

SLOVENSKI STANDARD

SIST EN ISO 11806-1:2022

01-maj-2022

Nadomešča:

SIST EN ISO 11806-1:2012

Kmetijski in gozdarski stroji - Tehnične varnostne zahteve in preskus za prenosne, ročno vodene kosilnice s prosto rezjo, opremljene z rezilno ploščo ali kosilno nitko - 1. del: Naprave z motorjem z notranjim zgorevanjem (ISO 11806-1:2022)

Agricultural and forestry machinery - Safety requirements and testing for portable, hand-held, powered brush-cutters and grass trimmers - Part 1: Machines fitted with an integral combustion engine (ISO 11806-1:2022)

Land- und forstwirtschaftliche Maschinen - Sicherheitstechnische Anforderungen und Prüfung für tragbare handgehaltene motorbetriebene Freischneider und Grastrimmer - Teil 1: Maschinen mit Antrieb durch integrierten Verbrennungsmotor (ISO 11806-1:2022)

Matériel agricole et forestier - Exigences de sécurité et essais pour débroussailleuses et coupe-herbe portatifs à moteur - Partie 1: Machines équipées d'un moteur à combustion interne intégré (ISO 11806-1:2022)

Ta slovenski standard je istoveten z: EN ISO 11806-1:2022

ICS:

65.060.80

Gozdarska oprema

Forestry equipment

SIST EN ISO 11806-1:2022

en,fr,de

**iTeh STANDARD
PREVIEW
(standards.iteh.ai)**

SIST EN ISO 11806-1:2022

<https://standards.iteh.ai/catalog/standards/sist/25234a85-6456-48bf-807e-7d0e02dd8fc4/sist-en-iso-11806-1-2022>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 11806-1

March 2022

ICS 65.060.80

Supersedes EN ISO 11806-1:2011

English Version

**Agricultural and forestry machinery - Safety requirements
and testing for portable, hand-held, powered brush-cutters
and grass-trimmers - Part 1: Machines fitted with an
integral combustion engine (ISO 11806-1:2022)**

Matériel agricole et forestier - Exigences de sécurité et
essais pour débroussailleuses et coupe-herbe portatifs
à moteur - Partie 1: Machines équipées d'un moteur à
combustion interne intégré (ISO 11806-1:2022)

Land- und forstwirtschaftliche Maschinen -
Sicherheitstechnische Anforderungen und Prüfung für
tragbare handgehaltene motorbetriebene
Freischneider und Grastrimmer - Teil 1: Maschinen mit
Antrieb durch integrierten Verbrennungsmotor (ISO
11806-1:2022)

This European Standard was approved by CEN on 26 December 2021.

CEN 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 CEN 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 CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword.....	3
Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered	4

**iTeh STANDARD
PREVIEW
(standards.iteh.ai)**

SIST EN ISO 11806-1:2022
<https://standards.iteh.ai/catalog/standards/sist/25234a85-6456-48bf-807e-7d0e02dd8fc4/sist-en-iso-11806-1-2022>

European foreword

This document (EN ISO 11806-1:2022) 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 September 2022, and conflicting national standards shall be withdrawn at the latest by September 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 11806-1:2011.

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 11806-1:2022 has been approved by CEN as EN ISO 11806-1:2022 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 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		
1.1.2. Principles of safety integration	4.1	
1.1.3. Materials and products	4.15	
1.1.5. Design of machinery to facilitate its handling	4.2; 4.4	
1.1.6. Ergonomics	4.2; 4.4; 4.5	
1.1.7. Operating positions	4.18; 5.1; 5.2	
1.2. CONTROL SYSTEMS		
1.2.1. Safety and reliability of control systems	4.11; 4.12; 4.13; 4.14	
1.2.2. Control devices	4.11; 4.12; 4.13; 5.2; 5.3	
1.2.3. Starting	4.11; 4.13	
1.2.4. Stopping		
1.2.4.1. Normal stop	4.12	
1.2.4.2. Operational stop	4.14	
1.2.4.4. Assembly of machinery	4.12; 4.14	
1.2.5. Selection of control or operating modes		Not covered
1.2.6. Failure of the power supply	4.11; 4.12	
1.3. PROTECTION AGAINST MECHANICAL HAZARDS		

