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Responsible committee: CPL/116 Safety of motor-operated electric tools

Interested committees:

Title: BS EN IEC 62841-2-25 Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety

Part 2-25: Particular requirements for hand-held chain beam saws

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

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- ii) affects other national standard(s)
- iii) requires additional national guidance or information

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THIS DRAFT IS NOT CURRENT BEYOND 27 November 2024**

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



116/827/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER:

IEC 62841-2-25 ED1

DATE OF CIRCULATION:

2024-10-04

CLOSING DATE FOR VOTING:

2024-12-27

SUPERSEDES DOCUMENTS:

116/768/NP, 116/821/RVN

IEC TC 116 : SAFETY OF MOTOR-OPERATED ELECTRIC TOOLS

SECRETARIAT:

United States of America

SECRETARY:

Mr Joseph Harding

OF INTEREST TO THE FOLLOWING COMMITTEES:

HORIZONTAL FUNCTION(S):

ASPECTS CONCERNED:

Safety

☒ SUBMITTED FOR CENELEC PARALLEL VOTING☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING

Attention IEC-CENELEC parallel voting

The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.

The CENELEC members are invited to vote through the CENELEC online voting system.

This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Recipients of this document are invited to submit, with their comments, notification of any relevant "In Some Countries" clauses to be included should this proposal proceed. Recipients are reminded that the CDV stage is the final stage for submitting ISC clauses. (SEE [AC/22/2007](#) OR [NEW GUIDANCE DOC](#)).

TITLE:

Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 2-25: Particular requirements for hand-held chain beam saws

PROPOSED STABILITY DATE: 2030

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE
TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY –****Part 2-25: Particular requirements for hand-held chain beam saws****FOREWORD**

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IEC 62841-2-25 has been prepared by IEC technical committee 116: Safety of motor-operated electric tools. It is an International Standard.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
116/XX/FDIS	116/XX/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document is to be used in conjunction with the first edition of IEC 62841-1:2014.

This document supplements or modifies the corresponding clauses in IEC 62841-1, so as to convert it into the IEC Standard: Particular requirements for hand-held chain beam saws.

110 Where a particular subclause of IEC 62841-1 is not mentioned in this document, that subclause
111 applies as far as reasonable. Where this document states "addition", "modification" or
112 "replacement", the relevant text in IEC 62841-1 is to be adapted accordingly.

113 The following print types are used:

- 114 – requirements: in roman type;
- 115 – *test specifications: in italic type;*
- 116 – notes: in small roman type.

117 The terms defined in Clause 3 are printed in **bold typeface**.

118 Subclauses, notes, tables and figures which are additional to those in IEC 62841-1 are
119 numbered starting from 101.

120 Subclauses, notes, tables and figures in Annex K and Annex L which are additional to those in
121 the main body of this document are numbered starting from 301.

122 A list of all parts in the IEC 62841 series, published under the general title *Electric motor-*
123 *operated hand-held tools, transportable tools and lawn and garden machinery – Safety*, can be
124 found on the IEC website.

125 This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in
126 accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available
127 at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are
128 described in greater detail at www.iec.ch/standardsdev/publications.

129 The committee has decided that the contents of this document will remain unchanged until the
130 stability date indicated on the IEC website under webstore.iec.ch in the data related to the
131 specific document. At this date, the document will be

- 132 • reconfirmed,
- 133 • withdrawn,
- 134 • replaced by a revised edition, or
- 135 • amended.

136 NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing
137 organizations may need a transitional period following publication of a new, amended or revised IEC publication in
138 which to make products in accordance with the new requirements and to equip themselves for conducting new or
139 revised tests.

140 It is the recommendation of the committee that the content of this publication be adopted for implementation nationally
141 not earlier than 36 months from the date of publication.

142

ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY –

Part 2-25: Particular requirements for hand-held chain beam saws

1 Scope

IEC 62841-1:2014, Clause 1 is applicable, except as follows.

