

KÄESHOITAVAD ELEKTRIMOOTORIGA TÖÖRIISTAD,
TRANSPORDITAVAD TÖÖRIISTAD JA MURU- NING
AIATÖÖMASINAD. OHUTUS. OSA 4-3: ERINÕUDED
LÜKATAVATELE MURUNIIDUKITELE

Electric motor-operated hand-held tools, transportable
tools and lawn and garden machinery - Safety - Part
4-3: Particular requirements for pedestrian controlled
walk-behind lawnmowers

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 62841-4-3:2021 sisaldab Euroopa standardi EN IEC 62841-4-3:2021 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 62841-4-3:2021 consists of the English text of the European standard EN IEC 62841-4-3:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 06.08.2021.	Date of Availability of the European standard is 06.08.2021.
Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 65.060.70

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele. Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardimis- ja Akrediteerimiskeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardimis- ja Akrediteerimiskeskusega: Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation and Accreditation. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation and Accreditation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation and Accreditation: Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

**Electric motor-operated hand-held tools, transportable tools and
lawn and garden machinery - Safety - Part 4-3: Particular
requirements for pedestrian controlled walk-behind lawnmowers
(IEC 62841-4-3:2020)**

Outils électroportatifs à moteur, outils portables et machines
pour jardins et pelouses - Sécurité - Partie 4-3: Exigences
particulières pour tondeuses à gazon à conducteur à pied
(IEC 62841-4-3:2020)

Elektrische motorbetriebene handgeführte Werkzeuge,
transportable Werkzeuge und Rasen- und
Gartenmaschinen - Sicherheit - Teil 4-3: Besondere
Anforderungen für handgeführte Rasenmäher
(IEC 62841-4-3:2020)

This European Standard was approved by CENELEC on 2020-12-16. 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

European foreword

The text of document 116/467/FDIS, future edition 1 of IEC 62841-4-3, 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 62841-4-3:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2022-02-06 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2025-08-06 document have to be withdrawn

This document supersedes EN 60335-2-77:2010 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.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 62841-4-3:2020 was approved by CENELEC as a European Standard without any modification.

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety –
Part 4-3: Particular requirements for pedestrian controlled walk-behind
lawnmowers**

**Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses – Sécurité –
Partie 4-3: Exigences particulières pour tondeuses à gazon à conducteur à pied**



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2020 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search - webstore.iec.ch/advsearchform

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

Electropedia - www.electropedia.org

The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

A propos de l'IEC

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications IEC

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

Recherche de publications IEC -

webstore.iec.ch/advsearchform

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études,...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

IEC Just Published - webstore.iec.ch/justpublished

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et une fois par mois par email.

Service Clients - webstore.iec.ch/csc

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: sales@iec.ch.

Electropedia - www.electropedia.org

Le premier dictionnaire d'électrotechnologie en ligne au monde, avec plus de 22 000 articles terminologiques en anglais et en français, ainsi que les termes équivalents dans 16 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

Glossaire IEC - std.iec.ch/glossary

67 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et Définitions des publications IEC parues depuis 2002. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety –
Part 4-3: Particular requirements for pedestrian controlled walk-behind lawnmowers**

**Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses – Sécurité –
Partie 4-3: Exigences particulières pour tondeuses à gazon à conducteur à pied**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 65.060.70

ISBN 978-2-8322-8896-2

**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	5
1 Scope	7
2 Normative references	8
3 Terms and definitions	9
4 General requirements	11
5 General conditions for the tests	11
6 Radiation, toxicity and similar hazards	11
7 Classification	12
8 Marking and instructions	12
9 Protection against access to live parts	16
10 Starting	16
11 Input and current	16
12 Heating	16
13 Resistance to heat and fire	17
14 Moisture resistance	17
15 Resistance to rusting	18
16 Overload protection of transformers and associated circuits	18
17 Endurance	18
18 Abnormal operation	19
19 Mechanical hazards	20
20 Mechanical strength	39
21 Construction	41
22 Internal wiring	46
23 Components	46
24 Supply connection and external flexible cords	48
25 Terminals for external conductors	50
26 Provision for earthing	50
27 Screws and connections	50
28 Creepage distances, clearances and distances through insulation	50
Annexes	55
Annex I (informative) Measurement of noise and vibration emissions	55
Annex K (normative) Battery tools and battery packs	64
Annex L (normative) Battery tools and battery packs provided with mains connection or non-isolated sources	80
Annex AA (normative) Safety signs	86
Annex BB (normative) Test enclosure	92
Annex CC (normative) Rotary lawnmower foot protection test	101
Annex DD (normative) Lawnmower cutting means stopping time test	110
Annex EE (informative) Example of a material and construction for fulfilling the requirements for an artificial surface	112
Bibliography	114

