrische motorbetriebene handgeführte Werkzeuge, transportable Werkzeuge und Rasen- und Gartenmaschinen - Sicherheit - Teil 4-1: Besondere Anforderungen für Kettensägen (IEC 62841-4-1:2017 , modifiziert)

This European Standard was approved by CENELEC on 2017-11-15. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

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

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Ref. No. EN 62841-4-1:2020 E

European foreword

The text of document 116/339/FDIS, future edition 1 of IEC 62841-4-1, prepared by IEC/TC 116 "Safety of motor-operated electric tools" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62841-4-1:2020.

A draft amendment, which covers common modifications to IEC 62841-4-1 (116/339/FDIS), was prepared by CLC/TC 116 "Safety of motor-operated electric tools" and approved by CENELEC.

The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2020-09-13
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2024-03-13

EN 62841-4-1:2020 supersedes EN 60745-2-13:2009 + A1:2010.

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

This European Standard is divided into four 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, 3 or 4: 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 Part 4-1 is to be used in conjunction with EN 62841-1:2015.

This Part 4-1 supplements or modifies the corresponding clauses in EN 62841-1:2015, so as to convert it into the European Standard: Particular requirements for chain saws.

Where a particular subclause of Part 1 is not mentioned in this Part 4-1, that subclause applies as far as relevant. When this standard states "addition", "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

The following print types are used:
- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in smaller roman type.

The terms defined in Clause 3 are printed in **bold typeface**.

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

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62841-4-1:2017 are prefixed “Z”.

This European Standard follows the overall requirements of EN ISO 12100.

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.

Compliance with the clauses of Part 1 together with this Part 4-1 provides one means of conforming with the essential health and safety requirements of the Directive concerned.

Endorsement notice

The text of the International Standard IEC 62841-4-1:2017 was approved by CENELEC as a European Standard with agreed common modifications.

COMMON MODIFICATIONS

1 Scope

Add *the following to the existing Clause 1:*

This standard covers all significant hazards, hazardous situations or hazardous events relevant for tools covered by this standard.

NOTE Z101 Essential requirements not mentioned in Table ZZ.1 are deemed to be not applicable, because the corresponding hazards are either not significant for tools covered by this standard or do not require specific action by the designer.

Annex I

Replace *the title of Annex I with the following:*

Annex I
(normative)

Measurement of noise and vibration emissions

and ***delete*** *the note.*

Replace *I.2.5.3 with the following:*

I.2.5.3 Battery powered **chain saws** shall be tested with a fully charged battery using a **saw chain** and the longest **guide bar** combination(s) as specified in 8.14.2 c) 101), under both of the following conditions:

– no-load speed, with the highest setting of the speed control, if any; and

– at **maximum speed**, by applying, if necessary, an adjustable load by means of a water brake (or equivalent) as specified in A.2.1 of ISO 22868:2011, which is increased starting from zero (no-load) until the **maximum speed** is achieved.

NOTE The use of the adjustable load is only necessary for machines where the **maximum speed** occurs at part load. For machines, where the **maximum speed** occurs at no-load, the application of an adjustable load is not necessary.

Four consecutive sound power level tests at no-load speed and four at **maximum speed** shall be carried out. The resulting sound power level L_{WA} is calculated by:

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

where

L_{W1} is the arithmetic mean, rounded to the nearest decibel, of the four sound power level tests performed at no-load speed; and

L_{W2} is the arithmetic mean, rounded to the nearest decibel, of the four sound power level tests performed at **maximum speed**.

During measurements, the machine shall operate under stable conditions. Once the noise emission is steady, the measurement time interval shall be at least 15 s. If measurements are to be made in octave or one-third octave frequency bands, the minimum period of observation shall be 30 s for the frequency bands centred on or below 160 Hz, and 15 s for the frequency bands centred on or above 200 Hz.

Annex K
(normative)

Battery tools and battery packs

K.1 Scope

Replace *Note 102 with the following normative text:*

This annex does not apply to **chain saws** equipped with **integral batteries** and with a **maximum speed** of the **saw chain** exceeding 5 m/s.

Replace *Subclause K.21.18 with the following:*

K.21.18.Z101 Isolation and disabling device

Machines with an **integral battery** shall either be equipped

– with an isolation device to prevent the risk of injury from mechanical hazards during servicing or **user maintenance**; or

– with a disabling device that prevents unintentional starting of the machine.

