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**Elektromotorna ročna orodja, prenosna orodja ter stroji za trato in vrt - Varnost - 4-1. del: Posebne zahteve za verižne žage - Dopolnilo A1**

Amendment 1 - Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 4-1: Particular requirements for chain saws

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses - Sécurité - Partie 4-1: Exigences particulières pour les scies à chaîne

<https://standards.iteh.ai/catalog/standards/sist/5af6c061-90c8-49a4-b1fe-2020/oprA1:2023>

**Ta slovenski standard je istoveten z: EN 62841-4-1:2020/prA1:2022**

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**ICS:**

25.080.60	Strojne žage	Sawing machines
25.140.20	Električna orodja	Electric tools
65.060.80	Gozdarska oprema	Forestry equipment

**SIST EN 62841-4-1:2020/oprA1:2023** en





# 116/641/CDV

## COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER:

**IEC 62841-4-1/AMD1 ED1**

DATE OF CIRCULATION:

**2022-12-23**

CLOSING DATE FOR VOTING:

**2023-03-17**

SUPERSEDES DOCUMENTS:

**116/640/RR**

IEC TC 116 : SAFETY OF MOTOR-OPERATED ELECTRIC TOOLS	
SECRETARIAT: United States of America	SECRETARY: Mr Joseph Harding
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: <input type="checkbox"/> Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.
FUNCTIONS CONCERNED: <input type="checkbox"/> EMC <input type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input checked="" type="checkbox"/> SAFETY	
<input checked="" type="checkbox"/> SUBMITTED FOR CENELEC PARALLEL VOTING	<input type="checkbox"/> NOT SUBMITTED FOR CENELEC PARALLEL VOTING
<p><b>Attention IEC-CENELEC parallel voting</b></p> <p>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.</p> <p>The CENELEC members are invited to vote through the CENELEC online voting system.</p>	

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.

TITLE:

**Amendment 1 - Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 4-1: Particular requirements for chain saws**

PROPOSED STABILITY DATE: 2027

NOTE FROM TC/SC OFFICERS:

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1

## FOREWORD

2 This amendment has been prepared by IEC technical committee 116: Safety of motor-  
3 operated electric tools.

4 The text of this amendment is based on the following documents:

FDIS	Report on voting
116/XXX/FDIS	116/XXX/RVD

5

6 Full information on the voting for the approval of this amendment can be found in the report  
7 on voting indicated in the above table.

8 The committee has decided that the contents of this amendment and the base publication will  
9 remain unchanged until the stability date indicated on the IEC website under  
10 "http://webstore.iec.ch" in the data related to the specific publication. At this date, the  
11 publication will be

- 12 • reconfirmed,
- 13 • withdrawn,
- 14 • replaced by a revised edition, or
- 15 • amended.

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

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

22

<https://standards.iteh.ai/catalog/standards/sist/5af6c061-90c8-49a4-b1fe-c2017b9114b8/sist-en-62841-4-1-2020-opra1-2023>

23 *Add the following new Introduction:*

24

## INTRODUCTION

25 The International Electrotechnical Commission (IEC) draws attention to the fact that it is  
26 claimed that compliance with this document may involve the use of patents concerning  
27 prevention of inadvertent starting given in Subclause 21.18.102.

28 IEC takes no position concerning the evidence, validity and scope of this patent right.

29 The holders of these patent rights have assured the IEC that they are willing to negotiate  
30 licences under reasonable and non-discriminatory terms and conditions with applicants  
31 throughout the world. In this respect, the statements of the holders of these patent rights are  
32 registered with IEC. Information may be obtained from:

33 Andreas Stihl AG & Co. KG  
34 Stuttgarter Strasse 80  
35 71332 Waiblingen, Germany

36

37 Husqvarna AB  
38 SE-561 82 Huskvarna  
39 Sweden

40

41 Robert Bosch GmbH  
42 Postfach 30 02 20  
43 D-70442 Stuttgart, Germany

44 Attention is drawn to the possibility that some of the elements of this document may be the  
45 subject of patent rights other than those identified above. IEC shall not be held responsible  
46 for identifying any or all such patent rights.

47 ISO ([www.iso.org/patents](http://www.iso.org/patents)) and IEC (<http://patents.iec.ch>) maintain on-line data bases of  
48 patents relevant to their standards. Users are encouraged to consult the data bases for the  
49 most up to date information concerning patents.

## 50 2 Normative references

51 *Add the following normative references:*

52 IEC 60664-3:2016, *Insulation coordination for equipment within low-voltage systems – Part 3:*  
53 *Use of coating, potting or moulding for protection against pollution*

54 ISO 37:2017, *Rubber, vulcanized or thermoplastic – Determination of tensile stress-strain*  
55 *properties*

## 56 5 General conditions for the tests

57 *Delete Subclause 5.14.*

58 *Add the following new subclause:*

### 59 5.15 Addition:

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

## 63 7 Classification

64 *Replace the existing text of Part 1, Subclause 7.2 with the following new text:*

65 **7.2 Chain saws** shall not be classified with a degree of protection against harmful  
66 ingress of water higher than IPX0 according to IEC 60529:1989.

67 *Compliance is checked by inspection.*

## 68 8 Marking and instructions

69 *Add the following new subclause:*

### 70 8.1 Replacement:

71 **Chain saws** shall be marked with rating information as follows:

72 – **rated voltage(s)** or **rated voltage range**, in volts. Machines for star-delta connection shall  
73 be clearly marked with the two **rated voltages** (for example 230 Δ/ 400 Y). A machine that  
74 complies with this standard for a voltage range, may also be marked with any single  
75 voltage or smaller voltage range within that range;

- 76 – symbol for nature of supply, unless the **rated frequency(ies)** or **rated frequency range** is  
77 marked. The symbol for nature of supply shall be placed next to the marking for **rated**  
78 **voltage**;
- 79 – **rated input**, in watts or **rated current**, in amperes. The **rated input** or **rated current** to  
80 be marked on the machine is the total maximum input or current that can be drawn from  
81 external circuit at the same time. If a machine has alternative components which can be  
82 selected by a **control device**, the **rated input** or **rated current** is that corresponding to  
83 the highest loading possible;
- 84 – symbol for **class II construction**, for **class II tools** (machines) only.

85 *Add the following new subclause:*

86 **8.1.101 Chain saws** shall not be marked with an IP rating for the degree of protection  
87 against harmful ingress of water higher than IPX0 according to IEC  
88 60529:1989/AMD1:1999/AMD2:2013. **Chain saws** may be marked with an IP rating for the  
89 degree of protection against solid foreign objects and access to hazardous  
90 parts in accordance with IEC 60529:1989/AMD1:1999/AMD2:2013.

91 *Compliance is checked by inspection.*

92 *Replace the existing text of the third dash of 8.2 with the following new text:*

- 93 – “Do not expose to rain” or the safety sign specified in Annex AA.

## 94 **14 Moisture resistance**

95 *Add the following new subclause:*

96 **14.2** This subclause of Part 1 is not applicable.

97 *Replace the existing text of 14.2.1 with the following new text:*

98 **14.2.1** This subclause of Part 1 is not applicable.

99 *Add the following new subclauses:*

100 **14.2.2 to 14.2.3** These subclauses of Part 1 are not applicable.

101 *Add the following new subclause:*

102 **21.35** This subclause of Part 1 is not applicable.

103 *Replace the existing text of 21.103 with the following new text:*

### 104 **21.103 Spiked bumper**

105 **Chain saws** with a nominal **guide bar** size or size range in accordance with 8.3 exceeding  
106 400 mm shall

- 107 – be equipped with a **spiked bumper** (see Figure 101); or  
108 – have a provision for mounting one.