Figure 101 – Operator control zones	24
Figure 102 – Handle distance and rear cutting means enclosure for rotary lawnmowers	27
Figure 103 – Example of design for rotary lawnmower front opening	28
Figure 104 – Examples of front opening allowance for rotary lawnmowers	29
Figure 105 – Obstruction test	35
Figure 106 – Guarding of cylinder lawnmower cutting means, general	37
Figure 107 – Guarding of cylinder lawnmower cutting means, side coverage	37
Figure 108 – Guarding of cylinder lawnmower cutting means, free and rear discharge	38
Figure 109 – Guarding of cylinder lawnmower cutting means, front discharge	38
Figure 110 – Cylinder lawnmower throw line and handle distance	39
Figure 111 – Impact test fixture for handle insulation	42
Figure 112 – Lawnmower cutting means measurement	46
Figure 113 – Test assembly for accessibility of attachment plug blades	49
Figure I.101 – Microphone positions on the hemisphere (see Table I.101)	56
Figure I.102 – Examples of positions of transducers for lawnmowers	62
Figure K.301 – Examples of separable battery pack connection points and direction of applied force	74
Figure AA.1 – Safety signs illustrating – "WARNING – Beware of thrown objects – keep bystanders away"	86
Figure AA.2 – Safety signs illustrating – "WARNING – Remove plug from mains before maintenance or if cord is damaged"	87
Figure AA.3 – Safety sign illustrating – "WARNING – Keep the supply cord away from the blades"	87
Figure AA.4 – Safety signs illustrating – "WARNING – Keep hands and feet away from the blades"	88
Figure AA.5 – Safety signs illustrating – "WARNING – Disconnect battery before maintenance"	89
Figure AA.6 – Safety signs illustrating – "WARNING – Remove the disabling device before maintenance"	90
Figure AA.7 – Safety signs illustrating – "WARNING – Activate the disabling device before maintenance"	91
Figure AA.8 – Safety sign illustrating – "DANGER – Keep hands and feet away"	91
Figure BB.1 – Test enclosure, construction detail	92
Figure BB.2 – Base detail	93
Figure BB.3 – Example of base, nail plan	93
Figure BB.4 – Test enclosure, general view	95
Figure BB.5 – Test enclosure, single spindle rotary lawnmower	96
Figure BB.6 – Test enclosure, multiple spindle rotary lawnmower	97
Figure BB.7 – Fixture for fibreboard penetration test	99
Figure CC.1 – Foot probe	102
Figure CC.2 – Areas to be probed for rotary lawnmowers	104
Figure CC.3 – Area to be probed for rotary lawnmowers with movable offset handles	105
Figure CC.4 – Area to be probed for air-cushion lawnmowers with single cutting means	106
Figure CC.5 – Area to be probed for air-cushion lawnmowers with multiple cutting means	107
Figure CC.6 – Area to be probed for rotary lawnmowers with single cutting means	108

Figure CC.7 – Area to be probed for rotary lawnmowers with multiple cutting means	109
Figure EE.1 – Sketch of the measurement surface covered with an artificial surface	113
Table 4 – Required performance levels	20
Table 101 – Cutting means stopping time	32
Table 102 – Permissible hits from thrown object test.....	34
Table 9 – Pull and torque value	50
Table 12 – Minimum creepage distances and clearances	52
Table I.101 – Co-ordinates of microphone positions.....	58
Table I.102 – Values of the constant a	58
Table I.103 – Absorption coefficients	59
Table 4 – Required performance levels	69
Table 301 – Pull and torque value.....	76
Table K.1 – Minimum creepage distances and clearances between parts of different potential.....	78
Table K.2 – Minimum total sum of creepage distances and clearances to accessible surfaces.....	79
Table 4 – Required performance levels	82

preview generated by EVS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE
TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY –****Part 4-3: Particular requirements for pedestrian
controlled walk-behind lawnmowers**

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 62841-4-3 has been prepared by IEC technical committee 116: Safety of motor-operated electric tools.

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

FDIS	Report on voting
116/467/FDIS	116/478/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 4-3 is to be used in conjunction with the first edition of IEC 62841-1:2014.

This Part 4-3 supplements or modifies the corresponding clauses in IEC 62841-1, so as to convert it into the IEC Standard: Particular requirements for pedestrian controlled walk-behind lawnmowers.

Where a particular subclause of Part 1 is not mentioned in this Part 4-3, that subclause applies as far as reasonable. Where this document 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, tables and figures which are additional to those in Part 1 are numbered starting from 101.

Subclauses, notes, tables and figures in Annex K and Annex L which are additional to those in the main body of this Part 4-3 are numbered starting from 301.

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.