The relevant Essential Requirements of EU Directive 2006/42/EC	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
1.3.1. Risk of loss of stability		Not covered
1.3.2. Risk of break-up during operation	4.6; 4.15; 5.1	
1.3.3. Risks due to falling or ejected objects	5.1; 4.6; 4.7; 4.8	
1.3.4. Risks due to surfaces, edges or angles	4.1; 4.9	
1.3.6. Risks related to variations in operating conditions	4.13	
1.3.7. Risks related to moving parts	4.3; 4.14; 4.8	
1.3.8. Choice of protection against risks arising from moving parts		
1.3.8.1. Moving transmission parts	4.1	
1.3.8.2. Moving parts involved in the process	4.3; 4.8	
1.3.9. Risks of uncontrolled movements	4.13; 4.14	
1.4. REQUIRED CHARACTERISTICS OF GUARDS AND PROTECTIVE DEVICES		
1.4.1. General requirements	4.3; 4.17	
1.4.2.1. Fixed guards	4.3; 4.8	
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		not covered
1.5. RISKS DUE TO OTHER HAZARDS		
1.5.2. Static electricity	-	not covered
1.5.3. Energy supply other than electricity	4.15	
1.5.4. Errors of fitting	5.1	
1.5.5. Extreme temperatures	4.17	
1.5.6. Fire	4.15; 5.1	
1.5.8. Noise	4.20; 5.1	
1.5.9. Vibrations	4.19; 5.1	
1.5.11. External radiation	4.21	
1.5.13. Emissions of hazardous materials and substances	4.15; 4.18	
1.5.15. Risk of slipping, tripping or falling	-	not covered
1.6. MAINTENANCE		
1.6.1. Machinery maintenance	4.7; 5.1	
1.6.2. Access to operating positions and servicing points	-	not covered

EN ISO 11806-1:2022 (E)

The relevant Essential Requirements of EU Directive 2006/42/EC	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
1.6.3. Isolation of energy sources	4.12	
1.6.4. Operator intervention	5.1; 5.3	
1.6.5. Cleaning of internal parts	-	not covered
1.7. INFORMATION		
1.7.1. Information and warnings on the machinery	5.2; 5.3	
1.7.1.1. Information and information devices	5.2; 5.3	
1.7.1.2. Warning devices	-	not covered
1.7.2. Warning of residual risks	5.1; 5.2; 5.3	
1.7.3. Marking of machinery	5.2	
1.7.4. Instructions	5.1	
1.7.4.1. General principles for the drafting of instructions	5.1	
1.7.4.2. Contents of the instructions from a) to t) and v)	5.1	
1.7.4.2. u)		This standard does not provide presumption of conformity with regard to the determination of sound power level.
1.7.4.3. Sales literature	SIST EN ISO 11806-1:2022	Not covered
2. SUPPLEMENTARY ESSENTIAL HEALTH AND SAFETY REQUIREMENTS FOR CERTAIN CATEGORIES OF MACHINERY		
2.2. PORTABLE HAND-HELD AND/OR HAND-GUIDED MACHINERY		
2.2.1. General	4.2; 4.12; 4.13; 4.14	
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
STANDARDISO
11806-1Second edition
2022-02

**Agricultural and forestry
machinery — Safety requirements
and testing for portable, hand-held,
powered brush-cutters and grass-
trimmers —**

iTeh STANDARD

Part 1:

**Machines fitted with an integral
combustion engine**

(standards.iteh.ai)

*Matériel agricole et forestier — Exigences de sécurité et essais pour
débroussailleuses et coupe-herbe portatifs à moteur —**Subsystème 11806-1*<https://standards.iteh.ai/catalog/standards/sist/25234e85-6456-48bf-8077-719e02dd8fc4/sist-en-iso-11806-1-2022>*Partie 1: Machines équipées d'un moteur à combustion interne
intégrée*

