

**Käeshoitavad mootorajamiga elektritööriistad. Ohutus.
Osa 2-20: Erinõuded lintsaagidele**

Hand-held motor-operated electric tools - Safety Part 2-20:
Particular requirements for band saws

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60745-2-20:2009 sisaldab Euroopa standardi EN 60745-2-20:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.11.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 03.09.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 60745-2-20:2009 consists of the English text of the European standard EN 60745-2-20:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.11.2009 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 03.09.2009.

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Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

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English version

**Hand-held motor-operated electric tools -
Safety -
Part 2-20: Particular requirements for band saws
(IEC 60745-2-20:2003, modified + A1:2008)**

Outils électroportatifs à moteur -
Sécurité -
Partie 2-20: Règles particulières
pour les scies à ruban
(CEI 60745-2-20:2003, modifiée +
A1:2008)

Handgeführte motorbetriebene
Elektrowerkzeuge -
Sicherheit -
Teil 2-20: Besondere Anforderungen
für Bandsägen
(IEC 60745-2-20:2003, modifiziert +
A1:2008)

This European Standard was approved by CENELEC on 2009-07-01. 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.

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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 60745-2-20:2003, 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 61F (transformed into TC 116) was submitted to the formal vote and was approved by CENELEC as EN 60745-2-20 on 2003-09-01.

A draft amendment (prAA) was prepared to align Subclause 6.2 with the new Subclause 6.2 in EN 60745-1. Moreover, vibration values determined with the new 6.2 are complying with the requirements of the Physical Agents Directive Vibration 2002/44/EC. The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A11 to EN 60745-2-20:2003 on 2007-06-01.

The text of document 61F/738/FDIS future amendment 1 to IEC 60745-2-20:2003, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60745-2-20:2003 on 2009-04-22.

A further draft amendment (prAB), 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 60745-2-9 on 2009-07-01.

This European Standard supersedes EN 60745-2-9:2003 + A11:2007 + A1:2009.

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) 2010-02-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2012-05-01

This standard is divided into two parts:

Part 1: General requirements which are common to most hand-held 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 tools 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 (Machinery Directive), amended by Directive 98/79/EC, and of EC Directive 2006/42/EC. See Annex ZZA and Annex ZZB.

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

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

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

This Part 2-20 is to be used in conjunction with EN 60745-1:2009. When this standard 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 60745-2-20 are prefixed "Z".

NOTE In this standard, the following print types are used:

- Requirements: in roman type;
- *Test specification: in italic type;*
- Notes: in smaller roman type.

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Endorsement notice

The text of the International Standard IEC 60745-2-20:2003 + A1:2008 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

6 Void

Replace by:

6 Environmental requirements

This clause of Part 1 is applicable except as follows:

6.1.2.4 Modification:

Band saws are suspended. The cutting part of the loop blade shall be horizontal.

6.1.2.5 Modification:

Band saws are tested at no-load.

6.2 Vibration

6.2.4.2 Location of the measurement

Addition:

Figure Z101 shows the positions for band saws.

6.2.6.3 Operating conditions

Modification:

Band saws are tested under load observing the conditions shown in Tables Z101 or Z102. If the band saw is intended to cut metal, the test requirements of Table Z101 apply. If the band saw is intended to cut wood, the test requirements of Table Z102 apply.

Table Z101 — Operating conditions for band saws intended to cut metal

Orientation	<p>Cutting rings in a vertical direction from a tube of mild steel. The tube shall have a diameter of 40 mm ^{+10 mm} and a wall thickness of 2 mm ^{+2 mm}.</p> <p>The steel tube is clamped in a vice which is rigidly mounted on a workbench. The tube shall project 100 mm from the vice clamp and shall be readjusted at the beginning of each series of tests.</p>
Tool bit/ settings	<p>New saw band as specified for cutting of mild steel.</p> <p>Speed setting devices shall be adjusted to the setting specified to cut mild steel.</p>
Feed force	<p>The force to be applied to the tool in addition to its weight shall be just as necessary to ensure stable sawing at a brisk pace. Equal force shall be applied to both handles, avoiding excessive grip forces. Vibration reducing mechanisms shall not be overloaded to allow them proper operation.</p>
Test cycle	<p>A 10 mm wide ring is cut from the tube.</p> <p>Measurement starts when the band saw enters the tube and stops when the saw band leaves the tube.</p>
<p>NOTE In general, stable operation is achieved by a feed force which is not more than 50 N in addition to the weight of the tool.</p>	

Table Z102 — Operating conditions for band saws intended to cut wood

Orientation	<p>Cutting slices in vertical direction of a horizontal piece of softwood 50 mm x 50 mm with a minimum length of 200 mm.</p> <p>The workpiece shall be firmly clamped to a workbench using resilient material, which shall be mounted so that it does not have any significant resonance in the frequency range that can influence the test result.</p> <p>The wood shall project 100 mm from the clamped area and shall be readjusted at the beginning of each series of tests.</p>
Tool bit/settings	<p>New saw band as specified for cutting softwood.</p> <p>Speed setting devices shall be adjusted to the setting specified to cut softwood.</p>
Feed force	<p>Just sufficient to cut at a brisk pace. Equal force shall be applied to both handles, avoiding excessive grip forces. Vibration reducing mechanisms shall not be overloaded to allow them proper operation</p>
Test cycle	<p>One test cycle is given by cutting off one approximately 10 mm wide slice (set by rip fence if available) across the wood.</p> <p>The measurement starts when the saw band enters the wood and finishes when the saw band leaves the wood.</p>
<p>NOTE In general, stable operation is achieved by a feed force which is not more than 50 N in addition to the weight of the tool.</p>	

6.2.7.1 Reported vibration value

Addition:

For band saws intended to cut metal, the result $a_{h,CM}$ in accordance with Table Z101 shall be reported:

$a_{h,CM}$ = mean vibration "cutting metal".