109 *Compliance is checked by inspection.*

110

111 **Annexes**112 *Add the following new Annex:*113 **Annex C**  
114 (normative)115 **Leakage current**  
116  
117118 *Addition:*119 **C.101 Measurement of insulation touch current for battery-operated machines**120 *The **insulation touch current** is measured for machines with a **working voltage** that is a*  
121 ***hazardous voltage**, where there is an **accessible part** or surface conductively connected to*  
122 *internal circuitry, other than through **protective impedance**.*123 *The **insulation touch current** is measured as the weighted touch current by means of the*  
124 *circuit of Figure C.3 of Part 1 between*125 – *the accessible part(s) or surface(s) connected to internal circuitry;*126 *and*127 – *metal foil stretched across the surface of all accessible part(s) or surface(s) not connected*  
128 *to internal circuitry.*129 *The measurement circuit of Figure C.3 of Part 1 shall meet the accuracy specifications in*  
130 *Clause G.3 of IEC 60990:1999.*131 *If the **insulation touch current** exceeds the specified limit due to capacitance effects, then*  
132 *metal foil with an area not exceeding 20 cm × 10 cm shall be used. If its area is smaller than*  
133 *the surface under test, it is moved to make sure all parts of the surface are tested. The heat*  
134 *dissipation of the machine shall, however, not be affected by the metal foil in areas such as*  
135 *ventilation openings.*136 *For the test, the machine is operated at no-load with a **fully charged battery**.*137 *The **insulation touch current** shall not exceed 2,0 mA, unless otherwise specified in the*  
138 *relevant Clause of this document.*

139

140 **Annex K**141 *Add the following new Clause:*142 **K.3 Terms and definitions**143 *Replacement of Part 1, Subclause 3.63:*144 **K.3.63**  
145 **working voltage**146 voltage, without the effect of transient voltages, across any insulation or between any parts of  
147 different potential when the tool is supplied by (a) **fully charged battery(ies)** and operating at  
148 no-load, or with the tool in the "off" condition, whichever is greater149 *Replacement of Part 1, Subclause K.3.211:*150 **K.3.211**  
151 **hazardous voltage**  
152 voltage between parts

- 153 – for machines intended for use in rain, having
- 154 • an average value exceeding 30 V d.c.; or
  - 155 • a peak value exceeding 21,2 V when the peak-to-peak ripple exceeds 10 % of the
  - 156 average value; or
- 157 – for other machines, having
- 158 • an average value exceeding 60 V d.c.; or
  - 159 • a peak value exceeding 42,4 V when the peak-to-peak ripple exceeds 10 % of the
  - 160 average value.

161 Note 301 to entry: For machines classified in accordance with K.7.2 as "Immersion in water to a depth of up to 1 m  
162 for cleaning is permitted", it is assumed that the operator's hands are wet during machine cleaning while immersed  
163 in water.

164 *Add the following new subclause:*165 **K.3.301**  
166 **insulation touch current**

167 current which flows through a person upon contact with **accessible parts** of a **battery-**  
168 **operated machine** with a **working voltage** that is a **hazardous voltage**, where at least one  
169 **accessible part** is connected to internal circuitry other than through **protective impedance**

170 *Add the following new subclause:*171 **K.7.2 Replacement:**172 **Chain saws** shall be of one of the following categories with respect to moisture resistance:

- 173 – exposure to rain, cleaning with water or immersion in water is not permitted; or
- 174 – use in rain is permitted; or
- 175 – cleaning with low-pressure water is permitted; or
- 176 – immersion in water to a depth of up to 1 m for cleaning is permitted.

177 Machines that are classified as "Use in rain is permitted" may additionally be classified as  
178 "Cleaning with Low-Pressure Water is permitted" or "Immersion in water to a depth of up to  
179 1 m for cleaning is permitted".



180 *Compliance is checked by inspection and by the relevant tests, as applicable.*

181 **K.7.301 Detachable battery packs and separable battery packs** shall be of one of the  
182 following categories with respect to moisture resistance:

- 183 – exposure to rain, cleaning with water or immersion in water is not permitted; or
- 184 – use in rain is permitted; or
- 185 – cleaning with low-pressure water is permitted; or
- 186 – immersion in water to a depth of up to 1 m for cleaning is permitted.