Addition:

This document applies to hand-held **chain beam saws** for cutting wood or similar material and designed for use by one person.

This document does not apply to **chain beam saw attachments** that convert a circular saw or a chain saw into a **chain beam saw**.

This document does not apply to

- chain saws;
- chain saws for tree service; and
- pole-mounted pruners.

NOTE 101 Chain saws are covered by IEC 62841-4-1.

NOTE 102 Chain saws for tree service will be covered by a future part of IEC 62841.

NOTE 103 Pole-mounted pruners will be covered by a future part of IEC 62841.

2 Normative references

IEC 62841-1:2014, Clause 2 is applicable, except as follows.

Addition:

IEC 62841-1:2014, *Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 1: General requirements*

ISO 630-2:2021, *Structural steels - Part 2: Technical delivery conditions for structural steels for general purposes*

3 Terms and definitions

IEC 62841-1:2014, Clause 3 is applicable, except as follows.

Addition:

3.101

auxiliary handle

support handle located at or towards the front of the motor housing (see Figure 101)

3.102**bar tip guard**

shield that prevents contact with the **saw chain** near the tip of the **guide bar**

3.103**base plate**

part supporting the saw on the material being cut or on a guide rail

3.104**bevel angle**

angular displacement of the **guide bar** plane with respect to the **base plate** plane, the position of the **guide bar** plane that is perpendicular to the **base plate** being the 0° bevel position

3.105**chain barrier**

device located behind and in the plane of the guide bar in a fixed proximity to the saw chain through the entire depth of cut range of the **chain beam saw**, intended to reduce the risk of chain pinching and binding

3.106**chain beam saw**

tool designed to cut wood or similar material with a **saw chain** on a **guide bar** and consists of an integral unit of handles, cutting attachment, motor, base plate, and **chain barrier**, designed to be supported with two hands (see Figure 101)

Note 101 to entry: The **base plate** of a **chain beam saw** is in contact with the workpiece during operation.

3.107**drive sprocket**

chain drive wheel with teeth

3.108**guide bar**

attachment that supports and guides the **saw chain**

3.109**guide rail**

attachment mounted on the material being cut and on which the **base plate** of the **chain beam saw** glides during cutting

3.110**kickback**

sudden reaction to a pinched, jammed or misaligned **saw chain**, causing a sudden motion of the **chain beam saw** in a direction opposite to the **saw chain** motion at the point of the **saw chain** being jammed

3.111**main handle**

support handle located toward the rear of the motor housing (see Figure 101)

