

# **SLOVENSKI STANDARD**

## **SIST EN IEC 62841-3-9:2020**

**01-september-2020**

**Nadomešča:**

**SIST EN 62841-3-9:2016**

**SIST EN 62841-3-9:2016/A11:2018**

**SIST EN 62841-3-9:2016/AC:2016**

---

### **Elektromotorna ročna orodja, prenosna orodja ter stroji za trato in vrt - Varnost - 3-9. del: Posebne zahteve za prenosne zajeralne žage (IEC 62841-3-9:2020)**

Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 3-9: Particular requirements for transportable mitre saws (IEC 62841-3-9:2020)

**(standards.iteh.ai)**

Elektrische motorbetriebene handgeführte Werkzeuge, transportable Werkzeuge und Rasen- und Gartenmaschinen - Sicherheit - Teil 3-9: Besondere Anforderungen für transportable Gehrungskappsägen (IEC 62841-3-9:2020)

Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses - Sécurité - Partie 3-9: Exigences particulières pour les scies à onglets transportables (IEC 62841-3-9:2020)

**Ta slovenski standard je istoveten z: EN IEC 62841-3-9:2020**

---

#### **ICS:**

25.080.60	Strojne žage	Sawing machines
25.140.20	Električna orodja	Electric tools

**SIST EN IEC 62841-3-9:2020**

**en**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN IEC 62841-3-9:2020

<https://standards.iteh.ai/catalog/standards/sist/818d5892-a520-4830-b657-7d1363dc2725/sist-en-iec-62841-3-9-2020>

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN IEC 62841-3-9**

June 2020

ICS 25.140.20

Supersedes EN 62841-3-9:2015 and all of its  
amendments and corrigenda (if any)

English Version

**Electric motor-operated hand-held tools, transportable tools and  
lawn and garden machinery - Safety - Part 3-9: Particular  
requirements for transportable mitre saws  
(IEC 62841-3-9:2020)**

Outils électroportatifs à moteur, outils portables et machines  
pour jardins et pelouses - Sécurité - Partie 3-9: Exigences  
particulières pour les scies à onglets transportables  
(IEC 62841-3-9:2020)

Elektrische motorbetriebene handgeführte Werkzeuge,  
transportable Werkzeuge und Rasen- und  
Gartenmaschinen - Sicherheit - Teil 3-9: Besondere  
Anforderungen für transportable Gehrungskappsägen  
(IEC 62841-3-9:2020)

This European Standard was approved by CENELEC on 2020-03-20. 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN IEC 62841-3-9:2020 (E)****European foreword**

The text of document 116/430/FDIS, future edition 2 of IEC 62841-3-9, prepared by IEC/TC 116 "Safety of motor-operated electric tools" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62841-3-9:2020.

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) 2021-04-20
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-04-20

This document supersedes EN 62841-3-9:2015 and all of its amendments and corrigenda (if any).

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

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(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of EN IEC 62841-3-9:2020/A11:2020.

SIST EN IEC 62841-3-9:2020  
<https://standards.iteh.ai/catalog/standards/sist/818d5892-a520-4830-b657-7d1363dc2725/sist-en-iec-62841-3-9-2020>

**Endorsement notice**

The text of the International Standard IEC 62841-3-9:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 62841-3-10      NOTE      Harmonized as EN 62841-3-10



IEC 62841-3-9

Edition 2.0 2020-02

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Electric motor-operated hand-held tools, transportable tools and lawn  
and garden machinery – Safety –  
Part 3-9: Particular requirements for transportable mitre saws**

**Outils électroportatifs à moteur, outils portables et machines pour jardins  
et pelouses – Sécurité –  
Partie 3-9: Exigences particulières pour les scies à onglets transportables**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

ICS 25.140.20

ISBN 978-2-8322-7801-7

**Warning! Make sure that you obtained this publication from an authorized distributor.  
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

## CONTENTS

FOREWORD .....	4
1 Scope .....	6
2 Normative references .....	6
3 Terms and definitions .....	6
4 General requirements .....	11
5 General conditions for the tests .....	11
6 Radiation, toxicity and similar hazards .....	11
7 Classification .....	11
8 Marking and instructions .....	11
9 Protection against access to live parts .....	14
10 Starting .....	14
11 Input and current .....	14
12 Heating .....	15
13 Resistance to heat and fire .....	15
14 Moisture resistance .....	15
15 Resistance to rusting .....	15
16 Overload protection of transformers and associated circuits .....	15
17 Endurance .....	15
18 Abnormal operation .....	15
19 Mechanical hazards .....	16
20 Mechanical strength .....	22
21 Construction .....	24
22 Internal wiring .....	31
23 Components .....	31
24 Supply connection and external flexible cords .....	31
25 Terminals for external conductors .....	32
26 Provision for earthing .....	32
27 Screws and connections .....	32
28 Creepage distances, clearances and distances through insulation .....	32
Annexes .....	33
Annex I (informative) Measurement of noise and vibration emissions .....	33
Annex K (normative) Battery tools and battery packs .....	34
Annex L (normative) Battery tools and battery packs provided with mains connection or non-isolated sources .....	35
Bibliography .....	36
Figure 101 – Mitre saw with centre workpiece support .....	7
Figure 102 – Mitre saw .....	9
Figure 103 – Saw blade quadrants .....	10
Figure 104 – Open guard construction .....	18
Figure 105 – Position of saw blade and lower guard relative to saw table .....	19

