### საქართველოს სტანდარტი

ცვლადი დენის გენერატორები ამძრავით დგუშიანი შიდა წვის ძრავებიდან ნაწილი 13: უსაფრთხოება (ისო 8528-213:2016, შესწორებული ვერსია 2016-10-15)

> საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტო თბილისი

#### სსტ ენ ისო 8528-13:2016/2019

#### საინფორმაციო მონაცემები

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### EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN ISO 8528-13

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#### **English Version**

## Reciprocating internal combustion engine driven alternating current generating sets - Part 13: Safety (ISO 8528-13:2016)

Groupes électrogènes à courant alternatif entraînés par moteurs alternatifs à combustion interne - Partie 13: Sécurité (ISO 8528-13:2016) Stromerzeugungsaggregate mit Hubkolben-Verbrennungsmotor - Teil 13: Sicherheit (ISO 8528-13:2016)

This European Standard was approved by CEN on 23 January 2016.

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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.

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



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

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#### **European foreword**

This document (EN ISO 8528-13:2016) 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of an identical text or by endorsement, at the latest by December 2016, and conflicting national standards shall be withdrawn at the latest by June 2017.

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

This document supersedes EN 12601:2010.

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, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

#### **Endorsement notice**

The text of ISO 8528-13:2016 has been approved by CEN as EN ISO 8528-13:2016 without any modification.

#### Annexe ZA

(informative)

## Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC

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 2006/42/EC on machinery.

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 clauses of this standard, with the exclusion of all references to ISO 8528-13 confers, within the limits of the scope of this standard, a presumption of conformity with the Essential Requirements of that Directive and associated EFTA regulations.

WARNING — Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.

## INTERNATIONAL STANDARD

ISO 8528-13

> First edition 2016-05-15 Corrected version 2016-10-15

# Reciprocating internal combustion engine driven alternating current generating sets —

Part 13: **Safety** 

Groupes électrogènes à courant alternatif entraînés par moteurs alternatifs à combustion interne —

Partie 13: 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.

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 <a href="www.iso.org/directives">www.iso.org/directives</a>).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 70, *Internal combustion engines*.

ISO 8528 consists of the following parts, under the general title *Reciprocating internal combustion engine driven alternating current generating sets*:

- Part 1: Application, ratings and performance
- