
Varnost premičnih električnih orodij - 2-9. del: Posebne zahteve za zajeralne žage (IEC 61029-2-9:1995; spremenjen)

Safety of transportable motor-operated electric tools - Part 2-9: Particular requirements for mitre saws

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EUROPEAN STANDARD

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NORME EUROPÉENNE

EUROPÄISCHE NORM

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English version

Safety of transportable motor-operated electric tools
Part 2-9: Particular requirements for mitre saws
(IEC 61029-2-9:1995, modified)

Sécurité des machines-outils
électriques semi-fixes
Partie 2-9: Règles particulières
pour les scies à onglet
(CEI 61029-2-9:1995, modifiée)

Sicherheit transportabler
motorbetriebener Elektrowerkzeuge
Teil 2-9: Besondere Anforderungen
für Gehrungskappsägen
(IEC 61029-2-9:1995, modifiziert)

This European Standard was approved by CENELEC on 2002-09-24. 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, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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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 61029-2-9:1995, has been 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 electric motor-operated tools, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 61029-2-9 on 2002-03-01.

A draft for an amendment (prAA) was submitted to the formal vote and was approved by CENELEC for incorporation into EN 61029-2-9 on 2002-09-24.

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) 2003-10-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-10-01

In this document the common modifications to the International Standard are indicated by a vertical line in the left margin of the text.

This standard is divided into two parts:

- Part 1 General requirements, which are common to most transportable motor, operated tools (for the purpose of this standard referred to simple as tools) which could come within the scope of this standard.
- 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 given to CEN/CENELEC by the European Commission and European Free Trade Association and supports the essential health and safety requirements of the Machinery Directive.

Compliance with the relevant clauses of part 1 together with this part 2 provides one means of confirming with the specified essential health and safety requirements of the Directive. The requirements defined in EN 1050 are also dealt with in this standard.

For noise and vibration this standard covers the requirements for their measurement, the provisions 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 the design of the tool are not given as this reflects the current state of the art.

Warning: Other requirements arising from other European Directives can be applicable to the products falling within the scope of this standard.

CEN have prepared standards for wood working machines, which may include transportable machines. Although CEN and CENELEC have, where appropriate, used common solutions to provide uniform levels of protection, persons using this standard should check the scope of both this and CEN standards to ensure that a correct standard is used. Where necessary, normative reference is made to these standards in this part 2.

Part 2-9 is to be used in conjunction with EN 61029-1:2000.

Part 2-9 supplements or modifies the corresponding clauses of EN 61029-1, so as to convert it into the European Standard: Safety requirements for transportable mitre saws.

Where a particular subclause of part 1 is not mentioned in this part 2-9, that subclause applies as far as is reasonable. Where this part 2-9 states "addition", "modification" or "replacement", the relevant text of part 1 is to be adapted accordingly.

Subclauses, tables 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 61029-2-9 are prefixed "Z"

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:

1.1 *Addition:*

This European Standard applies to transportable mitre saws with a blade diameter not exceeding 350 mm, intended for cutting wood and analogue materials.

1.2 *Addition:*

This standard does not apply to transportable mitre saws used to cut steel, brass or food.

Mitre saws for cutting wood other than transportable are covered by EN 1870-3.

Tools combining the function of a mitre saw with the function of a circular saw bench are covered by EN 61029-2-11.

2 Definitions

This clause of part 1 is applicable except as follows:

2.21 *Replacement:*

2.21

normal load

the load to obtain rated input

2.101

mitre saw

a saw consisting of a table which supports and positions the workpiece and a saw unit fitted to an arm which projects over the table, normally from a pivot located at the table or on part of the frame of the machine.

A sliding movement of the saw unit may follow the chop action of the saw blade. For cutting purpose, the work piece is manually positioned against a fence

2.2.Z101

transportable mitre saw

a mitre saw used on a bench, or table or any supporting means, similar to a bench which is intended to carry out work in a stationary position and is capable of being lifted by one person by hand

3 General requirement

This clause of part 1 is applicable.

4 General notes on tests

This clause of part 1 is applicable.

5 Rating

This clause of part 1 is applicable.

6 Classification

This clause of part 1 is applicable.

7 Marking and information for use

This clause of part 1 is applicable except as follows:

7.1 Addition:

Mitre saws shall be marked with:

- maximum and minimum saw blade diameter;
- rated no-load speed;
- indication of direction of rotation of the saw blade;
- saw blade bore diameter.

