

**Pöörd-sisepõlemismootorid.
Tagasitõmbevedruga käivitusseadmed.
Üldised ohutusnõuded (ISO 14314:2004)**

Reciprocal internal combustion engines - Recoil starting equipment - General safety requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 14314:2004 sisaldab Euroopa standardi EN ISO 14314:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 27.07.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 14314:2004 consists of the English text of the European standard EN ISO 14314:2004.</p> <p>This document is endorsed on 27.07.2004 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This International Standard specifies the safety requirements for engine re-coil starting equipment intended for use on RIC engines for land, rail and marine use, excluding engines intended for use to propel road vehicles and aircraft. It may be applied to engines intended for use to propel construction and earth-moving machines and for other applications where no other suitable International Standards exist.</p>	<p>Scope: This International Standard specifies the safety requirements for engine re-coil starting equipment intended for use on RIC engines for land, rail and marine use, excluding engines intended for use to propel road vehicles and aircraft. It may be applied to engines intended for use to propel construction and earth-moving machines and for other applications where no other suitable International Standards exist.</p>
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ICS 27.020

Võtmesõnad:

ICS 27.020

English version

**Reciprocal internal combustion engines - Recoil starting
equipment - General safety requirements (ISO 14314:2004)**

Moteurs alternatifs à combustion interne - Dispositifs de
démarrage à réenrouleur - Exigences générales de sécurité
(ISO 14314:2004)

Hubkolben-Verbrennungsmotoren -
Reversierstarteinrichtung - Allgemeine
Sicherheitsanforderungen (ISO 14314:2004)

This European Standard was approved by CEN on 1 March 2004.

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 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 Management Centre has the same status as the official versions.

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

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Foreword

This document (EN ISO 14314:2004) has been prepared by Technical Committee ISO/TC 70 "Internal combustion engines" in collaboration with Technical Committee CEN/TC 270 "Internal combustion engines", the secretariat of which is held by DIN.

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 2004, and conflicting national standards shall be withdrawn at the latest by September 2004.

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.

Endorsement notice

The text of ISO 14314:2004 has been approved by CEN as EN ISO 14314:2004 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.

**Reciprocal internal combustion
engines — Recoil starting equipment —
General safety requirements**

*Moteurs alternatifs à combustion interne — Dispositifs de démarrage à
réciprocateur — Exigences générales de sécurité*



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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.

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 14314 was prepared by Technical Committee ISO/TC 70, *Internal combustion engines*.

Introduction

The hierarchy of safety standards in the field of machinery is as follows:

- a) type-A standards (basis safety standards) giving basic concepts, principle for design, and general aspects that can be applied to machinery;
- b) type-B standards (generic safety standards) dealing with one safety aspect or one type of safeguards that can be used across a wide range of machinery;
 - 1) type-B1 standards on particular safety aspects (e.g. safety distances, surface temperature, noise);
 - 2) type-B2 standards on safeguards (e.g. two-hands controls, interlocking devices, pressure sensitive devices, guards);
- c) type-C standards (machinery safety standards) dealing with detailed safety requirements for a particular machine or group of machines.

This document is a type C standard as stated in EN 1070.

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

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

The concept of re-coil starting systems avoids the two main risks inherent in the use of a loose rope to start Reciprocating Internal Combustion (RIC) engines as follows:

- i) by preventing the rope coming loose from the engine starting pulley, in an uncontrolled manner, at the end of the starting operation and injuring the operator;
- ii) by preventing the operator from being in or coming into contact with any rotating parts of the starting system.

Reciprocal internal combustion engines — Recoil starting equipment — General safety requirements

1 Scope

This International Standard specifies the safety requirements for engine re-coil starting equipment intended for use on RIC engines for land, rail and marine use, excluding engines intended for use to propel road vehicles and aircraft. It may be applied to engines intended for use to propel construction and earth-moving machines and for other applications where no other suitable International Standards exist.

In addition to the technical safety requirements, it also contains the method of checking the adherence to these requirements.

This International Standard only addresses the hazards associated with the installation and operation of re-coil starting equipment.

This International Standard is primarily directed at machines which are manufactured after the date of publication of this International Standard.

2 Normative references

The following referenced documents are indispensable for the application 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 2710-1, *Reciprocating internal combustion engines — Vocabulary — Part 1: Terms for engine design and operation*

ISO 2710-2, *Reciprocating internal combustion engines — Vocabulary — Part 2: Terms for engine maintenance*

ISO 7967-8, *Reciprocating internal combustion engines — Vocabulary of components and systems — Part 8: Starting systems*

EN 292-1, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology*

EN 292-2 and EN 292-2/A1, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles and specifications*

EN 1070, *Safety of machinery — Terminology*

EN 1679-1, *Reciprocating internal combustion engines — Safety — Part 1: Compression ignition engines*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 2710-1, ISO 2710-2, ISO 7967-8, EN 1070, and the following apply.