

SLOVENSKI STANDARD
SIST EN 50636-2-107:2015/oprA2:2019
01-marec-2019

Varnost gospodinjskih in podobnih električnih aparatov - 2-107. del: Posebne zahteve za baterijske robotsko vodene električne vrtno kosilnice - Dopnilo A2

Safety of household and similar appliances - Part 2-107: Particular requirements for robotic battery powered electrical lawnmowers

Appareils électrodomestiques et analogues - Partie 2-107: Exigences particulières relatives aux tondeuses à gazon électriques robotisées alimentées par batteries

Ta slovenski standard je istoveten z: EN 50636-2-107:2015/prA2

ICS:

13.120	Varnost na domu	Domestic safety
65.060.70	Vrtnarska oprema	Horticultural equipment

SIST EN 50636-2-107:2015/oprA2:2019 en

ITeH STANDARD PREVIEW
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Full standard:
<https://standards.iteh.ai/catalog/standards/sist/21549883-0831-4966-97/cc-b8843d1b85765/sist-en-50636-2-107-2015-kfpra2-2019>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
EN 50636-2-107:2015
prA2

January 2019

ICS 65.060.70

English Version

**Safety of household and similar appliances - Part 2-107:
Particular requirements for robotic battery powered electrical
lawnmowers**

To be completed

To be completed

This draft amendment prA2, if approved, will modify the European Standard EN 50636-2-107:2015; it is submitted to CENELEC members for enquiry.

Deadline for CENELEC: 2019-04-12.

It has been drawn up by CLC/TC 116.

If this draft becomes an amendment, CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

This draft amendment was established by CENELEC 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.

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

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

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EN 50636-2-107:2015/prA2:2019

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7 European foreword

8 This document (EN 50636-2-107:2015/prA2:2019) has been prepared by CLC/TC 116 "Safety of
9 motor-operated electric tools".

10 This document is currently submitted to the Enquiry.

11 The following dates are proposed:

- latest date by which the existence of this (doa) dor + 6 months
document has to be announced at national
level
- latest date by which this document has to be (dop) dor + 12 months
implemented at national level by publication of
an identical national standard or by
endorsement
- latest date by which the national standards (dow) dor + 36 months
conflicting with this document have to be
withdrawn (to be confirmed or
modified when voting)

12 This amendment was developed to implement an extra test with a kneeling child foot test probe.

13 This document has been prepared under a mandate given to CENELEC by the European Commission
14 and the European Free Trade Association and supports essential requirements of EU Directive(s).

15 For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this
16 document.

17 **1 Modification to Clause 1, Scope**

18 *Add the following to the existing Clause 1:*

19 Hazards not mentioned in Table ZZ.1 are deemed to be not applicable for machines covered by this
20 standard.

21 **2 Modification to Clause 2, Normative references**

22 *Add the following normative reference:*

23 "EN ISO 8295:2004, Plastics - Film and sheeting - Determination of the coefficients of friction
24 (ISO 8295:1995)"

25 **3 Modification to 20.102.4.1**

26 *Replace the first four paragraphs with the following:*

27 **"20.102.4.1.1 General**

28 Inadvertent access to the **cutting means** by the feet during operation shall be prevented, so far as
29 reasonably practicable by the **cutting means enclosure**.

30 *Compliance is checked by the tests of 20.102.4.1.2, 20.102.4.1.3 and 20.102.4.1.4.*

31 *The tests are made with the **cutting means** in the most unfavourable **cutting position**. If the **cutting**
32 **means** path height is different at different **cutting means** speeds, the test is conducted so as to
33 include the extremes of **cutting means** height."*

34 *Replace the existing subclause 20.102.4.1.1 with the following:*

35 **"20.102.4.1.2 Adult foot probe test**

36 *The machine shall be placed on a hard, flat surface. The **guards** shall be in the normal operating*
37 *position on the **cutting means enclosure** and the machine support members in contact with the*
38 *supporting surface. Components of machines, such as wheels and frames, are where relevant*
39 *considered as part of the **cutting means enclosure** for the purpose of these tests. The tests are*
40 *conducted under static conditions."*