For band saws intended to cut wood, the result $a_{h,CW}$ in accordance with Table Z102 shall be reported:

$a_{h,CW}$ = mean vibration "cutting wood".

For saws intended to cut both metal and wood, both $a_{h,CM}$ and $a_{h,CW}$ shall be reported.

6.2.7.2 Declaration of the vibration total value

Addition:

The vibration total value of the handle with the highest emission and the uncertainty K shall be declared:

- for band saws intended to cut metal
the value of $a_{h,CM}$, with the work mode description "cutting metal";
- for band saws intended to cut wood
the value of $a_{h,CW}$, with the work mode description "cutting wood";
- for band saws intended to cut metal and wood
the value of $a_{h,CM}$, with the work mode description "cutting metal" and
the value of $a_{h,CW}$, with the work mode description "cutting wood".

21 Construction

Add:

21.21 *Addition:*

Band saws are not considered to be tools where a considerable amount of dust is produced.

Add the following figure:

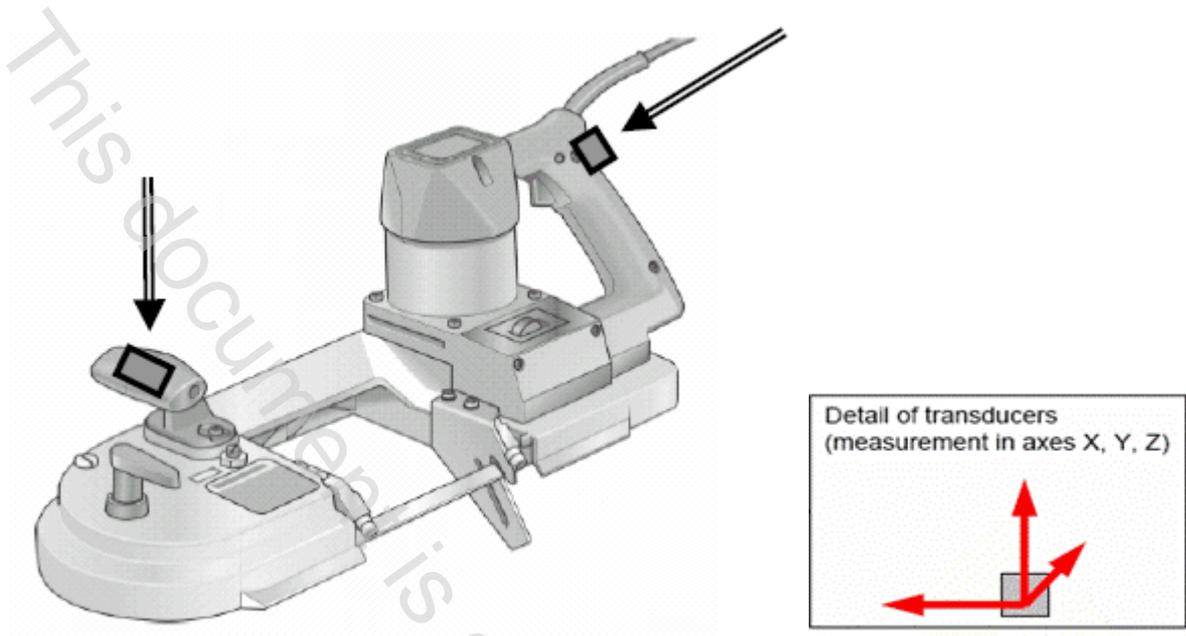


Figure Z101 - Positions of transducers for band saws

Add the following annex:

Annex ZZ
(informative)

Coverage of Essential Requirements of EC Directives

Annex ZZA
(informative)

Coverage of Essential Requirements of Directive 98/37/EC

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers all relevant Essential Requirements as given in EC Directive 98/37/EC (Machinery Directive), amended by Directive 98/79/EC.

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directives concerned.

WARNING: Other requirements and other EC Directives may be applicable to the products falling within the scope of this standard.

Annex ZZB
(informative)

Coverage of Essential Requirements of Directive 2006/42/EC

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers all relevant Essential Requirements as given in EC Directive 2006/42/EC (Machinery Directive).

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directive concerned.

WARNING: Other requirements and other EC Directives may be applicable to the products falling within the scope of this standard.

HAND-HELD MOTOR-OPERATED ELECTRIC TOOLS – SAFETY –

Part 2-20: Particular requirements for band saws

1 Scope

This clause of Part 1 is applicable, except as follows:

Addition:

This standard applies to band saws.

2 Normative references

This clause of Part 1 is applicable.

3 Terms and definitions

This clause of Part 1 is applicable, except as follows:

3.101

band saw

tool equipped with an endless loop blade

4 General requirements

This clause of Part 1 is applicable.

5 General conditions for the tests

This clause of Part 1 is applicable.

6 Void

7 Classification

This clause of Part 1 is applicable.

8 Marking and instructions

This clause of Part 1 is applicable, except as follows:

8.12.1.1 *Addition:*

- **Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord. Cutting accessories contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.**