Mitre saws which may be adjusted to different no-load speeds shall be marked, close to the means of adjustment.

This may be explained by means of drawings or diagrams, etc.

7.6 Addition:

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The direction of rotation of the blade shall be indicated on a fixed part of the mitre saw in the vicinity of the spindle axis by an arrow raised or sunk, which is visible when changing the blade, or by any other means not less visible and indelible.

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The substance of the following instructions shall also be given:

c) Safety precautions

- do not use saw blades which are damaged or deformed;
- replace the table insert when worn;

- use only saw blades recommended by the manufacturer which conform to EN 847-1;
- do not use saw blades manufactured from high speed steel;
- wear suitable personal protective equipment when necessary, this could include:
 - hearing protection to reduce the risk of induced hearing loss;
 - eye protection;
 - respiratory protection to reduce the risk of inhalation of harmful dust;
 - gloves for handling saw blades (saw blades shall be carried in a holder wherever practicable) and rough material;
- connect the saw to a dust collecting device when sawing wood. In addition the operator shall be informed of factors that influence exposure of dust and the precautions mentioned e.g. type of material to be machined and the importance of local extraction (capture or source) and proper adjustment of hoods/baffles/chutes;

The results of the dust collection test carried out in accordance with 13.1 shall be stated.

d) Maintenance and servicing

- operator's instructions on factors influencing exposure to noise (e.g. use of saw blades designed to reduce the emitted noise, saw blade and machine maintenance);
- report faults in the machine, including guards or saw blades, as soon as they are discovered.

e) Safe operation

- select the correct saw blade for the material to be cut;
- do not use the saw to cut other materials than those recommended by the manufacturer;
- lifting and transportation information: Information shall include where to lift and support the mitre saw and when necessary a warning not to use guards for this purpose;
- do not use the saw without the guards in good working order and properly maintained;
- ensure that the arm is securely fixed when bevelling;
- keep the floor area around the machine level, well maintained and free of loose materials e.g. chips and cut-offs;
- provide adequate general or localised lighting;
- the operator is adequately trained in the use, adjustment and operation of the machine;

- use correctly sharpened saw blades. Observe the maximum speed marked on the saw blade;
- ensure that any spacers and spindle rings used are suitable for the purpose as stated by the manufacturer;
- when fitted with laser, no exchange with different type of laser is permitted. Repairs shall only be carried out by the laser manufacturer or an authorised agent;
- blade replacement procedure including the method for repositioning and a warning that this must be carried out correctly;
- refrain from removing any cut-offs or other parts of the workpiece from the cutting area whilst the machine is running and the saw head is not in the rest position;
- ensure that the machine is always fixed to a bench, whenever possible;
- how to support long workpieces.

The following information shall also be given:

- the range of outside diameter, bore diameter and thickness of blades which may be used;
- maximum depth of cut;
- if double bevelling is possible, the safe method of operation;
- description of residual risks.

Drawings or diagrams may be used to illustrate the modes of operation.

8 Protection against electric shock

This clause of part 1 is applicable.

9 Starting **iTeh STANDARD PREVIEW**

This clause of part 1 is applicable. **(standards.iteh.ai)**

10 Input and current

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This clause of part 1 is applicable.

11 Heating

This clause of part 1 is applicable.

12 Leakage current

This clause of part 1 is applicable.

13 Environmental requirements

This clause of part 1 is applicable except as follows:

13.1 Replacement:

The tests under working conditions, orientation within the cabin and the material to be worked shall be in accordance with Table Z101:

Table Z101 - Conditions for dust measurements

Material	Beech – 20 mm x 2/3rds maximum cutting width but not more than 200 mm – planed on four sides
Feed speed	At a brisk pace without overloading the tool
Width of cut-off	15 mm minimum at 90° crosscut
Tool bit	New blade at the start of the test, tungsten carbide tipped for crosscutting and having the maximum diameters as recommended by the manufacturer.
Orientation	Across the width of the cabin with the air flow from left to right of the operator (see Figure Z101)
Test cycle	Five cuts per minute across the width of the work piece for 10 min, followed by 2 min rest time (total 12 min)
Test period	Five complete cycles (total 1 h)

13.2.1 Addition:

The most important sources of noise are:

- the saw blade;
- the gear;
- the motor / the fan;
- the workpiece.

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For general information concerning the reduction of noise, see EN ISO 11688-1.