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STN	**Lesnícke stroje Bezpečnostné požiadavky a skúšanie motorových odvetvovacích píl Časť 1: Jednotky so zabudovaným spaľovacím motorom (ISO 11680-1: 2021)**	**STN EN ISO 11680-1 47 9022**

Machinery for forestry - Safety requirements and testing for pole-mounted powered pruners - Part 1: Machines fitted with an integral combustion engine (ISO 11680-1:2021)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/22

Obsahuje: EN ISO 11680-1:2021, ISO 11680-1:2021

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English Version

Machinery for forestry - Safety requirements and testing for pole-mounted powered pruners - Part 1: Machines fitted with an integral combustion engine (ISO 11680-1:2021)

Matériel forestier - Exigences de sécurité et essais pour les perches élagueuses à moteur - Partie 1: Machines équipées d'un moteur à combustion interne intégré (ISO 11680-1:2021)

Forstmaschinen - Sicherheitstechnische Anforderungen und Prüfung für motorbetriebene Hochentaster - Teil 1: Maschinen mit Antrieb durch integrierten Verbrennungsmotor (ISO 11680-1:2021)

This European Standard was approved by CEN on 9 October 2021.

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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 CEN 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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Ref. No. EN ISO 11680-1:2021 E

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European foreword

This document (EN ISO 11680-1:2021) has been prepared by Technical Committee ISO/TC 23 "Tractors and machinery for agriculture and forestry" in collaboration with Technical Committee CEN/TC 144 “Tractors and machinery for agriculture and forestry” the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2022, and conflicting national standards shall be withdrawn at the latest by May 2022.

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

This document supersedes EN ISO 11680-1:2011.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For the relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 11680-1:2021 has been approved by CEN as EN ISO 11680-1:2021 without any modification.

Annex ZA
(informative)

Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered

This European Standard has been prepared under Commission's standardization request "M/396 mandate to CEN and CENELEC for standardisation in the field of machinery" to provide one voluntary means of conforming to essential requirements of the Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery.

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements, of that Directive and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and and Annex I of Directive 2006/42/EC

The relevant Essential Requirements of EU Directive 2006/42/EC	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
1. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS		
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1.1.3. Materials and products	4.12	
1.1.5. Design of machinery to facilitate its handling	4.3; 4.4	
1.1.6. Ergonomics	4.3; 4.4	
1.1.7. Operating positions	4.15; 5.1; 5.2	
1.2. CONTROL SYSTEMS		
1.2.1. Safety and reliability of control systems	4.8; 4.9; 4.10; 4.11	
1.2.2. Control devices	4.8; 4.9; 4.10; 5.2	
1.2.3. Starting	4.8; 4.10	
1.2.4.1. Normal stop	4.9	
1.2.4.2. Operational stop	4.11	
1.2.4.4. Assembly of machinery	4.9; 4.11	
1.2.6. Failure of the power supply	4.8; 4.9	
1.3. PROTECTION AGAINST MECHANICAL HAZARDS		
1.3.1. Risk of loss of stability	-	not covered
1.3.2. Risk of break-up during	4.5; 4.19; 4.20; 5.1	

The relevant Essential Requirements of EU Directive 2006/42/EC	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
operation		
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1.3.4. Risks due to surfaces, edges or angles	4.1; 4.6	
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1.3.8.1. Moving transmission parts	4.2	
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1.4.2.1. Fixed guards	-	not covered
1.4.2.2. Interlocking movable guards	-	not covered
1.4.2.3. Adjustable guards restricting access	-	not covered
1.4.3. Special requirements for protective devices	4.2; 4.7	
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1.5.15. Risk of slipping, tripping or	-	not covered

The relevant Essential Requirements of EU Directive 2006/42/EC	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
falling		
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1.6.2. Access to operating positions and servicing points	-	not covered
1.6.3. Isolation of energy sources	4.9	
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2.2.1.1. Instructions	5.1	

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

INTERNATIONAL STANDARD

ISO 11680-1

Third edition
2021-10

Machinery for forestry — Safety requirements and testing for pole-mounted powered pruners —

Part 1: Machines fitted with an integral combustion engine

Matériel forestier — Exigences de sécurité et essais pour les perches élagueuses à moteur —

Partie 1: Machines équipées d'un moteur à combustion interne intégré

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 17, *Manually portable (hand-held) powered lawn and garden equipment and forest machinery*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 144, *Tractors and machinery for agriculture and forestry,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 11680-1:2011), which has been technically revised.

