



SLOVENSKI STANDARD

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

Sicherheit transportabler motorbetriebener Elektrowerkzeuge -- Teil 2-9: Besondere Anforderungen für Gehrungssägen

Sécurité des machines-outils électriques semi-fixes -- Partie 2-9: Règles particulières pour les scies à onglet

Ta slovenski standard je istoveten z: EN 61029-2-9:2009

ICS:

25.080.60	Strojne žage	Sawing machines
25.140.20	Ò\ dā } æ ! [å æ	Electric tools

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 61029-2-9

October 2009

ICS 25.080.60; 25.140.20

Supersedes EN 61029-2-9:2002

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 Gehrungsskappsägen
(IEC 61029-2-9:1995, modifiziert)

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This European Standard was approved by CENELEC on 2009-06-01. 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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of the International Standard IEC 61029-2-9:1995, prepared by SC 61F (transformed into IEC TC 116, Safety of hand-held motor-operated electric tools), together with the common modifications prepared by the Technical Committee CENELEC TC 116, former TC 61F, Safety of hand-held motor-operated electric tools, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 61029-2-9 on 2009-06-01.

This European Standard supersedes EN 61029-2-9:2002.

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) 2010-06-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2012-06-01

This European Standard is divided into two parts:

Part 1 General requirements, which are common to most transportable motor, operated tools (for the purpose of this European Standard referred to simply as tools) which could come within the scope of this European 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 CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directives 98/37/EC (amended by Directive 98/79/EC) and 2006/42/EC. See Annexes ZZA and ZZB.

Compliance with the relevant clauses of Part 1 together with this Part 2 provides one means of conforming with the specified essential health and safety requirements of the Directives.

The standard follows the overall requirements of EN ISO 12100-1 and EN ISO 12100-2.

For noise and vibration this European 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 European 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 European 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.

This Part 2-9 is to be used in conjunction with EN 61029-1:2009. This 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.

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

Clauses, subclauses, notes, 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: in roman type;
- *test specifications: in italic type;*
- explanatory matter: in smaller roman type.

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Contents

1	Scope	6
2	Definitions	6
3	General requirements	6
4	General notes on tests	6
5	Rating	7
6	Classification	7
7	Marking and information for use	7
8	Protection against electric shock	8
9	Starting	8
10	Input and current	8
11	Heating	8
12	Leakage current	8
13	Environmental requirements	9
14	Protection against ingress of foreign bodies and moisture resistance	9
15	Insulation resistance and electric strength	9
16	Endurance	9
17	Abnormal operation	10
18	Stability and mechanical hazards	10
19	Mechanical strength	14
20	Construction	14
21	Internal wiring	15
22	Components	15
23	Supply connection and external flexible cables and cords	15
24	Terminals for external conductors	15
25	Provision for earthing	15
26	Screws and connections	16
27	Creepage distances, clearances and distances through insulation	16
28	Resistance to heat, fire and tracking	16
29	Resistance to rusting	16
30	Radiation	16
	Annex A (normative) Normative references	23
	Annex ZD (informative) Dust measurement	24
	Annex ZZA (informative) Coverage of Essential Requirements of Directive 98/37/EC	26
	Annex ZZB (informative) Coverage of Essential Requirements of Directive 2006/42/EC	26

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SIST EN 61029-2-9:2009

<https://standards.iteh.ai/catalog/standards/sist/b6fe28ec-7439-4afe-9552-2abbeaf13145/sist-en-61029-2-9-2009>

Figures

Figure Z101 – Saw blade areas	17
Figure Z102 – Mitre saw provided with U-shaped guard	18
Figure Z103 – Mitre saw provided with open guard construction.....	18
Figure Z104 – Open guard construction.....	19
Figure Z105 – Dimensions of test probe	19
Figure Z106 – Dimension of the slot in the table	20
Figure Z107 – Flange characteristics.....	21
Figure Z108 – Position of saw blade relative to saw table	22
Figure ZD.101 – Orientation of tool and operator	25

Tables

Table Z101 – Noise test conditions for mitre saws	9
Table ZD.101 – Conditions for dust measurements.....	Error! Bookmark not defined.

