

<b>STN</b>	<b>Elektrické ručné náradie, prenosné náradie a strojové zariadenia pre trávnik a záhradu</b> <b>Bezpečnosť</b> <b>Časť 2-6: Osobitné požiadavky na ručné kladivá</b>	<b>STN</b> <b>EN IEC 62841-2-6</b>  36 1560
------------	---	--

Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 2-6: Particular requirements for hand-held hammers

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/21

Obsahuje: EN IEC 62841-2-6:2020, IEC 62841-2-6:2020

Oznámením tejto normy sa od 10.08.2024 ruší  
STN EN 60745-2-6 (36 1550) z januára 2011

**132302**



EUROPEAN STANDARD

**EN IEC 62841-2-6**

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2020

ICS 25.140.20

Supersedes EN 60745-2-6:2010 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 2-6: Particular  
requirements for hand-held hammers  
(IEC 62841-2-6:2020)**

Outils électroportatifs à moteur, outils portables et machines  
pour jardins et pelouses - Sécurité - Partie 2-6 : Exigences  
particulières pour les marteaux portatifs  
(IEC 62841-2-6:2020)

Elektrische motorbetriebene handgeführte Werkzeuge,  
transportable Werkzeuge und Rasen- und  
Gartenmaschinen - Sicherheit - Teil 2-6: Besondere  
Anforderungen für handgeführte Hämmer  
(IEC 62841-2-6:2020)

This European Standard was approved by CENELEC on 2020-08-31. 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

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

**EN IEC 62841-2-6:2020 (E)****European foreword**

The text of document 116/459/FDIS, future edition 1 of IEC 62841-2-6, 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 IEC 62841-2-6:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2021-05-10 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2024-08-10 document have to be withdrawn

This document supersedes EN 60745-2-6:2010 and all of its amendments and corrigenda (if any).

This Part 2-6 is to be used in conjunction with EN 62841-1:2015 and its amendments.

This Part 2-6 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 hammers.

Where a particular subclause of Part 1 is not mentioned in this Part 2-6, 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.

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 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.

**Endorsement notice**

The text of the International Standard IEC 62841-2-6:2020 was approved by CENELEC as a European Standard without any modification.



IEC 62841-2-6

Edition 1.0 2020-07

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety –  
Part 2-6: Particular requirements for hand-held hammers**

**Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses – Sécurité –  
Partie 2-6: Exigences particulières pour les marteaux portatifs**

**THIS PUBLICATION IS COPYRIGHT PROTECTED****Copyright © 2020 IEC, Geneva, Switzerland**

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

**About the IEC**

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

**About IEC publications**

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

**IEC publications search - [webstore.iec.ch/advsearchform](http://webstore.iec.ch/advsearchform)**

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

**IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)**

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

**IEC Customer Service Centre - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)**

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: [sales@iec.ch](mailto:sales@iec.ch).

**Electropedia - [www.electropedia.org](http://www.electropedia.org)**

The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

**IEC Glossary - [std.iec.ch/glossary](http://std.iec.ch/glossary)**

67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

**A propos de l'IEC**

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

**A propos des publications IEC**

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

**Recherche de publications IEC -****[webstore.iec.ch/advsearchform](http://webstore.iec.ch/advsearchform)**

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études,...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

**IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)**

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et une fois par mois par email.

**Service Clients - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)**

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: [sales@iec.ch](mailto:sales@iec.ch).

**Electropedia - [www.electropedia.org](http://www.electropedia.org)**

Le premier dictionnaire d'électrotechnologie en ligne au monde, avec plus de 22 000 articles terminologiques en anglais et en français, ainsi que les termes équivalents dans 16 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

**Glossaire IEC - [std.iec.ch/glossary](http://std.iec.ch/glossary)**

67 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et Définitions des publications IEC parues depuis 2002. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.



IEC 62841-2-6

Edition 1.0 2020-07

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety –  
Part 2-6: Particular requirements for hand-held hammers**

**Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses – Sécurité –  
Partie 2-6: Exigences particulières pour les marteaux portatifs**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

ICS 25.140.20

ISBN 978-2-8322-8611-1

**Warning! Make sure that you obtained this publication from an authorized distributor.  
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

