

**Teisaldatavate mootorajamiga elektritööriistade ohutus.
Osa 2-11: Erinõuded kombineeritud järkamis- ja
lauasaagidele**

**Safety of transportable motor-operated electric tools -
Part 2-11: Particular requirements for combined mitre
and bench saws**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 61029-2-11:2012 sisaldab Euroopa standardi EN 61029-2-11:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 61029-2-11:2012 consists of the English text of the European standard EN 61029-2-11:2012.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 12.10.2012.	Date of Availability of the European standard is 12.10.2012.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 25.080.60, 25.140.20

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Aru 10, 10317 Tallinn, Eesti; www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:
Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

**Safety of transportable motor-operated electric tools -
Part 2-11: Particular requirements for combined mitre and bench saws**
(IEC 61029-2-11:2001, modified)

Sécurité des machines-outils
électriques semi-fixes -
Partie 2-11: Règles particulières pour
les scies d'établi-scies à mortaiser
(CEI 61029-2-11:2001, modifiée)

Sicherheit transportabler
motorbetriebener Elektrowerkzeuge -
Teil 2-11: Besondere Anforderungen für
kombinierte Tisch- und Gehrungssägen
(IEC 61029-2-11:2001, modifiziert)

This European Standard was approved by CENELEC on 2012-09-03. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Contents

Foreword	4
1 Scope	6
2 Definitions.....	6
3 General requirement	7
4 General notes on tests	7
5 Rating	7
6 Classification.....	7
7 Marking and information for use	7
8 Protection against electric shock.....	9
9 Starting	9
10 Input and current	10
11 Heating	10
12 Leakage current	10
13 Environmental requirements	10
14 Protection against ingress of foreign bodies and moisture resistance	10
15 Insulation resistance and electric strength.....	11
16 Endurance	11
17 Abnormal operation.....	11
18 Stability and mechanical hazards	11
19 Mechanical strength.....	20
20 Construction.....	21
21 Internal wiring.....	22
22 Components	22
23 Supply connection and external flexible cables and cords	22
24 Terminals for external conductors	22
25 Provision for earthing	22
26 Screws and connections.....	22
27 Creepage distances, clearances and distance through insulation	23
28 Resistance to heat, fire and tracking	23
29 Resistance to rusting.....	23
30 Radiation	23
Annex A (normative) Normative references	44
Annex ZD (informative) Dust measurement.....	45
Annex ZZ (informative) Coverage of Essential Requirements of Directive 2006/42/EC.....	46

Figures

Figure Z101 – Combined mitre and bench saw (Type “A”)	24
Figure Z102 – Combined mitre and bench saw (Type “B”)	25
Figure Z103 – Orientation of tool and operator.....	26
Figure Z104 – Saw blade areas – Combined mitre and bench saw in mitre saw position (Type “B”).....	27
Figure Z105 – Self-closing guard – Opening angle	28
Figure Z106 – Open guard construction	29
Figure Z107 – Guarding of saw blade relative to mitre saw table position (Type “A” machine)	29
Figure Z108 – Dimensions of test probe	30
Figure Z109 – Riving knife mounted guard	30
Figure Z110 – Top guard side walls	31
Figure Z111 – Saw blade guard – Stability test	32
Figure Z112 – Guarding below the bench table (Type “B” machine).....	34
Figure Z113 – Width of the slot in the table.....	34
Figure Z114 – Dimensions of the bench saw table	35
Figure Z115 – Riving knife adjustment.....	36
Figure Z116 – Riving knife testing – Strength of riving knife mounting	37
Figure Z117 – Riving knife testing – Resiliency of riving knife	38
Figure Z118 – Two position rip fence	39
Figure Z119 – Distance between fence and saw blade in mitre saw mode	40
Figure Z120 – Flange characteristics	41
Figure Z121 – Examples of push stick and push block handle	42
Figure Z122 – Saw with workpiece support in mitre saw mode	43

Tables

Table Z101 – Noise test conditions for combined mitre and bench saws	10
Table ZD.101 – Conditions for dust measurement.....	45

Foreword

This document (EN 61029-2-11:2012) consists of the text of IEC 61029-2-11:2001 prepared by IEC/SC 61F (transformed into IEC TC 116 "Safety of hand-held motor-operated electric tools"), together with the common modifications prepared by CLC/TC 116 "Safety of motor-operated electric tools".

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) 2013-09-03
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-09-03

This document supersedes EN 61029-2-11:2009.

EN 61029-2-11:2012 includes the following significant technical changes with respect to EN 61029-2-11:2009:

- introduction of 'linked action'
- rewording of some clauses;
- improvement and clarification of Clause 18.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

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.

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

This European Standard follows the overall requirements of EN ISO 12100.

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 art.

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

CEN has prepared standards for industrial machines, which may extend to 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.

This Part 2-11 is to be used in conjunction with EN 61029-1:2009. This Part 2-11 supplements or modifies the corresponding clauses of EN 61029-1, so as to convert it into the European Standard: "Particular requirements for combined mitre and bench saws".

Where a particular subclause of Part 1 is not mentioned in this Part 2-11, that subclause applies as far as reasonable. Where this Part 2-11 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 61029-2-11 are prefixed "Z".

NOTE In this European Standard, the following print types are used:

- requirements proper: in roman type;
- *test specifications: in italic type;*
- explanatory matter: in smaller roman type.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive.

For the relationship with EU Directive 2006/42/EC, see informative Annex ZZ, which is an integral part of this document.

Endorsement notice

The text of the International Standard IEC 61029-2-11:2001 was approved by CENELEC as a European Standard with agreed common modifications.

1 Scope

This clause of Part 1 is applicable except as follows:

1.1 Addition:

This European Standard applies to transportable combined mitre and bench saws with a saw blade diameter not exceeding 315 mm and intended for cutting wood and analogous materials, plastics and non-ferrous metals except magnesium.

1.2 Addition:

This European Standard does not apply to transportable mitre and bench saws intended to be used to cut ferrous metals, magnesium or food.

This standard does not apply to

- single function bench saws;
- single function mitre saws;
- combined mitre and bench saws other than transportable.

NOTE Z101 Transportable single function bench saws are covered by EN 61029-2-1.

NOTE Z102 Transportable single function mitre saws are covered by EN 61029-2-9.

NOTE Z103 EN 1870-3 gives requirements for combined mitre and bench saws for cutting wood other than transportable.

2 Definitions

This clause of Part 1 is applicable except as follows:

2.21 Replacement:

2.21

normal load

load to obtain rated input

Addition:

2.101

combined mitre and bench saw

saw intended to be used:

- a) as a down-cutting cross cut saw;
- b) as a circular bench saw

Note 1 to entry The saw may be of type "A" or type "B" as defined in 2.Z101 and 2.Z102.

2.Z101

type "A" saw

combined mitre and bench saw equipped with two tables: a mitre saw table having a fence to support the material to be cut as the saw blade is brought down and a bench table which supports the material to be cut as it is fed by hand towards to the saw blade. In mitre saw mode the saw blade is suspended over the mitre saw table from an arm, normally from a point located at the table or on a part of the frame of the machine. A sliding cutting movement may follow a downward cutting action or vice-versa. In bench saw mode, the saw blade projects through a slot in the bench saw table (see Figure Z101)