41 *The foot probe of Figure 102 shall be inserted towards the **cutting means** around the machine's*
42 *external enclosure. The base of the probe is held horizontally at any height and then inclined up to 15°*
43 *forward or backward from the horizontal (see Figure 102). The probe is applied around the entire*
44 *machine as described in Figure 102 until a horizontal force of 20 N maximum is reached, or until the*
45 *machine's enclosure lifts or moves from the original position, or until contact is made with the **cutting***
46 ***means** path, whichever occurs first.*

47 *The test probe shall not enter the path of the **cutting means** assembly."*

48 *Replace the existing subclause 20.102.4.1.2 with the following:*

49 **"20.102.4.1.3 Foot probe test for standing child**

50 *The machine shall be placed on a hard, flat surface. The **guards** shall be in the normal operating*
51 *position on the **cutting means enclosure** and the machine support members in contact with the*
52 *supporting surface. Components of machines, such as wheels and frames, are where relevant*
53 *considered as part of the **cutting means enclosure** for the purpose of these tests. The tests are*
54 *conducted under static conditions.*

55 *The foot probe of Figure 107 shall be inserted towards the **cutting means** around the machine's*
56 *external enclosure. The base of the probe is held horizontally at any height and then inclined up to 15°*
57 *forward or backward from the horizontal (see Figure 102). The probe is applied around the entire*
58 *machine as described in Figure 102 until a horizontal force of 20 N maximum is reached, or until the*

59 machine's enclosure lifts or moves from the original position, or until contact is made with the **cutting**
60 **means** path, whichever occurs first.

61 The test probe shall not enter the path of the **cutting means** assembly."

62 Add the following new subclause:

63 "20.102.4.1.4 Foot probe test for kneeling child

64 The machine is placed on a test surface as described in Annex CC, except that

65 — the minimum size as described in CC.2 shall be such that the machine is capable of attaining its
66 maximum **traction drive** speed in automatic mode during normal use with the **cutting means**
67 operating; and

68 — an injection tube as shown in Figure CC.1 need not be incorporated into the test surface.

69 The machine is tested by means of the foot probe shown in Figure 108. The sole of the foot probe
70 shall be constructed of a material with a 70 Shore A hardness (nominal) and a thickness of
71 $(3 \pm 0,5)$ mm. The sole of the foot probe shall be free from dust and grease. Prior to the series of tests,
72 the sole of the foot probe in Figure 108 shall be checked to ensure a dynamic coefficient of friction of
73 $(0,6 \pm 0,06)$ with respect to the same material surface in accordance with EN ISO 8295:2004.

74 The machine is operated in automatic mode with the **cutting means** operating. While the machine is
75 operating, the foot probe of Figure 108 is placed in each of the ten test positions shown in Figure 109,
76 as applicable to the anticipated movement of the machine, such that

77 — the foot probe is aligned with the direction of the machine's movement with the toe pointing
78 toward the machine; and

79 — the foot probe is placed on the test surface and care is taken that foot probe movement is
80 minimised if the machine comes into contact with the foot probe;

81 NOTE A spike or other feature located on the knee of the probe has been shown to be helpful in minimising
82 movement of the foot probe during the test.

83 — an injection tube, if any, in the coconut matting does not influence the test result.

84 If, in automatic mode, it is not possible for the machine to move in accordance with any of the test
85 positions shown in Figure 109, then it is not necessary to conduct the test for those test positions.

86 The foot probe remains in place at each test position until

87 — the machine has moved completely away from the foot probe; or

88 — the foot probe has been in place for 20 s; or

89 — the machine stops such that a manual reset is required;

