

**Teisaldatavate elektrimootoriga käsitööriistade ohutus.
Osa 2: Erinõuded ühepoolsetele vertikaalasendis völli-
valamismasinatele**

Safety of transportable motor-operated electric tools - Part 2:
Particular requirements for single spindle vertical moulders

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 61029-2-8:2010 sisaldab Euroopa standardi EN 61029-2-8:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.03.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 26.02.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 61029-2-8:2010 consists of the English text of the European standard EN 61029-2-8:2010.

This standard is ratified with the order of Estonian Centre for Standardisation dated 31.03.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 26.02.2010.

The standard is available from Estonian standardisation organisation.

ICS 25.080.20, 25.140.20

Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

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

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

Right to reproduce and distribute Estonian 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 permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: +372 605 5050; E-mail: info@evs.ee

EUROPEAN STANDARD

EN 61029-2-8

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2010

ICS 25.080.20; 25.140.20

Supersedes EN 61029-2-8:2003

English version

**Safety of transportable motor-operated electric tools -
Part 2-8: Particular requirements for single spindle vertical moulders**
(IEC 61029-2-8:1995, modified + A1:1999 + A2:2001)

Sécurité des machines-outils électriques
semi-fixes -
Partie 2-8: Règles particulières
pour les toupies monobroches verticales
(CEI 61029-2-8:1995, modifiée + A1:1999
+ A2:2001)

Sicherheit transportabler motorbetriebener
Elektrowerkzeuge -
Teil 2-8: Besondere Anforderungen
an einspindelige senkrechte
Tischfräsmaschinen
(IEC 61029-2-8:1995, modifiziert +
A1:1999 + A2:2001)

This European Standard was approved by CENELEC on 2009-11-17. 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, Croatia, 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 61029-2-8:1995 and its amendments 1:1999 and 2:2001, 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 61029-2-8 on 2003-06-01.

A draft amendment (prAA), extending Annex ZZ to include the new MD 2006/42/EC, was submitted to the formal vote.

The combined texts were approved by CENELEC as a new edition of EN 61029-2-8 on 2009-11-17.

This European Standard supersedes EN 61029-2-8:2003.

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

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) 2010-06-01

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 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 Directive 2006/42/EC. See Annex ZZ.

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 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 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 the design of the tool are not given as this reflects the current state of the art.

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

This Part 2-8 is to be used in conjunction with EN 61029-1:2009. This Part 2-8 supplements or modifies the corresponding clauses of EN 61029-1, so as to convert it into the European Standard: "Safety requirements for transportable vertical spindle moulders".

Where a particular subclause of Part 1 is not mentioned in this Part 2-8, that subclause applies as far as is reasonable. Where this Part 2-1 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 61029-2-8 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.

Contents

1	Scope	6
2	Definitions	6
3	General requirements	7
4	General notes on tests	7
5	Rating	7
6	Classification	7
7	Marking	7
8	Protection against electric shock	10
9	Starting	10
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	12
15	Insulation resistance and electric strength	12
16	Endurance	12
17	Abnormal operation	12
18	Stability and mechanical hazards	12
19	Mechanical strength	20
20	Construction	22
21	Internal wiring	23
22	Components	23
23	Supply connection and external flexible cables and cords	23
24	Terminals for external conductor	23
25	Provision for earthing	23
26	Screws and connections	23
27	Creepage distances, clearances and distances through insulation	23
28	Resistance to heat, fire and tracking	23
29	Resistance to rusting	23
30	Radiation	23
	Annex A (normative) Normative references	38
	Annex ZZ (informative) Coverage of Essential Requirements of Directive 2006/42/EC	39

Figures

Figure Z101 – Example of single spindle vertical moulder	24
Figure Z102 – Example of straight work	25
Figure Z103 – Example of stopped straight work	25
Figure Z104 – Example of curved work	26
Figure Z105 – Examples of tenoning	26
Figure Z106 – Example of speed / cutting tool diameter diagram	27

Figure Z107 – Orientation of tool and operator.....	28
Figure Z108 – Tool holder spindles and spindle rings.....	29
Figure Z109 – Run out test of spindle rings.....	30
Figure Z110 – Table dimensions.....	30
Figure Z111 – Table rings	31
Figure Z112 – Example of curved work workpiece guiding and cutter block guarding systems.....	31
Figure Z113 – Test probe	32
Figure Z114 – Straight work - Example of using pressure devices.....	32
Figure Z115 – Example of guard and slide for tenoning operation	33
Figure Z116 – Definition of fence pressure pad deflection measuring point and directions of application of the test forces (horizontal view).....	34
Figure Z117 – Definition of fence pressure pad deflection measuring point and directions of application of the test forces (vertical view).....	34
Figure Z118 – Application of fence test force "F" and measurement of displacement "f" (vertical view).....	35
Figure Z119 – Definition of table pressure pad deflection measuring point and directions of application of test forces (horizontal view).....	35
Figure Z120 – Definition of table pressure pad deflection measuring point and directions of application of test forces (vertical view)	35
Figure Z121 – Definition of the adjustable guard defection measuring points and directions of application of test forces.....	36
Figure Z122 – Definition of guiding deflection measuring points and directions of application of test forces.....	37

Tables

Table Z101 – Conditions for dust measurements	11
Table Z102 – Noise test conditions for single vertical spindle moulders.....	11
Table Z103 – Tool holder spindle and cutting tool dimensions	13
Table Z104 – Table dimensions (mm).....	15
Table Z105 – Table rings.....	15
Table Z106 – Fences and table pressure pad displacement.....	21
Table Z107 – Adjustable guard deflection	21
Table Z108 – Guiding steady deflection	22

1 Scope

This clause of part 1 is applicable except as follows:

1.1 Addition:

This European Standard applies to transportable single spindle vertical moulders, with a maximum cutter block diameter of 200 mm maximum, designed to cut wood and analogue materials also covered with plastic laminate or edgings by hand-feed operation.

Single spindle vertical moulders other than transportable are covered by EN 848-1:1998.

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

transportable single spindle vertical moulder

a hand fed vertical spindle moulder used on a table or similar support which is intended to carry out work in a stationary position, capable of being lifted by hand by one person. It has a single spindle (fixed or removable) the position of which is fixed during machining and a horizontal table. The motor is integral with the machine. The machine may have any of the following additional features:

- a) the facility for the spindle to be raised and lowered through the table;
- b) the facility for fitting an additional manually operated sliding table;
- c) the facility to tilt the spindle.

(See Figure Z101)

2.102

cutter block

rotating assembly consisting of the tool holder and the cutting tool

2.103

tool holder

single piece spindle or removable spindle to which the cutting tool is fixed

2.104

removable spindle

spindle capable of being changed without removing the bearings

2.Z101

straight work

the shaping of a workpiece with one face in contact with the table and a second with the fence, and where the work starts at one end of the workpiece and continuous through to the other end (see Figure Z102)

2.Z102

stopped straight work

the machining of only a part of the workpiece length

(See Figure Z103)