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

Part 4-3: Particular requirements for pedestrian controlled walk-behind lawnmowers

1 Scope

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

Addition:

This document applies to the design of pedestrian controlled walk-behind

- **cylinder lawnmowers;**

and

- **rotary lawnmowers**

equipped with

- metallic **cutting means**; and/or
- rigid non-metallic **cutting means**; and/or
- non-metallic **cutting means** with one or more cutting elements pivotally mounted on a generally circular drive unit, where these cutting elements rely on centrifugal force to achieve cutting, and have a kinetic energy for each single cutting element of greater than 10 J.

NOTE 101 Machines that have non-metallic **cutting means** and a kinetic energy for each single cutting element of less than or equal to 10 J are considered to be lawn trimmers.

This document does not apply to

- robotic lawnmowers;
- remote-controlled lawnmowers;
- flail mowers or flail-type attachments;
- scissors type lawnmowers;
- grassland mowers;
- sickle bar mowers;
- towed/semi-mounted grass-cutting machines;
- scrub-clearing machines;
- lawn trimmers and lawn edge trimmers;
- lawn edgers;
- grass trimmers;
- brush cutters;
- brush saws;
- agricultural mowers;
- trailing seat/sulky units;
- ride-on machines;

- non-powered lawnmowers;
- combustion engine powered lawnmowers;
- hybrid and fuel cell powered machines and associated charging systems; and
- garden tractors or their attachments.

NOTE 102 Robotic lawnmowers are covered by IEC 60335-2-107, and will be covered by a future part of IEC 62841.

NOTE 103 Lawn trimmers and lawn edge trimmers are covered by IEC 60335-2-91.

NOTE 104 Lawn trimmers, lawn edge trimmers, grass trimmers, brush cutters and brush saws will be covered by a future part of IEC 62841.

NOTE 105 Lawn edgers will be covered by a future part of IEC 62841.

2 Normative references

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

Addition:

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

IEC 60664-4, *Insulation coordination for equipment within low-voltage systems – Part 4: Consideration of high-frequency voltage stress*

IEC 61058-2-6:2018, *Switches for appliances – Part 2-6: Particular requirements for switches used in electric motor-operated hand-held tools, transportable tools and lawn and garden machinery*

IEC 61672-1, *Electroacoustics – Sound level meters – Part 1: Specifications*

ISO 354:2003, *Acoustics – Measurement of sound absorption in a reverberation room*

ISO 5395-1:2013, *Garden equipment – Safety requirements for combustion-engine-powered lawnmowers – Part 1: Terminology and common tests*
ISO 5395-1:2013/AMD1:2017

ISO 5395-2:2013/AMD1:2016, *Garden equipment – Safety requirements for combustion-engine-powered lawnmowers – Part 2: Pedestrian-controlled lawnmowers*
ISO 5395-2:2013/AMD1:2016/AMD2:2017

ISO 13857:2019, *Safety of machinery – Safety distances to prevent hazard zones being reached by upper and lower limbs*

ANSI B71.1:2017, *Consumer turf care equipment – Pedestrian-controlled mowers and ride-on mowers – Safety specifications*

EN 12096, *Mechanical Vibration – Declaration and Verification of Vibration Emission Values*

Replacement:

IEC 61058-1:2016, *Switches for appliances – Part 1: General requirements*

ISO 3744:2010, *Acoustics – Determination of sound power levels and sound energy levels of noise sources using sound pressure – Engineering methods for an essentially free field over a reflecting plane*

ISO 11201:2010, *Acoustics – Noise emitted by machinery and equipment – Determination of emission sound pressure levels at a work station and at other specified positions in an essentially free field over a reflecting plane with negligible environmental corrections*

3 Terms and definitions

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

3.101

cutter bar

stationary device used on a **cylinder lawnmower** to provide a shearing action in combination with the **cutting means**

3.102

cutting height

shortest vertical distance between the cutting edge of the **cutting means** and the supporting surface of a **lawnmower**

3.103

cutting means

rotating mechanism or rotating part of the **lawnmower** that is designed to perform the cutting action

Note 101 to entry: **Cutting means** are also known as blades, cutting cylinders or reels.

3.104

cutting means assembly

cutting means together with the **cutting means enclosure**, including **cutting means** shaft(s)

3.105

cutting means control

device to engage and disengage the **cutting means** from its drive, in order to start and stop the **cutting means** motion

3.106

cutting means enclosure

part or assembly, including the **discharge chute** and **guard** for **grass catcher** opening, designed to prevent unintended contact with the **cutting means**

3.107

cutting means tip circle

path described by the outermost point of the **rotary lawnmower cutting means** cutting edge as it rotates about its shaft axis

3.108

cutting position

any height setting of the **cutting means** designated by the manufacturer for cutting grass

3.109

cutting width

total distance across the **cutting means** path at 90° to the direction of travel