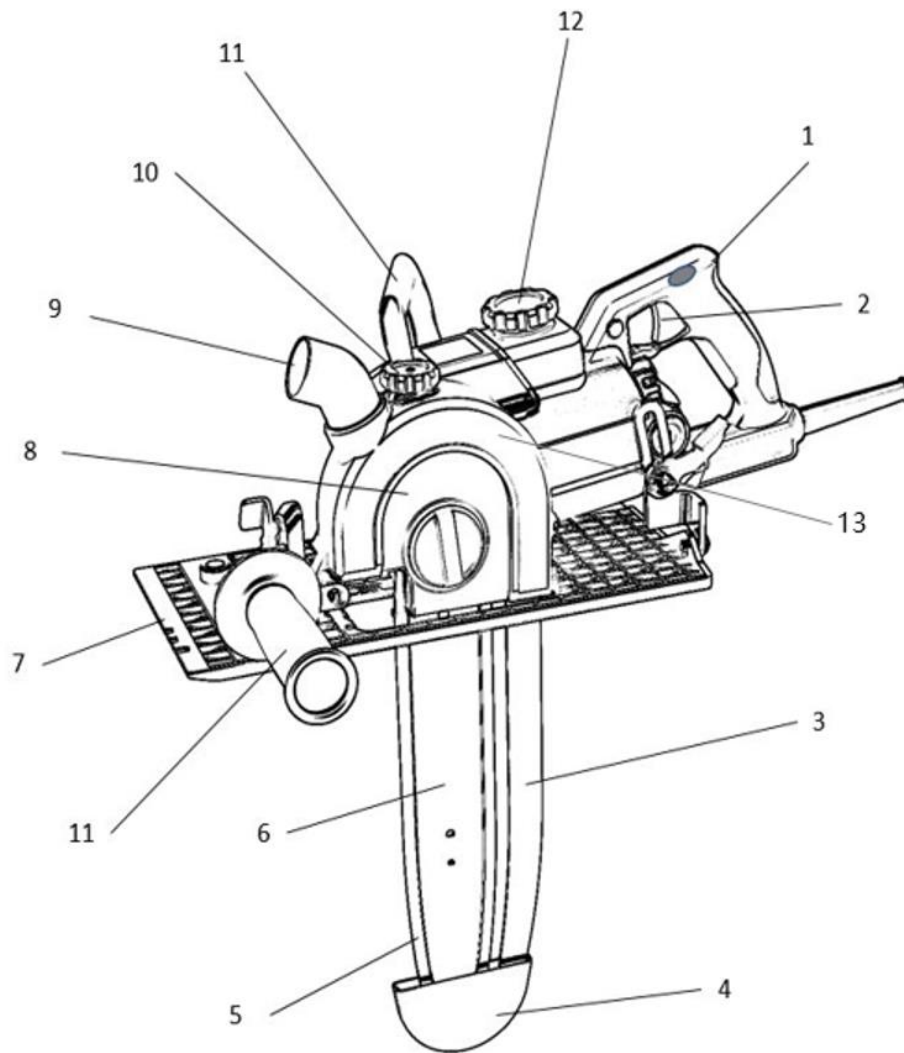
3.112**maximum depth of cut**

maximum thickness of the material being cut between the bottom plane of the **base plate** and the top side of the **bar tip guard** when the **guide bar** is set perpendicular to the **base plate** or the tip of the **chain barrier** in cases where a **guard** is not required (see Figure 102)

3.113**maximum speed**

highest **saw chain** speed attainable under all conditions of **normal use**, including no load

- 224 **3.114**
225 **run down time**
226 elapsed time from the release of the **power switch** until the **saw chain** stops
- 227 **3.115**
228 **saw chain**
229 **attachment**, serving as a cutting tool, consisting of drive links and cutters (see Figure 101)
- 230 **3.116**
231 **upper guard**
232 fixed cover of the **saw chain** situated above the **base plate**
- 233