Figure 106 – Test probe.....	20
Figure 107 – Application of test probe.....	20
Figure 108 – Workpiece support dimensions.....	26
Figure 109 – Minimum extension of fence .....	28
Figure 110 – Distance between fence and saw blade .....	29
Figure 111 – Flange characteristics .....	31
Table 4 – Required performance levels .....	15
Table I.101 – Noise test conditions for mitre saws .....	33

## iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN IEC 62841-3-9:2020

<https://standards.iteh.ai/catalog/standards/sist/818d5892-a520-4830-b657-7d1363dc2725/sist-en-iec-62841-3-9-2020>

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

## **Part 3-9: Particular requirements for transportable mitre saws**

### **FOREWORD**

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62841-3-9 has been prepared by IEC technical committee 116: Safety of motor-operated electric tools.

This second edition cancels and replaces the first edition published in 2014. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Clause 1: Scope: increase of the maximum saw blade diameter to 410 mm;
- b) Corrigendum 1 and Corrigendum 2 of the first edition have been incorporated in this second edition.



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

FDIS	Report on voting
116/430/FDIS	116/442/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This Part 3-9 is to be used in conjunction with the IEC 62841-1:2014.

This Part 3-9 supplements or modifies the corresponding clauses in IEC 62841-1, so as to convert it into the IEC Standard: Particular requirements for transportable mitre saws.

Where a particular subclause of Part 1 is not mentioned in this Part 3-9, that subclause applies as far as reasonable. Where this standard states “addition”, “modification” or “replacement”, the relevant text in Part 1 is to be adapted accordingly.

The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in small roman type.

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

Subclauses, notes and figures which are additional to those in Part 1 are numbered starting from 101.

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

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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

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

**IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**

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

## Part 3-9: Particular requirements for transportable mitre saws

### 1 Scope

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

*Addition:*

This part of IEC 62841 applies to transportable **mitre saws** intended to be used with a toothed saw blade for cutting wood and analogous materials, plastics and nonferrous metals except magnesium with a saw blade diameter not exceeding 410 mm, which hereinafter might simply be referred to as saw or tool.

This International Standard does not apply to **mitre saws** intended to cut other metals, such as magnesium, steel and iron. This document does not apply to **mitre saws** with an automatic feeding device.

NOTE 101 Transportable saws intended to cut ferrous metals will be covered by a future part of IEC 62841-3.

This document does not apply to saws designed for use with abrasive wheels.

NOTE 102 **Transportable tools** designed for use with abrasive wheels are covered by IEC 62841-3-10.

This document does not apply to tools combining the function of a **mitre saw** with the function of a table saw.

NOTE 103 **Transportable tools** combining the function of a **mitre saw** with the function of a table saw are covered by a future part of IEC 62841-3.

### 2 Normative references

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

*Addition:*

ISO 180, *Plastics – Determination of Izod impact strength*

### 3 Terms and definitions

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

#### 3.101

##### **bevel angle**

angular displacement of the saw blade plane with respect to the **table top** plane, the position of the saw blade plane that is perpendicular to the **table top** being the 0° bevel position

#### 3.102

##### **compound angle**

angular displacement of the saw blade plane having a **bevel** and **mitre angle** other than 0°

**3.103****cutting edge zone**

outer 20 % of the radius of the saw blade

**3.104*****D***

specified diameter of the saw blade

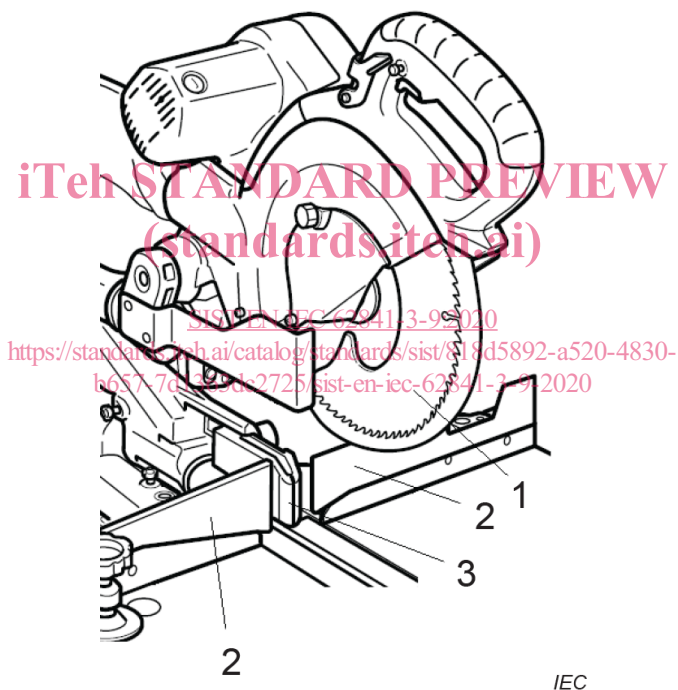
**3.105****fence**

device to position the workpiece and absorb the horizontal forces from the saw blade during the cutting process

**3.105.1****centre workpiece support**

device that has a face supporting the workpiece in conjunction with the **fence**

Note 1 to entry: See Figure 101.