## CONTENTS

FOREWORD .....	4
1 Scope .....	6
2 Normative references .....	6
3 Terms and definitions .....	6
4 General requirements .....	7
5 General conditions for the tests .....	7
6 Radiation, toxicity and similar hazards .....	7
7 Classification .....	7
8 Marking and instructions .....	7
9 Protection against access to live parts .....	8
10 Starting .....	8
11 Input and current .....	8
12 Heating .....	8
13 Resistance to heat and fire .....	9
14 Moisture resistance .....	9
15 Resistance to rusting .....	9
16 Overload protection of transformers and associated circuits .....	9
17 Endurance .....	9
18 Abnormal operation .....	12
19 Mechanical hazards .....	13
20 Mechanical strength .....	23
21 Construction .....	23
22 Internal wiring .....	24
23 Components .....	24
24 Supply connection and external flexible cords .....	25
25 Terminals for external conductors .....	25
26 Provision for earthing .....	25
27 Screws and connections .....	25
28 Creepage distances, clearances and distances through insulation .....	25
Annexes .....	26
Annex I (informative) Measurement of noise and vibration emissions .....	26
Annex K (normative) Battery tools and battery packs .....	39
Annex L (normative) Battery tools and battery packs provided with mains connection or non-isolated sources .....	44
Annex AA (informative) Loading device .....	46
Bibliography .....	58
Figure 101 – Example of a testing apparatus .....	11
Figure 102 – Reaction torque measurement of single handle tools (1) .....	14
Figure 103 – Reaction torque measurement of single handle tools (2) .....	15
Figure 104 – Reaction torque measurement of multi handle tools (1) .....	16
Figure 105 – Reaction torque measurement of multi handle tools (2) .....	17

Figure 106 – Locating point "S" on different power switch and handle designs .....	18
Figure 107 – Locating point "F" on different flange designs .....	19
Figure 108 – Measurement of length <i>a</i> for stick-type auxiliary handles without flange used on rotary hammers that can also operate in percussion only mode .....	20
Figure 109 – Example torque of a tool with a stable signal region .....	22
Figure 110 – Example torque of a tool without a stable signal region .....	22
Figure 111 – Example torque of a tool with an overload clutch .....	23
Figure I.101 – Positions of microphones for the hemispherical measurement surface .....	27
Figure I.102 – Test block and example of rebar configuration .....	30
Figure I.103 – Testing device .....	31
Figure I.104 – Application of load .....	32
Figure I.105 – Positions of transducers for percussion hammers .....	34
Figure I.106 – Positions of transducers for rotary hammers .....	35
Figure AA.1 – Loading device .....	47
Figure AA.2 – Details of the stamper SDS-Plus (size 40) .....	48
Figure AA.3 – Details of the stamper SDS-Max (size 60) .....	49
Figure AA.4 – Details of the stamper HEX 22 (size 60) .....	50
Figure AA.5 – Details of the stamper HEX 28 (size 100) .....	51
Figure AA.6 – Details of the stamper (generic) .....	52
Figure AA.7 – Details of the bottom plate .....	53
Figure AA.8 – Details of the cylinder .....	54
Figure AA.9 – Details of the cover plate .....	55
Figure AA.10 – Details of the flange .....	56
Figure AA.11 – Details of the steel ball reaction plate .....	57
Table 4 – Required performance levels .....	12
Table I.101 – Coordinates of the six microphone positions .....	27
Table I.102 – Noise test conditions for rotary hammers .....	32
Table I.103 – Concrete specifications .....	33
Table I.104 – Detailed example of a concrete formulation that fulfils the requirements of Table I.103 .....	33
Table I.105 – Drill bit size .....	33
Table I.106 – Vibration test conditions for percussion hammers under load .....	36
Table I.107 – Vibration test conditions for rotary hammers .....	37
Table 4 – Required performance levels .....	40
Table AA.1 – Loading device parameters .....	46

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY –****Part 2-6: Particular requirements for hand-held hammers**

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62841-2-6 has been prepared by IEC technical committee 116: Safety of motor-operated electric tools

The text of this International Standard is based on the following documents:

FDIS	Report on voting
116/459/FDIS	116/466/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This Part 2-6 is to be used in conjunction with IEC 62841-1:2014.

This Part 2-6 supplements or modifies the corresponding clauses in IEC 62841-1, so as to convert it into the IEC Standard: Particular requirements for hand-held hammers.

Where a particular subclause of Part 1 is not mentioned in this Part 2-6, that subclause applies as far as relevant. Where 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 small roman type.

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

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

A list of all parts in the IEC 62841 series, under the general title: *Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 36 months from the date of publication.

**IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**

# ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY –

## Part 2-6: Particular requirements for hand-held hammers

### 1 Scope

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

*Addition:*

This part of IEC 62841 applies to hand-held hammers.

Tools covered by this document include **percussion hammers** and **rotary hammers**, including **rotary hammers** with the capability to rotate only with the percussion system disengaged (drill only mode).

This document does not apply to drills and impact drills.

NOTE 101 Drills and impact drills are covered by IEC 62841-2-1.

This document does not apply to tools that are designed exclusively for driving fasteners, such as palm nailers.

### 2 Normative references

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

*Addition:*

EN 206:2013, *Concrete. Specification, performance, production and conformity*  
EN 206:2013/AMD1:2016

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**