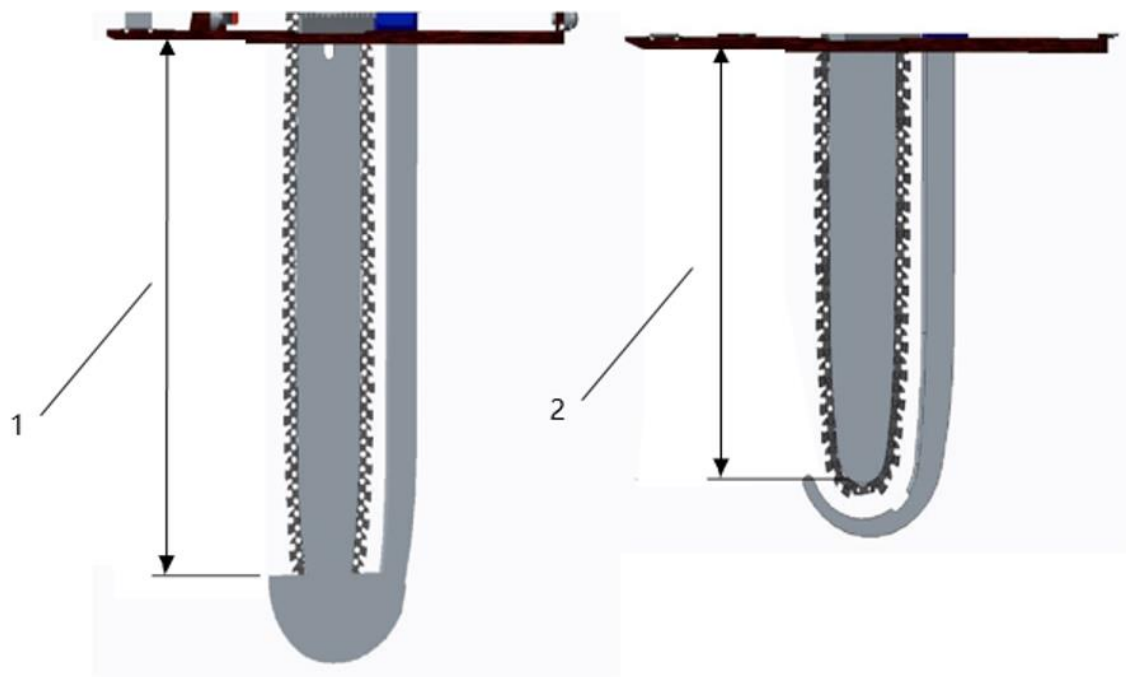


234

235 **Key**236 1 **main handle**237 2 **power switch**238 3 **chain barrier**239 4 **bar tip guard**240 5 **saw chain**241 6 **guide bar**242 7 **base plate**243 8 **drive sprocket cover**244 9 **dust extraction**245 10 **chain tensioning knob**246 11 **auxiliary handle**247 12 **lubrication oil tank**248 13 **upper guard**

249

Figure 101 – Example of a chain beam saw

**Key**

1 maximum depth of cut (with bar tip guard)

2 maximum depth of cut (without bar tip guard)

Figure 102 – Maximum depth of cut**4 General requirements**

IEC 62841-1:2014, Clause 4 is applicable.

5 General conditions for the tests

IEC 62841-1:2014, Clause 5 is applicable, except as follows.

5.17 Addition:

The mass of the tool includes the heaviest **guide bar** and **saw chain** combination in accordance with 8.14.2 a) 101) as well as the lubrication tank filled to the maximum specified level, but excludes the **guide bar** cover.

5.101 For tests that are performed at **maximum speed** and no load, the manufacturer may need to provide special hardware and/or software.

5.102 For tests carried out at any percentage of **rated input** or **rated current**, except for no-load, the **saw chain** and the **guide bar** may be removed and the **chain beam saw** loaded by means of a brake.

6 Radiation, toxicity and similar hazards

IEC 62841-1:2014, Clause 6 is applicable.

7 Classification

IEC 62841-1:2014, Clause 7 is applicable.

8 Marking and instructions

IEC 62841-1:2014, Clause 8 is applicable, except as follows.

8.2 Addition:

Chain beam saws shall be marked with the following additional safety warnings:

For all **chain beam saws**:

- “ **WARNING** — Hold saw with both hands” or a product safety label that is described in the instruction manual.

NOTE 101 In Canada and the United States of America, the following additional requirements apply.

Chain beam saws shall be marked with the following additional safety warning:

- “ **DANGER** — Keep hands and body away from the saw chain or guide bar. Chain barrier shall always be attached and properly aligned when operating the chain beam saw. Contact with the saw chain will result in serious injury.”

In Canada, the equivalent French wording of the above warning is as follows: “ **DANGER** — Maintenir les mains et le corps à l'écart de la chaîne coupante ou du guide-chaîne. La barrière de chaîne doit toujours être fixée et correctement alignée lors de l'utilisation de la scie à chaîne de poutre. Tout contact avec la chaîne coupante causera une blessure grave”

8.3 Addition:

Chain beam saws shall be marked with the following:

- specified nominal **guide bar** length(s) and thickness(es) in mm (in);

NOTE 101 The nominal **guide bar** size(s) is not necessarily the same as the cutting length(s).