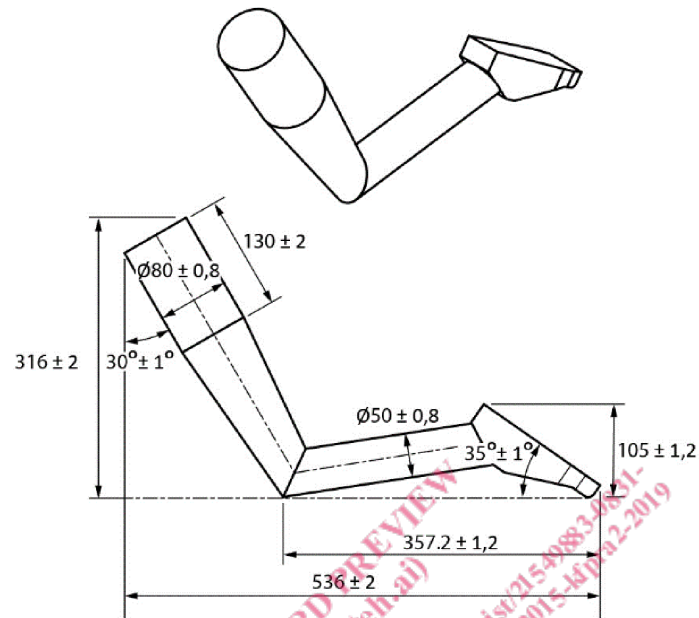
90 — whichever occurs first.

91 For each test position, the foot probe shall not contact the **cutting means** whilst the **cutting means** is
92 rotating. If the sole of the foot probe is damaged during the test, it shall be repaired or replaced as
93 necessary."

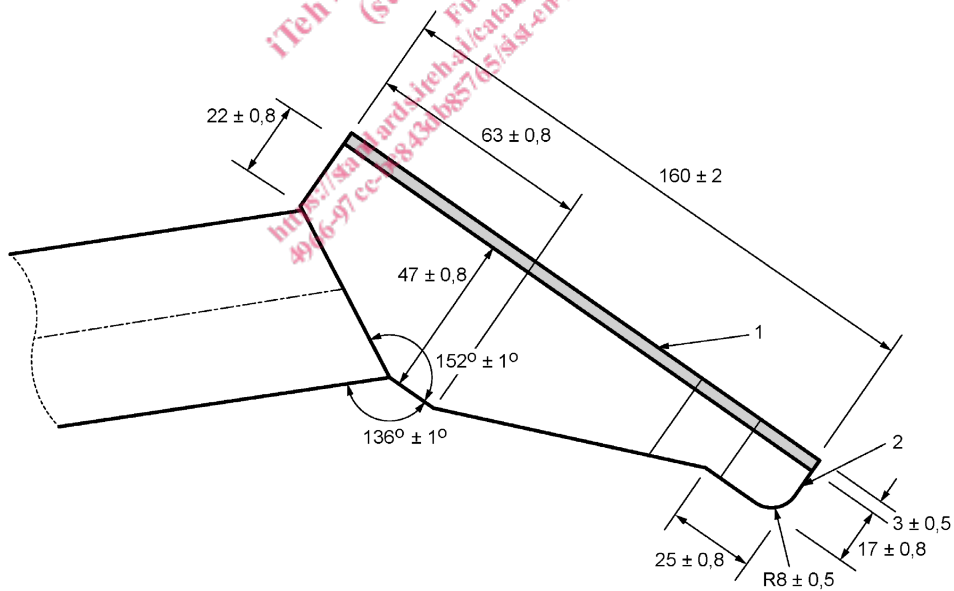
94 **4 Addition of Figures 108 and 109 to Clause 32**95 *Add the following new figures after Figure 107:*

