



SLOVENSKI STANDARD
SIST EN 50260-2-1:2002
01-september-2002

Safety of hand-held battery-powered motor-operated tools and battery packs - Part 2-1: Particular requirements for drills

Safety of hand-held battery-powered motor-operated tools and battery packs -- Part 2-1: Particular requirements for drills

Sicherheit für handgeführte akkubetriebene Elektrowerkzeuge und Akkublöcke -- Teil 2-1: Besondere Anforderungen für Bohrmaschinen

Sécurité des outils électroportatifs alimentés par batteries et des blocs de batteries -- Partie 2-1: Règles particulières pour les perceuses

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Ta slovenski standard je istoveten z: EN 50260-2-1:2002

ICS:

25.080.40	Vrtalniki	Drilling machines
25.140.20	Ò\ dā } æ ! [åæ	Electric tools
29.220.20	Sā ā • \ ā ^ ~ } åæ } ā ^ } æ àæ\ åæ	Acid secondary cells and batteries

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en

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EUROPEAN STANDARD

EN 50260-2-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2002

ICS 25.140.20

English version

**Safety of hand-held battery-powered motor-operated tools
and battery packs
Part 2-1: Particular requirements for drills**

Sécurité des outils électroportatifs
alimentés par batteries
et des blocs de batteries
Partie 2-1: Règles particulières
pour les perceuses

Sicherheit für handgeführte
akkubetriebene Elektrowerkzeuge
und Akkublöcke
Teil 2-1: Besondere Anforderungen
für Bohrmaschinen

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This European Standard was approved by CENELEC on 2000-08-01. 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, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, 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

This European Standard has been prepared by the Technical Committee CENELEC TC 61F, Hand-held and transportable electric motor-operated tools.

A first draft was submitted to the unique acceptance procedure in August 1996 with positive result. A second draft incorporating the editorial comments received during the UAP and the modifications necessary to incorporate the mechanical requirements which have been agreed for hand held tools was submitted to the formal vote in November 1999 and was approved by CENELEC as EN 50260-2-1 on 2000-08-01.

The following dates were fixed:

- latest date by the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2003-03-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2005-03-01

This European Standard is divided into two parts:

Part 1: General requirements which are common to most hand-held battery powered motor operated tools (for the purpose of this European Standard referred to simply as tools).

Part 2: Requirements for particular types of tool 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 (M/083) given to CEN and CENELEC by the European Commission and the European Free Trade Association and supports the essential safety requirements of the Machinery Directive.

Compliance with the clauses of Part 1 of this European Standard together with this Part 2 provides one means of conforming with the specified essential requirements of the Directive concerned.

For noise and vibration, this European Standard covers the requirements for their measurement, the provision of information arising from these measurements and the provision of information about the personal protective equipment required. Specific requirements for the reduction of the risk arising from noise and vibration through design of the tool are not given as this reflects the current state of the art. As with any standard, technical progress will be kept under review so that any developments can be taken into account.

Warning: Other requirements and other EC Directives can be applicable to the products falling within the scope of this European Standard.

Hand held motor-operated tools are covered by the EN 50144 series.

In order to be consistent with the EN 50144 series, the same order of clauses has been kept; the missing clauses are considered void.

CEN/TC 255 is producing standards for non-electric drills and tappers (EN 792-3) and for non-electric rotary percussive tools (EN 792-5).

This European Standard follows the overall requirements of EN 292-1 and EN 292-2.

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

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

- Requirements proper;
- *Test specifications;*
- Explanatory matter.

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1 Scope

This clause of Part 1 is applicable except as follows:

Addition:

This European Standard applies to drills. Impact drills are within the scope of this European Standard.

Stands for use with drills are not covered by this European Standard.

This European Standard does not give requirements for the design of the tool to reduce the risks arising from noise and vibration.

2 Definitions

This clause of Part 1 is applicable.

3 General requirements

This clause of Part 1 is applicable.

4 General conditions for the tests

This clause of Part 1 is applicable.

5 Rating

This clause of Part 1 is applicable.

6 Void

7 Marking and information for use

This clause of Part 1 is applicable except as follows:

7.1 *Addition:*

Drills shall be marked with:

- maximum diameter (in mm) of the drill bit for drilling in steel having a tensile strength of 390 N/mm².

8 Protection against electric shock

This clause of Part 1 is applicable.

9 Void

10 Void

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11 Void**12 Void****13 Environmental requirements**

This clause of Part 1 is applicable except as follows:

13.1 Void**13.2.2.4 Addition:**

For drills without impact mechanism, the chuck shall be horizontal.

For drills without impact mechanism, all speed setting devices shall be adjusted to the highest value.

For impact drills, the speed setting shall be that recommended by the manufacturer for an 8 mm bit drilling into concrete.

13.2.2.5 Replacement of paragraphs 3, 4 and 5:

Drills without impact mechanism are tested at no-load.

Impact drills are tested under load as shown in Figure 101 and in accordance with the conditions shown in Tables 101 and 102. A fully charged battery shall be used for each test.

Table 101.- Test conditions

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Orientation	<i>Drilling vertically downwards into concrete block having the dimensions 500 mm x 500 mm x 200 mm in height and supported on resilient material</i>
Tool bit/cutter/abrasive	<i>8 mm drill bit for drilling in concrete with a useable length of approximately 100 mm</i>
Feed force	<i>150 N ± 30 N</i>
Test cycle	<i>Measurement starts when drill bit has reached a depth of 10 mm and stops when the depth has reached approximately 80 mm</i>

Table 102 - Concrete formulation (per cubic metre)

Cement	Water	Aggregate	
		1450 kg	
450 kg	220 kg	Particle size	Fraction (%)
		0 to 0,25 mm	12 ± 3
		0 to 0,50 mm	50 ± 5
		0 to 1,00 mm	80 ± 5
		0 to 4,00 mm	100
<i>Compressive strength after 28 days to be 40 N/mm².</i>			

13.3.4 Replacement of paragraph 2:

The speed setting shall be that recommended by the manufacturer for an 8 mm bit drilling into concrete.

13.3.6 Replacement of paragraph 1:

Drills without impact mechanism are tested at no-load.

Impact drills are tested under load as shown in Figure 101 and in accordance with the conditions shown in Tables 101 and 102.

Paragraph 3 is not applicable.

14 Moisture resistance

This clause of Part 1 is applicable.

15 Insulation resistance and electric strength

This clause of Part 1 is applicable.

16 Void

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17 Abnormal operation

This clause of Part 1 is applicable.

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18 Mechanical hazards

This clause of Part 1 is applicable except as follows:

18.3 Addition:

Drills which can be fitted with bits having a diameter exceeding 16 mm shall be provided with two side handles or shall have provision for fitting a side handle.

Additional subclause:

18.101 Chuck keys shall be so designed that they drop easily out of position when released; they shall not be fixed to the drill by means of a chain, a string or similar means.

This requirement does not exclude the provision of clips for holding the key in place when not in use: metal clips fitted to a flexible cord, if any, are not allowed.

Compliance is checked by inspection and by manual test.

19 Mechanical strength

This clause of Part 1 is applicable.

20 Construction

This clause of Part 1 is applicable.

21 Components

This clause of Part 1 is applicable.

22 Internal wiring

This clause of Part 1 is applicable.

23 Void**24 Void****25 Void****26 Screws and connections**

This clause of Part 1 is applicable.

27 Creepage distances, clearances and distances through insulation

This clause of Part 1 is applicable.

28 Resistance to heat, fire and tracking

This clause of Part 1 is applicable.

29 Resistance to rusting

This clause of Part 1 is applicable.

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