SLOVENSKI STANDARD
SIST EN 61029-2-5:2012

01-marec-2012

Nadomešča:
SIST EN 61029-2-5:2003

Varnost premičnih električnih orodij - 2-5. del: Posebne zahteve za tračne žage

Safety of transportable motor-operated electric tools - Part 2-5: Particular requirements for band saws

Sicherheit transportabler motorbetriebener Elektrowerkzeuge - Teil 2-5: Besondere Anforderungen für Bandsägen

Sécurité des machines-outils électriques semi-fixes - Partie 2-5: Règles particulières pour les scies à ruban

Ta slovenski standard je istoveten z: **EN 61029-2-5:2011**

ICS:

25.080.60	Strojne žage	Sawing machines
25.140.20	Električna orodja	Electric tools

SIST EN 61029-2-5:2012 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61029-2-5

November 2011

ICS 25.080.60; 25.140.20

Supersedes EN 61029-2-5:2002

English version

Safety of transportable motor-operated electric tools - Part 2-5: Particular requirements for band saws (IEC 61029-2-5:1993, modified + A1:2001, modified)

Sécurité des machines-outils électriques semi-fixes - Partie 2-5: Règles particulières pour les scies à ruban (CEI 61029-2-5:1993, modifiée + A1:2001, modifiée)

Sicherheit transportabler motorbetriebener Elektrowerkzeuge - Teil 2-5: Besondere Anforderungen für Bandsägen (IEC 61029-2-5:1993, modifiziert + A1:2001, modifiziert)

This European Standard was approved by CENELEC on 2011-10-10. 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, 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

This document (EN 61029-2-5:2011) consists of the text of IEC 61029-2-5:1993 and its amendment 1:2001, prepared by IEC/TC 116 "Safety of motor-operated electric tools", together with the common modifications prepared by the CLC/TC 116, "Safety of motor-operated electric tools"

The following dates are fixed:

– latest date by which the existence of the EN has to be announced at national level	(doa)	2012-04-10
– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2012-10-10
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2014-10-10

This document supersedes EN 61029-2-5:2002.

The main changes with respect to EN 61029-2-5:2002 are in 7.13 (improved wording) and in Clause 18 (Stability and mechanical hazards). Additionally, dust measurement is now handled in the new Annex ZD instead of 13.1. These changes aim to adapt EN 61029-2-5 to EN 61029-1:2009 and to MD (2006/42/EC).

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

This European Standard is divided into two parts:

Part 1 General requirements that are common to most transportable electric motor operated tools (for the purpose of this standard referred to simply 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 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 Directives.

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 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 2-5 is to be used in conjunction with EN 61029-1:2009. This Part 2-5 supplements or modifies the corresponding clauses of EN 61029-1, so as to convert it into the European Standard: "Safety requirements for transportable band saws".

Where a particular subclause of Part 1 is not mentioned in this Part 2-5, that subclause applies as far as is reasonable. Where this Part 2-5 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 61029-2-5 are prefixed "Z".

NOTE In this standard the following print types are used:
- Requirements proper;
- *Test specifications;*
- Explanatory matter.

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.

Contents

1 Scope

This clause of Part 1 is applicable except as follows:

1.1 *Addition:*

This European Standard applies to transportable band saws having a saw band not more than 2 700 mm in length and band wheels having a diameter of not more than 350 mm.

1.2 *Addition:*

Band saws other than transportable band saws are covered by EN 1807.

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.Z101
band saw
tool designed to cut wood or other materials by means of a revolving endless saw band which is carried on two or more band wheels. It has a fixed or inclinable table to support and position the work piece that is fed by hand against the saw band

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:*

Band saws shall be marked with:

- for three phase tools, direction of rotation of the driven band wheel which shall be indicated on the tool by an arrow raised or sunk, or by any other means not less visible and indelible;
- warning stating that the tool shall be disconnected from the supply before maintenance. This warning shall be placed in the vicinity of the guard which when open gives access to the saw band.

Where a tool is designed to operate at more than one cutting speed, the following requirements shall apply:

- on tools where a speed change is achieved by changing the position of the drive belts on the drive pulleys, the selected speed shall be indicated on the same side of the tool as the start control by a diagram showing the relevant speed selected for each combination of pulleys;
- on tools where a speed change is achieved by an electronic control circuit, the selected speed shall be indicated on the tool at the selecting device (e.g. variable speed control dial provided with numerical speed settings).