2022

Reference number
ISO 11806-1:2022(E)

© ISO 2022

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 11806-1:2022

<https://standards.iteh.ai/catalog/standards/sist/25234a85-6456-48bf-807e-7d0e02dd8fc4/sist-en-iso-11806-1-2022>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2022

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Safety requirements and/or protective measures	4
4.1 General	4
4.2 Handles	5
4.2.1 Requirements	5
4.2.2 Verification	6
4.3 Barrier and distance to cutting attachment for brush-cutters	6
4.3.1 Requirements	6
4.3.2 Verification	7
4.4 Harness	8
4.4.1 Requirements	8
4.4.2 Verification	8
4.5 Balance	8
4.5.1 Requirements	8
4.5.2 Verification	9
4.6 Cutting attachment strength	9
4.6.1 Requirements	9
4.6.2 Verification	9
4.7 Cutting attachment retention	9
4.7.1 Requirements	9
4.7.2 Verification	9
4.8 Cutting attachment guards	10
4.8.1 Requirements	10
4.8.2 Verification	10
4.9 Transport cover	10
4.9.1 Requirements	10
4.9.2 Verification	10
4.10 Length of flexible cutting lines	10
4.10.1 Requirements	10
4.10.2 Verification	11
4.11 Engine starting device	11
4.11.1 Requirements	11
4.11.2 Verification	11
4.12 Engine stopping device	11
4.12.1 Requirements	11
4.12.2 Verification	11
4.13 Throttle control	11
4.13.1 Position	11
4.13.2 Operation	11
4.13.3 Throttle control latch	13
4.14 Clutch	14
4.14.1 Requirements	14
4.14.2 Verification	14
4.15 Tanks	14
4.15.1 General	14
4.15.2 Fuel tank structural integrity	15
4.15.3 Fuel feed line strength and accessibility	15
4.16 Protection against contact with parts of the machine under high voltage	15
4.16.1 Requirements	15

ISO 11806-1:2022(E)

4.16.2	Verification	15
4.17	Protection against contact with hot parts	15
4.17.1	Requirements	15
4.17.2	Verification	15
4.18	Exhaust gases	16
4.18.1	Requirement	16
4.18.2	Verification	16
4.19	Vibration	17
4.19.1	Reduction by design at source and by protective measures	17
4.19.2	Vibration measurement	17
4.20	Noise	17
4.20.1	Reduction by design at source and by protective measures	17
4.20.2	Noise measurement	17
4.21	Electromagnetic immunity	17
4.21.1	Requirements	17
4.21.2	Verification	17
5	Information for use	18
5.1	Instructions	18
5.1.1	General	18
5.1.2	Technical data	18
5.1.3	Other information	18
5.2	Marking	20
5.3	Warnings	21
5.4	Test of labels	22
5.4.1	Preparation of test specimens and control specimens	22
5.4.2	Wipe resistance test	22
5.4.3	Adhesion test	23
Annex A (normative)	Cutting attachment impact and spin test	24
Annex B (normative)	Thrown objects test	26
Annex C (informative)	List of significant hazards	30
Annex D (normative)	Structural integrity of fuel tanks	32
Annex E (normative)	Procedures for the evaluation of the strength and accessibility of fuel feed lines	33
Bibliography		34

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 second edition cancels and replaces the first edition (ISO 11806-1:2011), which has been technically revised.

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

- [Figure 3](#) has been revised to provide examples of handle distance;
- a force requirement in the throttle trigger lock-out performance test has been added;
- [Figures 5a](#) and [5b](#) have been added to clarify throttle trigger lock-out performance test;
- fuel tank structural integrity test requirements have been added by including a new [Annex D](#);
- fuel line strength and accessibility requirements have been added by including a new [Annex E](#);
- [Annex A](#), cutting attachment impact and spin test, has been revised for repeatability.

A list of all parts in the ISO 11806 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.