- identification of the direction of rotation of the **saw chain** by a legible and durable mark on the body of the tool; and
- a **guide bar** and **saw chain** combination(s) and corresponding **chain barrier**, if more than one **chain barrier** is permitted to be used with the tool in accordance with 8.14.2 a) 103).

The **chain barrier** shall be permanently marked (e.g., by engraving, stamping, or etching) with its thickness, the **guide bar** thickness, the **maximum depth of cut** and the direction of the **saw chain** rotation.

8.14.1 Addition:

The additional safety instructions as specified in 8.14.1.101 and 8.14.1.102 shall be given. This part may be printed separately from the “General Power Tool Safety Warnings”.

8.14.1.101 Safety instructions for chain beam saws

- a) **Wear eye protection. Appropriate protective equipment for face and eyes, hands, legs, and feet is recommended.** *Adequate protective clothing will reduce personal injury by flying debris or accidental contact with the saw chain.*
- b) **Do not operate the chain beam saw in a tree, on a ladder, from a rooftop, or any unstable support.** *Operation of a chain beam saw in this manner could result in serious personal injury.*
- c) **Always keep proper footing and operate the chain beam saw only when standing on fixed, secure, and level surface.** *Slippery or unstable surfaces such as ladders can cause a loss of balance or control of the chain beam saw.*
- d) **Hold the chain beam saw by insulated gripping surfaces only, because the saw chain can contact hidden wiring or its own cord.** *Saw chains contacting a "live" wire can make exposed metal parts of the power tool "live" and could give the operator an electric shock.*
- e) **Keep hands away from cutting area and the saw chain. Keep your second hand on auxiliary handle.** *If both hands are holding the saw, they cannot be cut by the saw chain, and the chain beam saw can be effectively guided and any kickback can be controlled effectively.*
- f) **Keep hands and legs away from the saw chain and guide bar when the chain beam saw is operating.** *A moment of inattention while operating the chain beam saw can cause entanglement of your clothing or body with the saw chain.*
- g) **Do not use the chain beam saw for operations that are not intended.** *Use of the chain beam saw for operations different than intended could result in a hazardous situation.*
- h) **Never hold the material being cut in your hands or across your leg while cutting. Secure the material to be cut to a stable platform.** *It is important to support the work properly to minimize body exposure, saw chain binding, or loss of control.*
- i) **Follow all instructions when clearing jammed material, storing, or servicing the chain beam saw. Make sure the switch is off and disconnect the plug from the power source.** *Unexpected actuation of the chain beam saw while clearing jammed material or servicing can result in serious personal injury.*
- j) **Carry the chain beam saw by the auxiliary handle with the chain beam saw switched off and the saw chain away from your body. When transporting or storing the chain beam saw always fit the guide bar cover.** *Proper handling of the chain beam saw will reduce the likelihood of accidental contact with the moving saw chain.*
- k) **Keep handles dry, clean, and free from oil and grease.** *Greasy, oily handles are slippery causing loss of control.*
- l) **Follow instructions for lubricating, chain tensioning, and changing bar and chain.** *Improperly tensioned or lubricated chain can either break or increase the chance for kickback.*

8.14.1.102 Further safety instructions for kickback

Kickback causes and related warnings

Kickback is a reaction to a pinched or jammed saw chain, mostly occurring at the back side of the guide bar not adequately protected by the chain barrier or at the nose of the guide bar not protected by the tip guard. Kickback causes a sudden motion of the chain beam saw in a direction opposite to the saw chain motion at the point where the saw chain is being jammed.

When the saw chain is jammed at the front of the guide bar, the cutting action will pull the chain beam saw tightly to the workpiece surface, but when the saw chain is jammed at the back of the guide bar, the kickback will suddenly push the chain beam saw up and away from the workpiece surface. The jamming of the saw chain at the nose of the guide bar will create a kickback that rotates the chain beam saw's guide bar back towards the operator.