IEC

**Key**

- 1 saw blade
- 2 fences
- 3 centre workpiece support

**Figure 101 – Mitre saw with centre workpiece support**

**3.106****fully down position**

position of the **saw unit** after adjustment of the saw in accordance with 8.14.2 a) 107) and any depth-of-cut stop as in 8.14.2 a) 108) disengaged or adjusted in order to produce the lowest position of the **saw unit**

**3.107****horizontal cutting capacity**

largest dimension perpendicular from the plane of the **fence** (width) of a workpiece with rectangular cross section that can be completely cut through with a single pass of the saw blade

Note 1 to entry: Subclause 5.101 provides a measurement procedure for **horizontal cutting capacity**.

**3.108****kerf width**

distance between two parallel planes that are touching the opposing sides of at least three saw blade tooth tips

**3.109****kerf plate**

portion of the **table top** on both sides of the saw blade intersect line with the **table top** for the purpose of minimizing the tearing of the wood fibres by the saw blade

Note 1 to entry: Depending on the design, the **kerf plate** is adjustable, replaceable or an integral part of the **table top**.

**3.110****mitre angle**

angular displacement of the plane of the **fence** with respect to the cutting line, the position of the saw blade plane that is perpendicular to the plane of the **fence** being the 0° mitre position

**3.111****mitre saw**

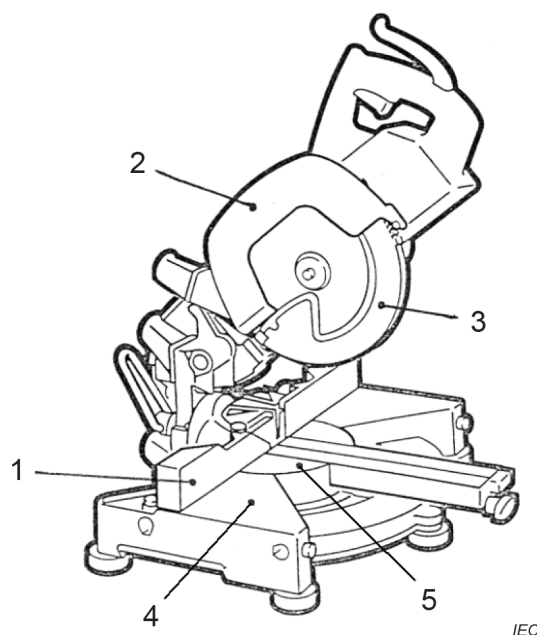
saw consisting of a **table top** and a **fence** which support and position the workpiece, and a **saw unit**, projecting over the **table top**

Note 1 to entry: Cutting is achieved by moving the **saw unit** through a plunging action or a combination of plunging and sliding actions. The workpiece does not move with respect to the **table top** or **fence** during cutting. The **saw unit** can be adjustable to cut at a **bevel angle**, a **mitre angle** or both angles to create a **compound angle** cut. See Figure 102.

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

SIST EN IEC 62841-3-9:2020

<https://standards.iteh.ai/catalog/standards/sist/818d5892-a520-4830-8657-7d1569dc725/sist-en-iec-62841-3-9-2020>



IEC

**Key**

- 1 fence
- 2 upper guard
- 3 lower guard
- 4 table base
- 5 turn table

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN IEC 62841-3-9:2020

<https://standards.iteh.ai/catalog/standards/sist/818d5892-a520-4830-b657-7d1363dc2725/sist-en-iec-62841-3-9-2020>

**Figure 102 – Mitre saw**

**3.112****quadrants**

with the **saw unit** in the **fully down position**, parts of the saw blade defined by two lines intersecting the centre of the saw blade, where one line is parallel to the **table top** and the other line is perpendicular to the first line

Note 1 to entry: The **quadrants** remain fixed in relation to the **saw unit** as it moves between the **rest position** and the **fully down position** (see Figure 103):

- **quadrant** “A” is above the line parallel to the **table top** and away from the operator's position;
- **quadrant** “B” is above the line parallel to the **table top** and closer to the operator's position;
- **quadrant** “C” is below the line parallel to the **table top** and closer to the operator's position;
- **quadrant** “D” is below the line parallel to the **table top** and away from the operator's position.