7.13 *Addition:*

The substance of the following instructions shall also be given:

Zc) Safety precautions

101) warning not to use saw bands which are damaged or deformed;

102) instruction to replace the table insert when worn;

103) instruction to connect the band saw to a dust collecting device when sawing wood;

104) warning not to operate the tool, when the guard protecting the saw band is open;

105) instruction to select the saw band and the speed depending on the material to be cut;

106) warning not to clean the saw band whilst it is in motion;

107) instruction to wear gloves for handling the saw band and rough material.

Zd) Safe operation

101) instruction to use a push stick when straight cutting small work pieces using the fence;

102) instruction to transport the tool with the band guard fully down and close to the table;

103) instruction to place the fence on the lower side of the table when bevel-cutting with the table inclined;

104) instruction to use a suitable holding device when cutting round or irregular shaped timber to prevent twisting of the work piece;

105) warning not to use guards for handling or transportation;

106) instruction to adjust the adjustable guard as close to the work piece as practicable;

107) information regarding the width and length of the saw band that may be used with the tool;

108) information on how to support long work pieces;

109) information how to correctly tension and track, if applicable, the saw band using the means provided;

110) information where to store the push stick.

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 work piece;
– the saw band;
– the motor;
– the band drive;
– the housing.

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

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

Band saws are tested under load and under the conditions shown in Table Z101:

Table Z101 − Noise conditions for band saws

Material	Beech – 20 mm × 400 mm × width as required, planed at least on the side in contact with the saw table
Feed speed	At a brisk pace without overloading the tool
Depth of cut	20 mm - upper guide set 40 mm above table
Width of cut-off	5 mm minimum at 90° as set by the guide fence
Tool bit	New saw band suitable for this material and working process
Test work cycle	Five cuts quickly following each other

13.3 This subclause is not applicable.

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.

17 Abnormal operation

This clause of Part 1 is applicable except as follows:

17.1 *Addition*:

Band saws shall be considered to be tools in which moving parts are liable to be jammed, if equipped with an induction motor.

18 Stability and mechanical hazards

This clause of Part 1 is applicable except as follows:

18.1 *Addition*:

The requirements of 18.1 do not apply to those guards covered by 18.1.Z102.

The band wheels, the drive mechanism and the whole saw band in the non-cutting area shall be enclosed by fixed and/or interlocked moveable guards, see Figure Z101. It shall be possible to change the saw band without the need to remove a fixed guard.

It shall not be possible to start the tool, when an interlocked movable guard is open.

The interlock function may be achieved by means of a switch with a contact separation of less than 3 mm. As a protection against the easy defeating of a switch used for the interlock, it shall not be possible to actuate the switch with the test finger of Figure 1 of Part 1, when the guard is open.

Compliance is checked by manual test using the test finger of Figure 1 with a force not exceeding 5 N.

A movable guard shall prevent access to moving parts behind the movable guard whilst the guard is being opened and before the interlocking switch actuates.

Compliance is checked by the following test.

The guard is opened to the point where the switch is just actuated. It shall not be possible to get access to moving parts with the test probe specified in Figure Z103. The test probe is applied with a force not exceeding 5 N.

For a saw with an interlocked movable guard, the run-down time of the saw band shall either:

– be less than 2 s; or

– be shorter than the time for opening an interlocked moveable guard.

NOTE A typical solution to comply with the second dash above is a guard lock.

Compliance with the first dash is checked by the following test.

The saw band is adjusted in accordance with the instructions required by 7.13 Zd).

The band saw shall be run in for 1 min before starting the test.

The test is made under no-load. The test sequence shall consist of a total of 2 500 cycles. The time measurement starts when the interlocking switch has opened.

The run down time of the saw band shall not exceed 2 s for the first six cycles and for the final six cycles of the test sequence.

Compliance with the second dash is checked by inspection.

18.1.Z101 Guiding of the saw band

The band saw shall be equipped with saw band guides which guide the saw band above and below the table. The guide above the table shall be adjustable down to a height of maximum 8 mm above the table surface when the table is in the horizontal position. See Figure Z102.

Compliance is checked by inspection and measurement.

18.1.Z102 Guarding in the cutting area

All sides of the saw band above the table, except that part necessary to process the work piece or to change the saw band, shall be covered by a guard. The guard shall be adjustable from the maximum height of cut down to a height of maximum 8 mm above the table surface when the table is in the horizontal position. The guard shall be capable of being fixed in every position within this range and shall be so designed that it does not have to be removed from the tool during saw band change. See Figure Z101.