187 *Compliance is checked by inspection and by the relevant tests, as applicable.*

188 *Add the following new subclause:*

189 **K.8.1** This subclause of Part 4-1 is not applicable.

190 *Add the following new subclause:*

191 **K.8.1.301 Chain saws, detachable battery packs and separable battery packs** shall not  
192 be marked with an IPX1, IPX2 or IPX3 rating.

193 *Compliance is checked by inspection.*

194 *Add the following new subclause:*

195 **K.8.1.302 Chain saws** shall be marked in accordance with their classification in K.7.2 as  
196 indicated in Table K.301.

197 *Compliance is checked by inspection.* [62841-4-1:2020/oprA1:2023](https://standards.iteh.ai/catalog/standards/sist/5af6c061-90c8-49a4-b1fe-c2017b9114b8/sist-en-62841-4-1-2020-opra1-2023)

198 <https://standards.iteh.ai/catalog/standards/sist/5af6c061-90c8-49a4-b1fe-c2017b9114b8/sist-en-62841-4-1-2020-opra1-2023>

199 *Add the following new Table K.301:*

200 **Table K.301 – Chain saw moisture resistance classification and marking**

Moisture resistance classification	Required marking	Additional optional marking
Exposure to rain, cleaning with water or immersion in water is not permitted	“Do not expose to rain” or the safety sign specified in Annex AA	None No additional markings related to moisture resistance classification, including IP markings, are permitted.
Use in rain is permitted	None	“OK to use in rain”, the symbol specified in Annex DD or IPX4M. If the IPX4M marking is used, the machine shall also be marked with “OK to use in rain” or the symbol specified in Annex DD.
Cleaning with low-pressure water is permitted	“May wash with water as indicated in instruction manual” or a symbol that is described in the instruction manual	IPX5S
Immersion in water up to a depth of 1 m for cleaning is permitted	“May immerse in water to a depth of up to 1 m for cleaning” or a symbol that is described in the instruction manual	IPX7S

201

202 *Add the following new subclause:*

203 **K.8.1.303 Detachable battery packs and separable battery packs** may be marked in  
204 accordance with their classification in K.7.301 as indicated in Table K.302.

205 *Compliance is checked by inspection.*

206

207 *Add the following new Table K.302:*

208 **Table K.302 – Battery pack moisture resistance classification and marking**

Moisture resistance classification	Required marking (if marked)	Additional optional marking (if marked)
Exposure to rain, cleaning with water or immersion in water is not permitted	“Do not expose to rain” or the safety sign specified in Annex AA	None No additional markings related to moisture resistance classification, including IP markings, are permitted.
Use in rain is permitted	None	“OK to use in rain”, the symbol specified in Annex DD or IPX4M.  If the IPX4M marking is used, the <b>battery</b> pack shall also be marked with “OK to use in rain” or the symbol specified in Annex DD.
Cleaning with low-pressure water is permitted	“May wash with water as indicated in instruction manual” or a symbol that is described in the instruction manual	IPX5S
Immersion in water up to a depth of 1 m for cleaning is permitted	“May immerse in water to a depth of up to 1 m for cleaning” or a symbol that is described in the instruction manual	IPX7S

209

210 *Add the following new subclause:*

211 **K.8.2** *Replacement of the third dashed item:*

212 – For **chain saws** classified as “exposure to rain, cleaning with water or immersion in water is not permitted”, “Do not expose to rain” or the safety sign specified in Annex AA.

213 NOTE 301 See Table K.301.

214 *Add the following new subclause:*

215 **K.8.14** *Addition:*

216 An explanation of the symbols required by this document and used on **detachable battery packs** or **separable battery packs** shall be provided in either the instruction manual or the safety instructions.

217 *Add the following new subclause:*

218 **K.8.14.1.1** Items 2) c) and 4) h) of Part 1 are not applicable.

219 **K.8.14.1.301** **General chain saw safety warnings**