
Električna motorna ročna orodja, prenosna orodja ter stroji za trato in vrt - Varnost - 3-6. del: Posebne zahteve za premične diamantne svedre s tekočinskim sistemom - Dopolnilo A1

Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 3-6: Particular requirements for transportable diamond drills with liquid system

Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses - Sécurité - Partie 3-6: Exigences particulières pour les forets diamantés transportables avec système liquide

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English Version

Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 3-6: Particular requirements for transportable diamond drills with liquid system (IEC 62841-3-6:2014/AMD1:2022)

Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses - Sécurité - Partie 3-6: Exigences particulières pour les forets diamantés transportables avec système liquide
(IEC 62841-3-6:2014/AMD1:2022)

Elektrische motorbetriebene handgeführte Werkzeuge, transportable Werkzeuge und Rasen- und Gartenmaschinen - Sicherheit - Teil 3-6: Besondere Anforderungen für transportable Diamantbohrmaschinen mit Flüssigkeitssystem
(IEC 62841-3-6:2014/AMD1:2022)

This amendment A1 modifies the European Standard EN 62841-3-6:2014; it was approved by CENELEC on 2022-06-07. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

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

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EN 62841-3-6:2014/A1:2022 (E)**European foreword**

The text of document 116/575/FDIS, future IEC 62841-3-6/AMD1, 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 62841-3-6:2014/A1:2022.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2023-05-16
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2026-05-16

EN 62841-3-6:2014/A1:2022 introduces clarifications on the requirements for liquid systems and extends the range for supply cords in Table 8.

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This document has been prepared under a Standardization Request given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For the relationship with EU Directive(s) / Regulation(s), see informative Annex ZZ, which is an integral part of EN 62841-3-6:2014/A1:2022.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

<https://standards.iteh.ai/catalog/standards/sist/b5423418-1424-4874-929f-280623b7d833/sist-en-62841-3-6-2014-a1-2022>

Endorsement notice

The text of the International Standard IEC 62841-3-6:2014/AMD1:2022 was approved by CENELEC as a European Standard without any modification.



INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

**Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety –
Part 3-6: Particular requirements for transportable diamond drills with liquid system**

**Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses – Sécurité –
Partie 3-6: Exigences particulières pour les forets diamantés transportables avec système liquide**

INTERNATIONAL
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE
TOOLS AND LAWN AND GARDEN MACHINERY –
SAFETY –****Part 3-6: Particular requirements for transportable
diamond drills with liquid system****AMENDMENT 1****FOREWORD**

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Amendment 1 to IEC 62841-3-6:2014 has been prepared by IEC technical committee 116: Safety of motor-operated electric tools.

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

Draft	Report on voting
116/575/FDIS	116/583/RVD

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

The language used for the development of this Amendment is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications/.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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

1 Scope

Replace the existing text with the following new text:

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

Replacement of the third paragraph:

The **rated voltage** is not more than 250 V for single-phase AC or DC tools, and 480 V for three-phase AC tools.

Addition:

This document applies to transportable **diamond drills**, intended to be connected to a **liquid system**. **Liquid system** can include liquid from a pipe or container.

2 Normative references

Replace the existing text with the following new text:

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

Replacement:

IEC 61540:1997¹, *Electrical accessories – Portable residual current devices without integral overcurrent protection for household and similar use (PRCDs)*
IEC 61540:1997/AMD1:1998

¹ There exists a consolidated edition 1.1:1999 which includes IEC 61540:1997 and its Amendment 1:1998.

Addition:

IEC 61008-1:2010², *Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) – Part 1: General rules*

IEC 61008-1:2010/AMD1:2012

IEC 61008-1:2010/AMD2:2013

IEC 62841-1:2014, *Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 1: General requirements*

8 Marking and instructions

Delete the existing addition to 8.1.

Add the following new subclause:

8.3 Replacement of the sixth dash:

– ">25 kg" on each separable unit with a mass above 25 kg, in accordance with 8.14.2 a) 102).

Replace the existing text of 8.14.2 a), item 102), with the following new text:

102) Instruction to and information about how to mount the **drill unit** to the **drill stand**, if separable;

Add the following new subclause:

8.14.3 Replacement:

If information about the mass or weight of the tool is provided, it shall either be the mass specified in 5.17, or it shall be clear which part of the tool the mass refers to.

Compliance is checked by inspection.

14 Moisture resistance

Replace the existing text with the following new text:

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

14.3 Replacement:

Liquid systems or spillage of liquid shall not subject the user to an increased risk of electrical shock.

If the tool is rated at least IPX4 in accordance with 14.2, this requirement is deemed to be fulfilled.