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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 analogous materials.

1.2 Addition:

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

This standard does not apply to mitre saws other than transportable.

NOTE EN 1870-3 gives requirements for mitre saws for cutting wood other than transportable.

This standard does not apply to tools combining the function of a mitre saw with the function of a circular saw bench.

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

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2 Definitions

This clause of Part 1 is applicable except as follows:

2.21 Replacement:

2.21

normal load

load to obtain rated input

2.101

mitre saw

saw consisting of a table which supports and positions the work piece 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 mitre saw will have one or more of the following actions, down cutting action or sliding action which may follow or precede any down cutting action and can perform cuts such as angle / mitre, bevel and compound

3 General requirements

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.

7.6 Addition:

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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7.13 Addition:

The substance of the following instructions shall also be given:

c) Safety precautions

- warning to not use saw blades which are damaged or deformed;
- instruction to replace the table insert when worn;
- instruction to use only saw blades recommended by the manufacturer;
- warning to not use saw blades manufactured from high speed steel;
- instruction to 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 and rough material (recommendation that saw blades should be carried in a holder wherever practicable).

e) Safe operation

- instruction to select the correct saw blade for the material to be cut;
- warning to not use the saw to cut materials other than those specified;
- 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;

- instruction to only use the saw with guards in good working order and properly maintained, and in position;
- instruction to keep the floor area free of loose material e.g. chips and cut-offs;
- instruction to ensure the speed marked on the saw blade is at least equal to the speed marked on the saw;
- instruction to ensure that any spacers and spindle rings used are suitable for the purpose as stated by the manufacturer;
- when fitted with a laser: warning to not replace the laser with a different type. Instruction that repairs shall only be carried out by the laser manufacturer or an authorised agent;
- instruction how to correctly replace and reposition the blade;
- warning to refrain from removing any cut-offs or other parts of the work piece from the cutting area whilst the machine is running and the saw head is not in the rest position;
- instruction how to perform cuts correctly and safely:
 - always to clamp work pieces to the saw table,
 - to ensure before each cut that the machine is stable,
 - if needed, to fix the machine to a work bench or the like,
 - if needed, to support long work pieces with appropriate additional supports;
- instruction how to clamp work pieces to the saw table;
- instruction how to support long work pieces;
- instruction how to fix the machine to a workbench or the like;
- information about the minimum size of the work piece;
- information about the maximum cross-section size of the work piece for cross-cutting.

The following information shall also be given:

- the range of outside diameter, bore diameter and thickness of blades which may be used;
- maximum cutting depth;
- if compound bevelling is possible, the safe method of operation.

8 Protection against electric shock

This clause of Part 1 is applicable.

9 Starting

This clause of Part 1 is applicable.

10 Input and current

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:

13.2.1 *Addition:*

The most important sources of noise are:

- the saw blade;
- the gear;
- the motor / the fan;
- the work piece.

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

13.2.4 *Replacement of paragraphs 1, 2 and 3:*

Mitre saws are tested under load under the conditions shown in Table Z101.

Table Z101 – Noise test conditions for mitre saws

Material	Beech – 20 mm x 2/3 rds maximum cutting width, but not more than 200 mm – planed on four sides
Feed speed	At a brisk pace without overloading the machine
Width of cut-off	15 mm minimum at 90° crosscut
Test work cycle	Five cuts quickly following each other. The sound pressure is averaged over the test work cycle
Tool bit	New blade at the start of the test, tungsten carbide tipped for crosscutting and having the maximum diameter as marked on the tool in accordance with 7.1
Test position	To be used on a bench above reflecting plane as shown in Figure 12 of Part 1

13.3.6.3 *Replacement:*

Mitre saws are tested under load under the conditions shown in Table Z101.

14 Protection against ingress of foreign bodies and moisture resistance

This clause of Part 1 is applicable.

15 Insulation resistance and electric strength

This clause of Part 1 is applicable.

16 Endurance

This clause of Part 1 is applicable.