
Električna ročna orodja - Varnost - 2-2. del: Posebne zahteve za vijačnike in udarne vijačnike (IEC 60745-2-2:2003; spremenjen)

Hand-held motor-operated electric tools - Safety - Part 2-2: Particular requirements for screwdrivers and impact wrenches

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EUROPEAN STANDARD

EN 60745-2-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2003

ICS 25.140.20; 25.140.30

Supersedes EN 50144-2-2:1999 & EN 50260-2-2:2002

English version

**Hand-held motor-operated electric tools -
Safety
Part 2-2: Particular requirements for screwdrivers
and impact wrenches
(IEC 60745-2-2:2003, modified)**

Outils électroportatifs à moteur -
Sécurité
Partie 2-2: Règles particulières
pour les visseuses
(CEI 60745-2-2:2003, modifiée)

Handgeführte motorbetriebene
Elektrowerkzeuge -
Sicherheit
Teil 2-2: Besondere Anforderungen
für Schrauber und Schlagschrauber
(IEC 60745-2-2:2003, modifiziert)

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This European Standard was approved by CENELEC on 2002-12-01. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of the International Standard IEC 60745-2-2:2003, prepared by SC 61F, Safety of hand-held motor-operated electric tools, of IEC TC 61, Safety of household and similar electrical appliances, together with the common modifications prepared by the Technical Committee CENELEC TC 61F, Safety of hand-held and transportable motor-operated electric tools, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 60745-2-2 on 2002-12-01.

This European Standard supersedes EN 50144-2-2:1999 and EN 50260-2-2:2002.

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) 2004-03-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2005-12-01

Other standards referred to in this European standard are listed in Clause 2. Clause 2 lists the valid edition of those documents at the time of issue of this EN.

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 CEN and CENELEC by the European Commission and the European Free Trade Association and supports the essential health and safety requirements of the Machinery Directive.

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 Directive concerned.

CEN/TC 255 is producing standards for non-electric screwdrivers and impact wrenches (EN 792-6).

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 292-1 and EN 292-2.

This Part 2-2 is to be used in conjunction with EN 60745-1:2003. 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 60745-2-2 are prefixed "Z".

NOTE In this standard, the following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in smaller roman type.

Endorsement notice

The text of the International Standard IEC 60745-2-2:2003 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

2 Normative references

Replace the text by:

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

Additional normative reference:

EN ISO 8662-7:1997, *Hand-held portable power tools – Measurement of vibrations at the handle – Part 7: Wrenches, screwdrivers and nut runners with impact, impulse or ratchet action* (ISO 8662-7:1997)

6 Void

Replace by:

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6 Environmental requirements

This clause of Part 1 is applicable except as follows:

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6.1.2.4 Modification:

Screwdrivers are suspended. The bit holder shall be horizontal.

Impact wrenches are held and used as specified in 6.1.2.5.

6.1.2.5 Modification:

Screwdrivers are tested at no-load.

Impact wrenches are tested under load. The load is applied by means of a brake system, so that the socket driving the brake rotates at a test speed of $(45 \pm 5) \text{ min}^{-1}$ and the impact mechanism is caused to operate continuously. The brake as shown in Figure Z101 is supported on a resilient material and mounted on a bench such that the geometric centre of the tool is 1 m above the reflecting plane. The details of the brake system are given in Annex B of EN ISO 8662-7.

The feed force shall be just sufficient to obtain a stable operation.

The measurement time shall be approximately 10 s.

6.2.2.3 Modification:

Measurements shall be made in the direction of the reaction torque.

6.2.2.4 Modification:

Screwdrivers and impact wrenches are tested under the operating conditions specified in 6.1.2.5.

21 Construction

Replace by:

This clause of Part 1 is applicable except as follows:

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

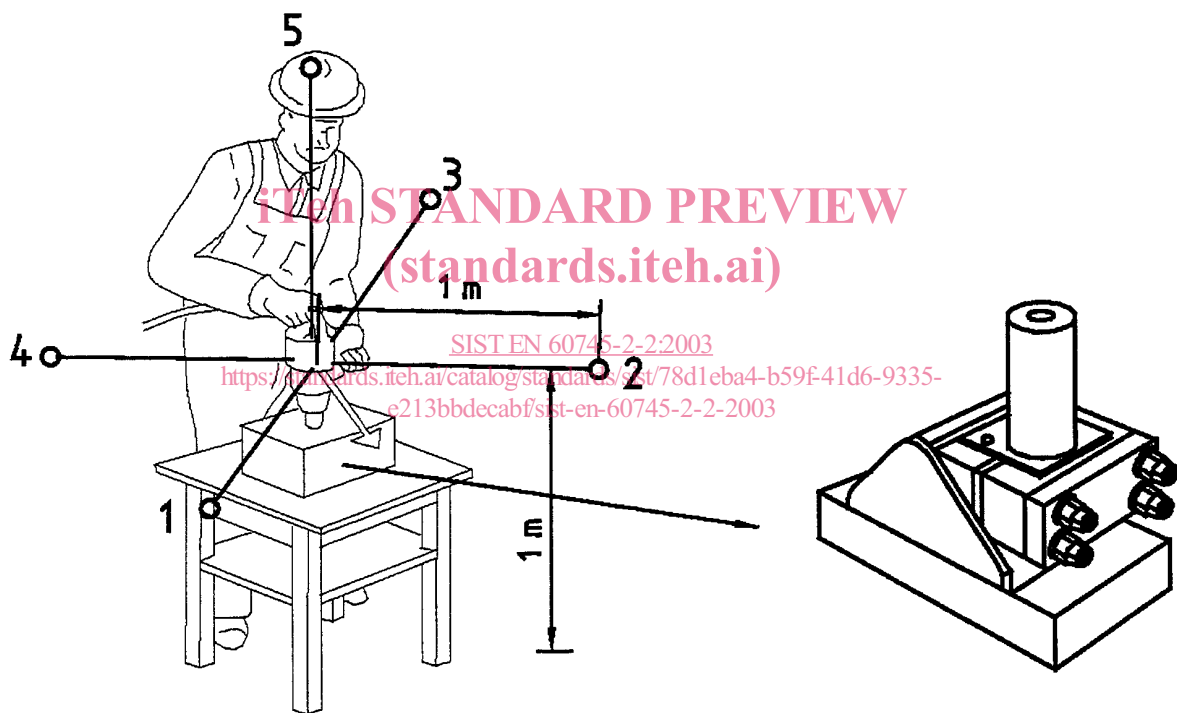


Figure Z101 — Brake

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IEC

60745-2-2

Deuxième édition
Second edition
2003-01

Outils électroportatifs à moteur –
Sécurité –

Partie 2-2:
Règles particulières pour les visseuses
et les clés à chocs

PREVIEW
(standards.iteh.ai)

Hand-held motor-operated electric tools –
Safety –

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Part 2-2:
Particular requirements for screwdrivers
and impact wrenches

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE

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For price, see current catalogue

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HAND-HELD MOTOR-OPERATED ELECTRIC TOOLS –
SAFETY –****Part 2-2: Particular requirements for screwdrivers
and impact wrenches**

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.
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- 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 60745-2-2 has been prepared by subcommittee 61F: Safety of hand-held motor-operated electric tools, of IEC technical committee 61: Safety of household and similar electrical appliances

This second edition cancels and replaces the first edition published in 1982, of which it constitutes a technical revision.

Main changes include Clause 12: Heating, introducing slightly different test cycles, Clause 17: Endurance, introducing both a no-load test and a practical test, and Clause 14: Supply connection and external flexible cords, in respect to minimum cable specifications. Subclause 2.2.23 has been removed, as the definitions of “normal load” are now generally covered by Part 1.

This bilingual version (2006-01) replaces the English version.

The text of this standard is based on the following documents:

FDIS	Report on voting
61F/461/FDIS	61F/485/RVD

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

The French version of this standard has not been voted upon.

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

This Part 2-2 is to be used in conjunction with the third edition of IEC 60745-1: Safety of hand-held motor-operated electric tools – Part 1: General requirements. When this standard states “addition”, “modification” or “replacement”, the relevant text in Part 1 is to be adapted accordingly.

NOTE In this standard, the following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in smaller roman type.

Subclauses, tables and figures which are additional to those in Part 1 are numbered starting from 101; additional annexes are lettered AA, BB, etc.

IEC 60745 consists of the following parts under the general title *Hand-held motor-operated electric tools – Safety*:

- Part 1: General requirements
- Part 2-1: Particular requirements for drills and impact drills
- Part 2-2: Particular requirements for screwdrivers and impact wrenches
- Part 2-3: Particular requirements for grinders, polishers and disk-type sanders
- Part 2-4: Particular requirements for sanders and polishers other than disk type
- Part 2-5: Particular requirements for circular saws and circular knives
- Part 2-6: Particular requirements for hammers
- Part 2-7: Particular requirements for spray guns for non-flammable liquids
- Part 2-8: Particular requirements for shears and nibblers
- Part 2-9: Particular requirements for tappers
- Part 2-11: Particular requirements for reciprocating saws (jig and sabre saws)
- Part 2-12: Particular requirements for concrete vibrators
- Part 2-13: Particular requirements for chain saws
- Part 2-14: Particular requirements for planers
- Part 2-15: Particular requirements for hedge trimmers
- Part 2-16: Particular requirements for tackers
- Part 2-17: Particular requirements for routers and trimmers
- Part 2-18: Particular requirements for strapping tools
- Part 2-19: Particular requirements for jointers
- Part 2-20: Particular requirements for band saws
- Part 2-21: Particular requirements for drain cleaners