² There exists a consolidated edition 3.2:2013 which includes IEC 61008-1:2010 and its Amendment 1:2012 and Amendment 2:2013.

Compliance is checked by the following test:

The **residual current device**, if any, shall be disabled during the test. Electrical components, covers and other parts which can be removed without the aid of a tool are removed, except those fulfilling the test of 21.22.

The tool is prepared with approximately 1,0 % NaCl solution in the following modes if applicable:

- as described in 8.14.2;
- the liquid container of the tool is completely filled, and a further quantity, equal to 15 % of the capacity of the container, or 0,25 l, whichever is the greater, is poured in steadily over a period of 60_{-10}^{+0} s, while the tool is resting in its filling position in accordance with 8.14.2 d);
- a detachable liquid container is filled completely and mounted and dismantled 10 times on the tool.

In each applicable preparation, the tool is operated at **rated voltage** in each position consistent with the instructions according to 8.14.2 b) for 1 min while monitoring the leakage current as in Clause C.3.

For 3-phase **diamond drills** with a **rated input** exceeding 3 700 W, during the test the leakage current shall not exceed:

- 5 mA for a, b and c in Figure C.2 in the closed position;
- 10 mA for the test repeated with each of the switches a, b, c in Figure C.2 open in turn, the other two switches being closed.

For all other **diamond drills**, during the test the leakage current shall not exceed:

- 2 mA for a **class II tool**;
- 5 mA for a **class I tool**.

Following this test, the tool shall meet the electric strength test of Clause D.2 between **live parts** and **accessible parts** after being allowed to dry for 24 h at ambient temperature.

14.3.101 Diamond drills which are intended to be used for drilling overhead in accordance with 8.14.2 a) 104) and using a **liquid collection device** shall prevent electric shock due to excessive liquid spillage.

Compliance is checked by the following test.

The **drill unit** runs vertically upwards at **rated voltage** under no-load condition with the **liquid collection device** installed. If the **liquid collection device** is designed to be connected to a liquid vacuum device, then such a device shall be attached. The test is conducted twice, the drill being fitted once with the minimum and once with the maximum diameter of the diamond core bit as specified for the **liquid collection device** in accordance with 8.14.2 a) 106).

The test arrangement is shown in Figure 102.

The liquid flow of approximately 1,0 % NaCl solution shall be in the range of 1 l/min to 1,5 l/min. The running time shall be 15 min. The measuring time starts when the core bit is filled with liquid.

During the test, the leakage current as in Clause C.3 is monitored.

For 3-phase **diamond drills** with a **rated input** exceeding 3 700 W, during the test the leakage current shall not exceed:

- 5 mA for a, b and c in Figure C.2 in the closed position;
- 10 mA for the test repeated with each of the switches a, b, c in Figure C.2 open in turn, the other two switches being closed.

For all other **diamond drills**, during the test the leakage current shall not exceed:

- 2 mA for a **class II tool**;
- 5 mA for a **class I tool**.

Following this test, the tool shall meet the electric strength test of Clause D.2 between **live parts** and **accessible parts** after being allowed to dry for 24 h at ambient temperature.

14.4 Replacement:

Liquid systems shall not subject the user to an increased risk of electrical shock by components not capable of withstanding the pressure during operation.

Compliance is checked by the following test.

The **residual current device**, if any, shall be disabled during the test.

The **liquid system** is closed and an approximately 1,0 % NaCl solution at a hydrostatic pressure equal to twice the pressure stated in 8.14.2 d) 1) is applied for 1 h.

The tool is then placed for 1 min in all positions consistent with the instructions in accordance with 8.14.2 b) while monitoring the leakage current as in Clause C.2.

For 3-phase **diamond drills** with a **rated input** exceeding 3 700 W, during the test the leakage current shall not exceed:

- 5 mA for a, b and c in Figure C.2 in the closed position;
- 10 mA for the test repeated with each of the switches a, b, c in Figure C.2 open in turn, the other two switches being closed.

For all other **diamond drills**, during the test the leakage current shall not exceed:

- 2 mA for a **class II tool**;
- 5 mA for a **class I tool**.

Following this test, the tool shall meet the electric strength test of Clause D.2 between **live parts** and **accessible parts** after being allowed to dry for 24 h at ambient temperature.

14.5 Replacement:

Residual current devices used to provide protection from shock in the case of failure of the **liquid system** shall comply with

- IEC 61540:1997; or
- alternatively for 3-phase tools, IEC 61008-1:2010

and shall meet the following requirements a) to c):

- a) The **RCD** shall disconnect all mains conductors, but not the earth conductor if provided, when the leakage exceeds
 - 10 mA and with a maximum response of 300 ms; or