96

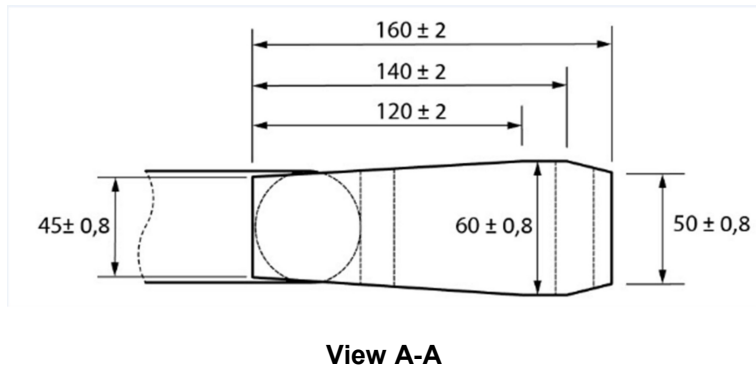
Dimensions in millimetres



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98



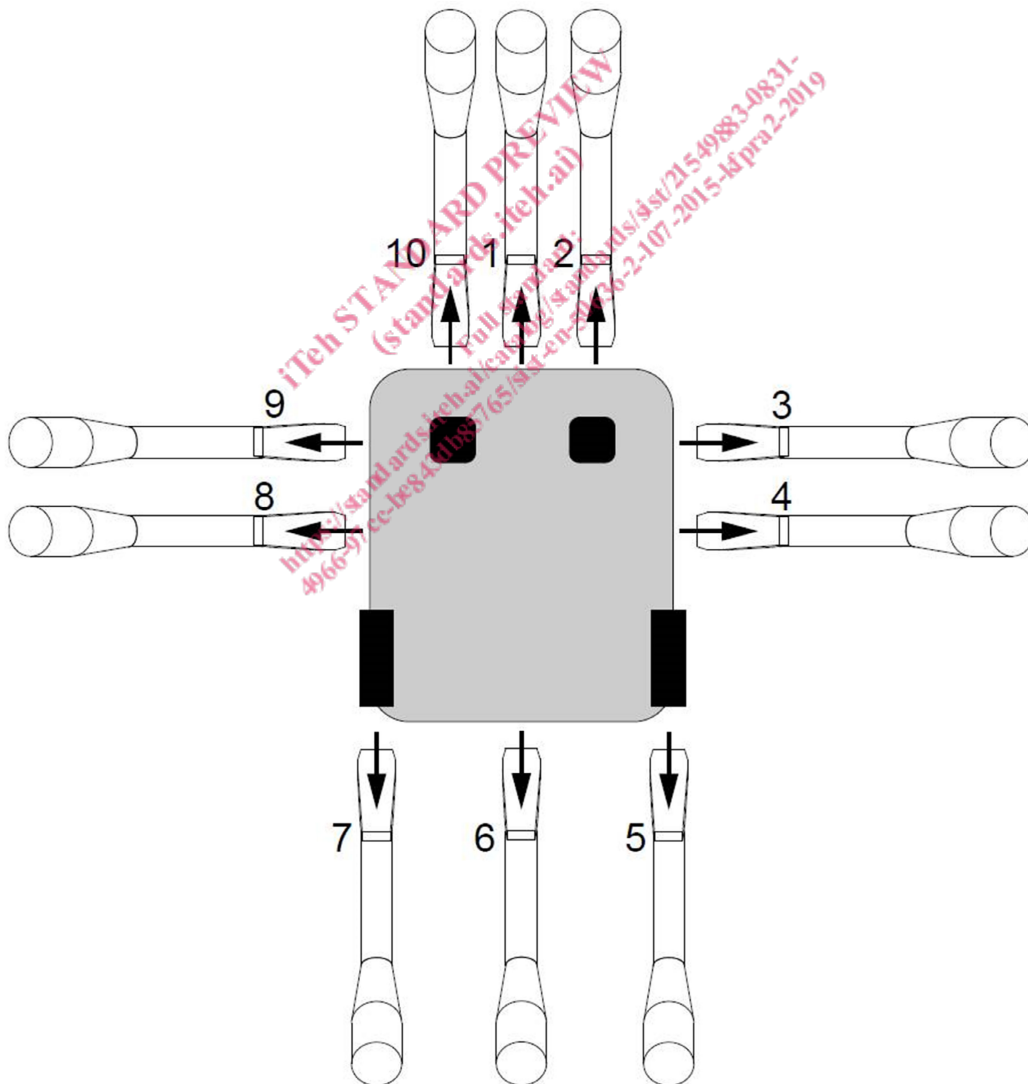
99

100

101 **Key**

- | | |
|---|------|
| 1 | sole |
| 2 | toe |

102

Figure 108 — Foot probe for kneeling child

103

Figure 109 a) — Example of foot probe for kneeling child test positions (two undriven supports)