



# SLOVENSKI STANDARD

## SIST EN ISO 22868:2005

01-maj-2005

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Forestry machinery - Noise test code for portable hand-held machines with internal combustion engine - Engineering method (Grade 2 accuracy) (ISO 22868:2005)

Forstwirtschaftliche Maschinen - Geräuschmessnorm für handgehaltene Maschinen mit Verbrennungsmotor - Verfahren der Genauigkeitsklasse 2 (ISO 22868:2005)

Machines forestières - Code d'essai acoustique pour machines portatives tenues a la main a moteur a combustion interne - Methode d'expertise (classe de précision 2) (ISO 22868:2005)

Ta slovenski standard je istoveten z: EN ISO 22868:2005

### ICS:

17.140.20	Emisija hrupa naprav in opreme	Noise emitted by machines and equipment
65.060.80	Gozdarska oprema	Forestry equipment

SIST EN ISO 22868:2005

en

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN ISO 22868**

February 2005

ICS 13.140; 65.060.80; 17.140.20

Supersedes EN 27182:1991, EN 27917:1991

English version

**Forestry machinery - Noise test code for portable hand-held  
machines with internal combustion engine - Engineering method  
(Grade 2 accuracy) (ISO 22868:2005)**

Machines forestières - Code d'essai acoustique pour  
machines portatives tenues à la main à moteur à  
combustion interne - Méthode d'expertise (classe de  
précision 2) (ISO 22868:2005)

Forstwirtschaftliche Maschinen - Geräuschmessnorm für  
handgehaltene Maschinen mit Verbrennungsmotor -  
Verfahren der Genauigkeitsklasse 2 (ISO 22868:2005)

This European Standard was approved by CEN on 13 January 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

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**EN ISO 22868:2005 (E)****Foreword**

This document (EN ISO 22868:2005) 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 August 2005, and conflicting national standards shall be withdrawn at the latest by August 2005.

This document supersedes EN 27182:1991 and EN 27917:1991.

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

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

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

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**Endorsement notice**

The text of ISO 22868:2005 has been approved by CEN as EN ISO 22868:2005 without any modifications.

## ANNEX ZA (informative)

### Relationship between this European Standard and the Essential Requirements of EU Directive 98/37 EEC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 98/37 EEC.

Once this standard is cited in the Official Journal of the European Communities under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard given in Table ZA. 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.

**WARNING:** Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

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# INTERNATIONAL STANDARD

**ISO**  
**22868**

First edition  
2005-02-01

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## Forestry machinery — Noise test code for portable hand-held machines with internal combustion engine — Engineering method (Grade 2 accuracy)

*Machines forestières — Code d'essai acoustique pour machines  
portatives tenues à la main à moteur à combustion interne —  
Méthode d'expertise (classe de précision 2)*

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Reference number  
ISO 22868:2005(E)

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## ISO 22868:2005(E)

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 22868 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 17, *Manually portable forest machinery*.

This first edition of ISO 22868 cancels and replaces ISO 7182:1984, ISO 7917:1987, ISO 9207:1995 and ISO 10884:1995, of which it constitutes a technical revision.

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## Introduction

During the first steps in the revision of this International Standard, it became obvious that the repeatability of the test results could become better if the operator were to be replaced by a simulation process, representing the normal operating modes with chain-saws and trimmers/brush-cutters. Furthermore, it was found that the cutting process performed with chain-saws causes considerable deviations, which are not related to the measured object but to the test procedure itself.

Based on these observations, it was concluded that the operators in both test procedures, i.e. for chain-saws and trimmers/brush-cutters, ought to be replaced by a defined fixture and the cutting process with chain-saws by a brake simulating the load. In this manner, the operating conditions during measurement would simulate normal operating conditions.

The determination of noise emission characteristics is primarily used for

- manufacturers' declarations of noise emitted,
- comparing the noise emitted by machines in the family concerned, and
- purposes of noise control at source at the design stage.

The use of this noise test code will ensure reproducibility of the determination of the noise emission characteristics within specified limits determined by the grade of accuracy of the basic noise measurement method used. Noise measurement methods allowed by this International Standard give results with Grade 2 accuracy.

The operating modes are of interest for assessment of the exposure sound pressure levels, for example, over a typical working day.

The work cycles chosen for this test code are based on the following considerations of application:

- a) chain-saws with an engine of  $< 80 \text{ cm}^3$  are used for various operations, including felling, bucking and delimiting;
- b) chain-saws with an engine of  $\geq 80 \text{ cm}^3$  are normally used for felling and bucking.

Delimiting will cause the saw to run at racing speed; therefore, racing is included only for saws with a  $< 80 \text{ cm}^3$  engine.

For brush-cutters and grass-trimmers, the cutting mode (full load) is estimated to be valid only for short periods, while racing and idling are the two dominant modes. Moreover, it has been found to be diverse and not able to be performed under repeatable conditions.

For trimmers, the full load and the racing modes are integrated in one single mode due to the loading effect of the flexible line.

For brush-cutters, it is not possible to simulate the full load mode in a feasible way since there are no constant load conditions comparable to chain-saws. Since the operating mode "racing" is anyhow the worst case, it is used as representative.

In either case, transport and other tasks between operations will cause the machine to run at idling. Experience has led to the conclusion that equal duration for the different working modes is a good estimation of daily exposure.

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