SLOVENSKI STANDARD
SIST EN 50636-2-107:2015/A2:2020

01-marec-2020

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

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

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-107: Besondere Anforderungen für batteriebetriebene Roboter-Rasenmäher

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/A2:2020**

ICS:

13.120	Varnost na domu	Domestic safety
65.060.70	Vrtnarska oprema	Horticultural equipment

SIST EN 50636-2-107:2015/A2:2020 **en**

EUROPEAN STANDARD

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English Version

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

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-107: Besondere Anforderungen für batteriebetriebene Roboter-Rasenmäher

This amendment A2 modifies the European Standard EN 50636-2-107:2015; it was approved by CENELEC on 2019-09-27. 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.

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 amendment 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.

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

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European foreword

This document [EN 50636-2-107:2015/A2:2020] has been prepared by CLC/TC 116 “Safety of motor-operated electric tools”.

The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2020-09-27
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2022-09-27

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

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 this document.

1 Modification to Clause 1, "Scope"

Add the following to the existing Clause 1:

"This standard covers all significant hazards, hazardous situations or hazardous events relevant for tools covered by this standard.

NOTE 101 Essential requirements not mentioned in Table ZZ.1 are deemed to be not applicable, because the corresponding hazards are either not relevant for machines covered by this standard or do not require specific action by the designer.".

2 Modification to Clause 2, "Normative references"

Add the following normative reference:

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

3 Modification to 20.102.4.1, "Inadvertent foot access to the cutting means"

Replace the first four paragraphs with the following:

"20.102.4.1.1 General

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

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

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

Replace the existing subclause 20.102.4.1.1 with the following:

"20.102.4.1.2 Adult foot probe test

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

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

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

Replace the existing subclause 20.102.4.1.2 with the following:

"20.102.4.1.3 Foot probe test for standing child

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

*The foot probe of Figure 107 shall be inserted towards the **cutting means** around the machine's external enclosure. The base of the probe is held horizontally at any height and then inclined up to 15° forward or backward from the horizontal (see Figure 102). The probe is applied around the entire machine as described in Figure 102 until a horizontal force of 20 N maximum is reached, or until the machine's enclosure lifts or moves from the original position, or until contact is made with the **cutting means** path, whichever occurs first.*

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

Add the following new subclause:

"20.102.4.1.4 Foot probe test for kneeling child

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

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

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

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

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

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

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

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

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

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

The foot probe remains in place at each test position until

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

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

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

whichever occurs first.

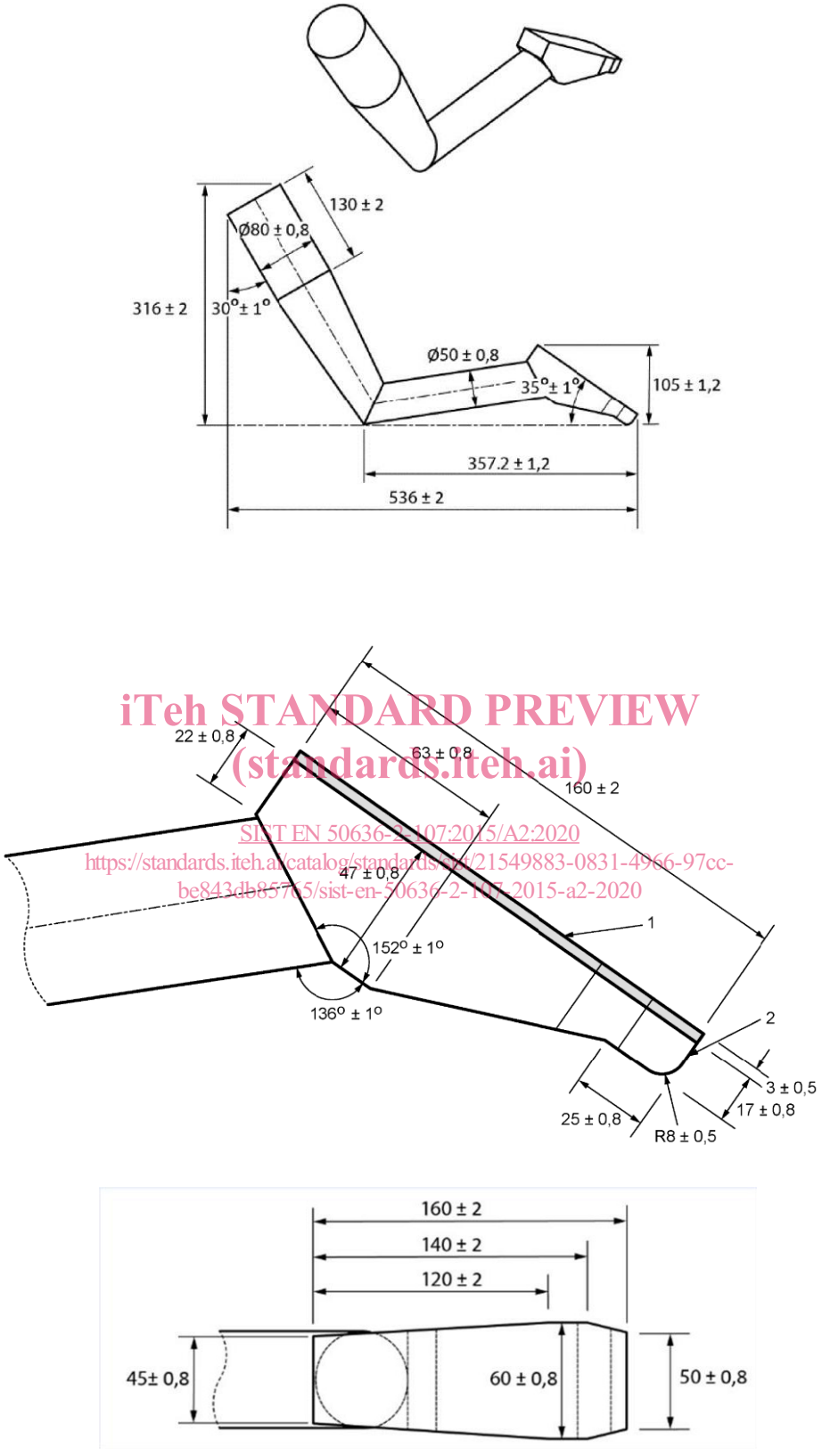
*For each test position, the foot probe shall not contact the **cutting means** whilst the **cutting means** is rotating. If the sole of the foot probe is damaged during the test, it shall be repaired or replaced as necessary."*

