



SLOVENSKI STANDARD SIST EN 50260-2-5:2002

01-september-2002

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Safety of hand-held battery-powered motor-operated tools and battery packs -- Part 2-5:
Particular requirements for circular saws and circular knives

Sicherheit für handgeführte akkubetriebene Elektrowerkzeuge und Akkublöcke -- Teil 2-
5: Besondere Anforderungen für Kreissägen und Kreismesser

Sécurité des outils électroportatifs alimentés par batteries et des blocs de batteries --
Partie 2-5: Règles particulières pour les scies circulaires et les couteaux circulaires

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Ta slovenski standard je istoveten z: EN 50260-2-5:2002

ICS:

25.080.60	Strojne žage	Sawing machines
25.140.20	Ò\^ dā } æ! åbæ	Electric tools
29.220.20	Sā ā • \ ā^ \ } åæ } ā ^ } æ	Acid secondary cells and batteries

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EUROPEAN STANDARD

EN 50260-2-5

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 2-5: Particular requirements for circular saws
and circular knives**

Sécurité des outils électroportatifs
alimentés par batteries et des blocs
de batteries
Partie 2-5: Règles particulières pour
les scies circulaires et les couteaux
circulaires

Sicherheit für handgeführte
akkubetriebene Elektrowerkzeuge
und Akkublöcke
Teil 2-5: Besondere Anforderungen
für Kreissägen und Kreismesser

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This European Standard was approved by CENELEC on 2001-01-01. 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 September 2000 and was approved by CENELEC as EN 50260-2-5 on 2001-01-01.

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 electrically driven circular saws (EN 792-12).

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 all types of circular saws for cutting wood and similar materials and circular knives.

These requirements do not cover circular saws and circular knives when mounted in a support for use as fixed tools.

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 except as follows:

Additional definitions:

2.101

circular saw with outer pendulum guard

tool the movable guard of which, for operation, swings around the upper fixed guard (see Figure 101)

2.102

circular saw with inner pendulum guard

tool the movable guard of which, for operation, swings inside the upper fixed guard (see Figure 102)

2.103

circular saw with tow guard

tool the movable guard of which, for operation, slides along the upper fixed guard (see Figure 103)

2.104

plunge type circular saw

tool having only a fixed upper guard into which the saw blade retracts when not in use (see Figure 104)

2.105

guide plate

part constituting the plane of reference on the material to be cut

2.106

fixed guard

cover linked to the motor unit which prevents access to the part of the blade situated above the guide plate

2.107

movable guard

cover which, in the rest position, prevents access to the part of the blade which is not covered by the fixed guard and which, in most cases, is situated below the guide plate. Plunge type circular saws have only one guard into which the saw blade retracts at the end of the sawing operation

2.108

riving knife

metal part placed in the plane of the saw blade which prevents the wood from tightening onto the rear part of the saw blade and thus prevents the backward movement of the tool or jamming of the saw blade

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:

Circular saws and circular knives shall be marked with:

- direction of rotation.

This shall be clearly marked by an arrow, raised or sunk on the fixed guard, or by any other means no less visible and indelible.

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7.8.1 Addition: <https://standards.iteh.ai/catalog/standards/sist/f00aec9c-0510-44d4-ab7c-24ae16b804c9/sist-en-50260-2-5-2002>

The instruction sheet shall contain also the following information:

- the maximum and minimum diameter, the thickness range of the saw blades, and other characteristics of the blades which can be fitted to the tool;
- the rated no-load speed of the working spindle.

7.8.2 Addition:

Instructions shall also include the substance of the following:

- do not use blades which are deformed or cracked;
- do not use saw blades made of high speed steel;
- do not use blades which do not comply with the characteristics specified in these instructions;
- do not stop the blade by lateral pressure on the disc;
- ensure that movable guards operate freely without jamming;
- do not lock the movable guard in the open position;
- ensure that any retraction mechanism of the guard system operates correctly;
- for circular saws: do not use saw blades the body of which is thicker or the set of which is smaller than the thickness of the riving knife;

- ensure that the riving knife is adjusted so that
 - the distance between the riving knife and the toothed rim of the saw blade is not more than 5 mm,
 - the toothed rim does not extend more than 5 mm beyond the lower edge of the riving knife.
- the riving knife should always be used except when plunging in the middle of the work piece;
- for circular saws for woodworking, the advice that if used in confined areas (e.g. indoors), to either use a dust protection or a dust collection equipment.

8 Protection against electric shock

This clause of Part 1 is applicable.

9 Void

10 Void

11 Void

12 Void

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13 Environmental requirements

This clause of Part 1 is applicable except as follows: [SIST EN 50260-2-5:2002](https://standards.iteh.ai/catalog/standards/sist/f00aec9c-0510-44d4-ab7c-24ae16b804c9/sist-en-50260-2-5-2002)

13.1 Void

13.2.2.4 Addition:

For circular knives, the blade shall be vertical.

13.2.2.5 Replacement of paragraphs 3 and 4:

Circular saws are tested under load under the conditions shown in Table 101:

Table 101 — Test conditions for circular saws

Orientation	Cutting a horizontal piece of chipboard 800 mm x 400 mm x 19 mm supported on resilient material and fixed to a bench
Tool bit/cutter/abrasive	New blade as recommended by the manufacturer for cutting chipboard
Feed force	Just sufficient to cut at a brisk pace
Test cycle	Cutting off approximately 10 mm wide strips (set by rip fence) across the 400 mm width of the chipboard

Circular knives are tested at no load.

13.3.6 Replacement of paragraph 1:

Circular saws and circular knives are tested under the conditions specified in 13.2.2.4 and 13.2.2.5.

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

17 Abnormal operation

This clause of Part 1 is applicable.

18 Mechanical hazards

This clause of Part 1 is applicable except as follows:

18.1 Replacement:

Circular saws and circular knives shall be equipped with an adequate guarding system which cannot be removed without the aid of a tool.

The guarding system for circular saws designed for cutting wood and the like shall comply with the requirements of 18.101, 18.102, 18.103 and 18.104.

Compliance is checked by inspection. [SIST EN 50260-2-5:2002](https://standards.iteh.ai/catalog/standards/sist/f00aec9c-0510-44d4-ab7c-2e0501699900/en-50260-2-5:2002)

This requirement does not apply to tools with a peripheral speed of the blade of less than 5 m/s.

For these tools, the relevant requirements are under consideration.

Other means of achieving the necessary degree of mechanical safety are allowed provided these are equally effective and reliable as those specified.

Additional subclauses:

18.101 Guarding above the guide plate

18.101.1 In order to prevent inadvertent contact of the operator's hand or fingers with the toothed rim of the saw blade, or with rotating parts on the handle side of the saw above the guide plate, these parts shall be screened by means of a guard or guards.

18.101.1.1 For saws of the types shown in Figures 101, 102 and 103, a fixed guard shall screen the toothed rim of the saw blade radially, at least down to the root of the saw teeth.

For the purpose of this requirement, the diameter of the root of the saw teeth shall not be greater than 0,9 times the diameter of the smallest saw blade specified in the instruction sheet.

18.101.1.2 Plunge type saws as shown in Figure 104 shall be equipped with a guard into which the saw blade and the riving knife automatically retract when not in use. The guard shall cover the toothed rim of the saw blade at least down to the root of the teeth for all possible depths of cut.

For the purpose of this requirement, the diameter of the root of the saw teeth shall not be greater than 0,9 times the diameter of the smallest saw blade specified in the instruction sheet.