

KÄESHOITAVAD ELEKTRIMOOTORIGA TÖÖRIISTAD,
TRANSPORDITAVAD TÖÖRIISTAD JA MURU- NING
AIATÖÖMASINAD. OHUTUS. OSA 2-21: ERINÕUDED
KÄESHOITAVATELE DRENAAZIPUHASTAJATELE

Electric Motor-Operated Hand-Held Tools,
Transportable Tools and Lawn and Garden Machinery -
Safety - Part 2-21: Particular requirements for
hand-held drain cleaners

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 62841-2-21:2019 sisaldab Euroopa standardi EN 62841-2-21:2019 ingliskeelset teksti.	This Estonian standard EVS-EN 62841-2-21:2019 consists of the English text of the European standard EN 62841-2-21:2019.
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 31.05.2019.	Date of Availability of the European standard is 31.05.2019.
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

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

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English Version

Electric motor-operated hand-held tools, transportable tools and
lawn and garden machinery - Safety - Part 2-21: Particular
requirements for hand-held drain cleaners
(IEC 62841-2-21:2017)

Outils électroportatifs à moteur, outils portables et machines
pour jardins et pelouses - Sécurité - Partie 2-21: Exigences
particulières pour les furets portatifs
(IEC 62841-2-21:2017)

Elektrische motorbetriebene handgeführte Werkzeuge,
transportable Werkzeuge und Rasen- und
Gartenmaschinen - Sicherheit - Teil 2-21: Besondere
Anforderungen für handgeführte Abflussreiniger
(IEC 62841-2-21:2017)

This European Standard was approved by CENELEC on 2017-06-27. 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, 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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 116/316/FDIS, future edition 1 of IEC 62841-2-21, 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 62841-2-21:2019.

A draft amendment, which covers common modifications to IEC 62841-2-21 (116/316/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) 2019-11-30
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2023-05-31

EN 62841-2-21:2019 supersedes EN 60745-2-21:2009 + 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 2-21 is to be used in conjunction with EN 62841-1:2015.

This Part 2-21 supplements or modifies the corresponding clauses in EN 62841-1:2015, so as to convert it into the European Standard: Particular requirements for hand-held drain cleaners.

Where a particular subclause of Part 1 is not mentioned in this Part 2-21, 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 62841-2-21:2017 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.

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

Compliance with the clauses of Part 1 together with this Part 2-21 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 62841-2-21:2017 was approved by CENELEC as a European Standard with agreed common modifications.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 62841-3-14 NOTE Harmonized as EN 62841-3-14

COMMON MODIFICATIONS

Replace the title of Annex I by the following:

Annex I (normative)

Measurement of noise and vibration emissions

Delete the Note.

Replace the existing Subclause I.2.4 with the following:

I.2.4 Installation and mounting conditions of the power tools during noise tests

Addition:

Drain cleaners are suspended in such a way as to correspond to **normal use**. They are tested with a **drain cleaner cable** installed but retracted.

Annex K (normative)

Battery tools and battery packs

Add the following new subclause:

K.21.18.Z101 Isolation and disabling device

Tools 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 tool.

An isolation device shall

- provide disconnection of all poles of the **battery** from the serviceable region of the tool;
- 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 21.18.1.2. 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 tool where it shall not be possible for the tool 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

Add the following new subclause:

L.21.18.Z101 Isolation and disabling device

Tools 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 tool.

An isolation device shall

- provide disconnection of all poles of the **battery** from the serviceable region of the tool;
- 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 21.18.1.2. 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 tool where it shall not be possible for the tool 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 are referred to in the text in such a way that some or all of their content constitutes requirements 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 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60061	2005 ¹	Lamp caps and holders together with gauges for the control of interchangeability and safety	-	-
IEC 60065	2001	Audio, video and similar electronic apparatus - Safety requirements	-	-
+ A1	2005		-	-
+ A2	2010		-	-
IEC 60068-2-75	1997	Environmental testing -- Part 2-75: Tests - Test Eh: Hammer tests	-	-
IEC/TR 60083	2015 ¹	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC	-	-
IEC 60085	2007	Electrical insulation - Thermal evaluation and designation	EN 60085	2008
IEC 60127	series	Miniature fuses	EN 60127	series
IEC 60227	series	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V	-	-
IEC 60238	-	Edison screw lampholders	EN IEC 60238	2018
IEC 60245	series	Rubber insulated cables - Rated voltages up to and including 450/750 V	-	-

¹ Dated as no equivalent European Standard exists.