An isolation device shall

– provide disconnection of all poles of the **battery** from the serviceable region of the machine;

– be equipped with an unambiguous indication of the state of the disconnection device which corresponds to each position of its manual control (actuator);

– be provided with protection against accidental reconnection.

NOTE 1 Examples of methods to achieve this disconnection include removable jumpers, **integral batteries** that can be disconnected for servicing or **user maintenance**, or an electromechanical **power switch** with a direct mechanical link between the actuator and the contact.

NOTE 2 The risk of accidental reconnection for a **power switch** is addressed by the requirement of 21.18.102. The other examples in NOTE 1 achieve this by the necessary actions for reconnection.

A disabling device may be achieved by any of the following:

– a self-restoring or non-self-restoring lock-off device where two separate and dissimilar actions are necessary before the motor is switched on (e.g. a **power switch** which has to be pushed in before it

can be moved laterally to close the contacts to start the motor). It shall not be possible to achieve these two actions with a single grasping motion or a straight-line motion;

– a removable disabling device provided with the machine where it shall not be possible for the machine to be operated when either applied or removed.

Compliance is checked by inspection and by manual test.

Annex L
(normative)

Battery tools and battery packs provided with mains connection or non-isolated sources

L.1 Scope

Replace *Note 102 with the following normative text:*

This annex does not apply to **chain saws** equipped with **integral batteries** and with a **maximum speed** of the **saw chain** exceeding 5 m/s.

Replace *Subclause L.21.18 with the following:*

L.21.18.Z101 Isolation and disabling device

Machines with an **integral battery** shall either be equipped

– with an isolation device to prevent the risk of injury from mechanical hazards during servicing or **user maintenance**; or

– with a disabling device that prevents unintentional starting of the machine.

An isolation device shall

– provide disconnection of all poles of the **battery** from the serviceable region of the machine;

– be equipped with an unambiguous indication of the state of the disconnection device which corresponds to each position of its manual control (actuator);

– be provided with protection against accidental reconnection.

NOTE 1 Examples of methods to achieve this disconnection include removable jumpers, **integral batteries** that can be disconnected for servicing or **user maintenance**, or an electromechanical **power switch** with a direct mechanical link between the actuator and the contact.

NOTE 2 The risk of accidental reconnection for a **power switch** is addressed by the requirement of 21.18.102. The other examples in NOTE 1 achieve this by the necessary actions for reconnection.

A disabling device may be achieved by any of the following:

– a self-restoring or non-self-restoring lock-off device where two separate and dissimilar actions are necessary before the motor is switched on (e.g. a **power switch** which has to be pushed in before it can be moved laterally to close the contacts to start the motor). It shall not be possible to achieve these two actions with a single grasping motion or a straight-line motion;

– a removable disabling device provided with the machine where it shall not be possible for the machine to be operated when either applied or removed.

Compliance is checked by inspection and by manual test.

***Add** the following annexes:*

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

This annex from EN 62841-1:2015 is applicable with the following addition:

Publication	Year	Title	EN/HD	Year
IEC 61672-1	-	Electroacoustics – Sound level meters – Part 1: Specifications	EN 61672-1	2013
ISO 354	2003	Acoustics – Measurement of sound absorption in a reverberation room	EN ISO 354	2003
ISO 3744	2010	Acoustics – Determination of sound power levels and sound energy levels of noise sources using sound pressure – Engineering methods for an essentially free field over a reflecting plane	EN ISO 3744	2010
ISO 6533	2012	Forestry machinery – Portable chain-saw front hand-guard – Dimensions and clearances	-	-
ISO 6534	2007	Forestry machinery – 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 9518	-	Forestry machinery – Portable chain-saws – Kickback test	-	-
ISO 10726	1992	Portable chain-saws – Chain catcher – Dimensions and mechanical strength	-	-
ISO 11681-2	2011	Machinery for forestry – Portable chain-saw safety requirements and testing – Part 2: Chain-saws for tree service	EN ISO 11681-2	2011
ISO 13772	2018	Forestry machinery – Portable chain saws - Non-manually actuated chain brake performance	-	-

Publication	Year	Title	EN/HD	Year
ISO 17080	2005	Manually portable agricultural and forestry machines and powered lawn and garden equipment – Design principles for single-panel product safety labels	-	-
ISO 22868	2011	Forestry and gardening machinery – Noise test code for portable hand-held machines with internal combustion engine – Engineering method (Grade 2 accuracy)	EN ISO 22868	2011