The main changes compared to the previous edition are as follows:

— Clause 1, the scope has been broadened to include extended and telescopic machines;

— Clause 3, definitions for “cutting attachment”, “dry weight”, “extendable”, “hand-held” and “telescopic” have been added;

— Figure 1 has been amended to show different types of pole mounted powered pruners;

— Clause 4:

  — a new subclause, 4.2 “Protection against contact with power driven components”, has been added;

  — in 4.4, harness requirements have been reworded and amended;

  — in 4.5.2, the requirements for circular saw blade securing have been clarified;

  — in 4.7, the distance to the cutting attachment have been clarified;

  — in 4.10.2, the requirement to test the throttle trigger lockout function has been added;

  — in 4.12, the verification method for fuel tank ventilation system has been added;

  — in 4.14, the requirements for protection against hot surfaces have been reworded and amended;

- in 4.19, fuel feed line strength and accessibility requirements have been added;
- in 4.20, fuel tank structural integrity requirements have been added;

— Clause 5:

- in 5.1, the requirements for instructions have been revised;
- in 5.2, the marking and warning requirements have been rearranged.

A list of all parts in the ISO 11680 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document is a type-C standard as stated in ISO 12100:2010.

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

— machine manufacturers (small, medium and large enterprises);

— health and safety bodies (regulators, accident prevention organisations, market surveillance, etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

— machine users/employers (small, medium and large enterprises);

— machine users/employees (e.g. trade unions, organizations for people with special needs);

— service providers, e. g. for maintenance (small, medium and large enterprises);

— consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the scope of this document.

When requirements of this type-C standard are different from those which are stated in type A or type B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type C standard.

INTERNATIONAL STANDARD **ISO 11680-1:2021(E)**

Machinery for forestry — Safety requirements and testing for pole-mounted powered pruners —

Part 1: Machines fitted with an integral combustion engine

1 Scope

This document specifies safety requirements and measures for their verification for the design and construction of portable, hand-held, pole-mounted powered pruners (hereafter named "machine"), including extendable and telescopic machines, having an integral combustion engine as their power source. These machines use a power transmission shaft to transmit power to a cutting attachment consisting of a saw-chain and guide bar, a reciprocating saw blade or a single-piece circular saw blade with a 205 mm maximum outside diameter. Methods for the elimination or reduction of hazards arising from the use of these machines and the type of information on safe working practices to be provided by the manufacturer are specified.

This document deals with all significant hazards, hazardous situations or hazardous events with the exception of electric shock from contact with overhead electric lines (apart from warnings and advice for inclusion in the instructions), relevant to these machines when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Annex A).

This document is applicable to portable, hand-held, pole-mounted powered pruners manufactured after its date of publication.

Brush cutters with a circular saw blade are not included in the scope of this document.

NOTE Brush cutter requirements are outlined in ISO 11806-1:2021.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6531:2017, *Machinery for forestry — Portable chain-saws — Vocabulary*

ISO 7112:2018, *Machinery for forestry — Portable brush-cutters and grass-trimmers — Vocabulary*

ISO 7113:1999, *Portable hand-held forestry machines — Cutting attachments for brush cutters — Single-piece metal blades*

ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

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

ISO 14982:1998, *Agricultural and forestry machinery — Electromagnetic compatibility — Test methods and acceptance criteria*

ISO 22867:2021, *Forestry and gardening machinery — Vibration test code for portable hand-held machines with internal combustion engine — Vibration at the handles*

ISO 22868:2021, *Forestry and gardening machinery — Noise test code for portable hand-held machines with internal combustion engine — Engineering method (Grade 2 accuracy)*

IEC 61032:1997, *Protection of persons and equipment by enclosures — Probes for verification*