4 Addition of Figures 108 and 109

Add the following new figures after Figure 107:

"

Dimensions in millimetres



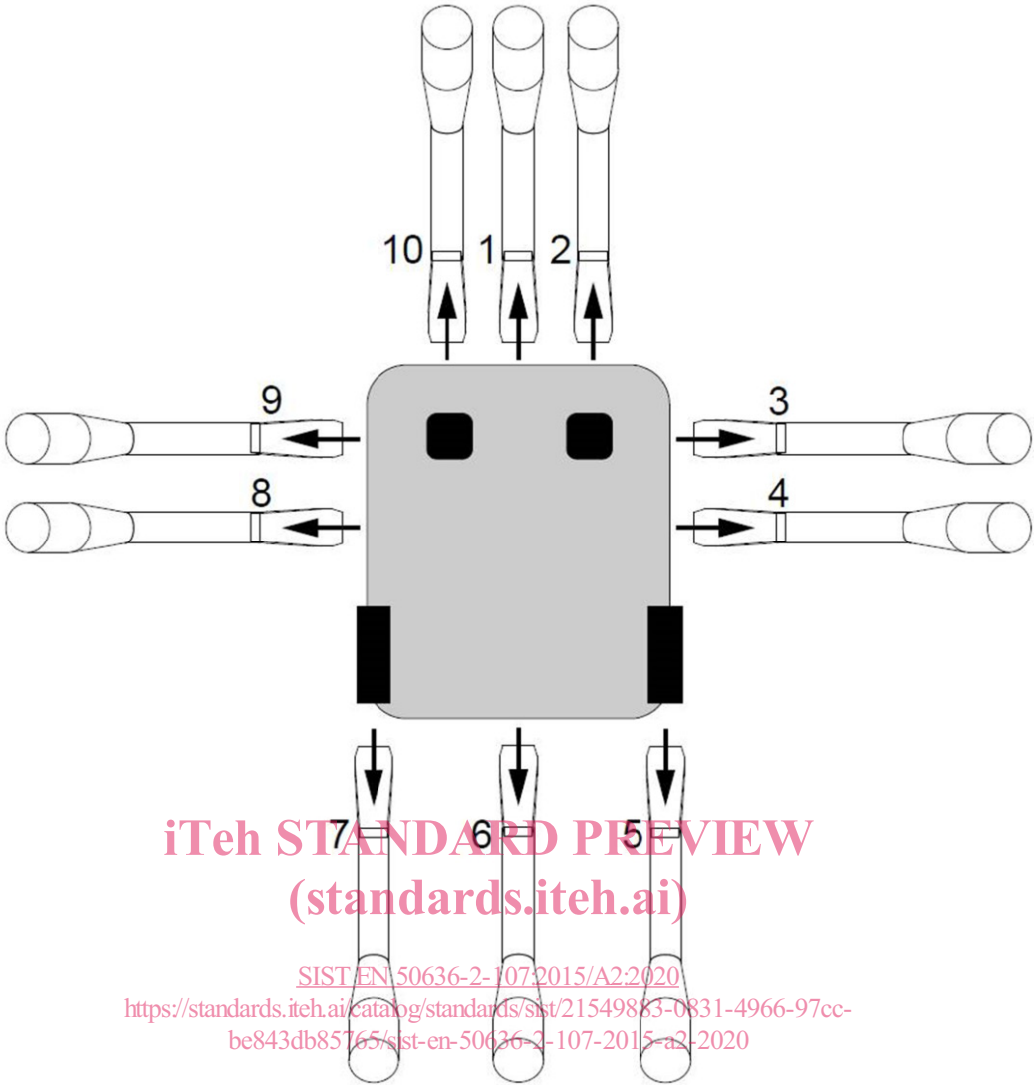
View A-A

Key

1 sole

2 toe

Figure 108 — Foot probe for kneeling child



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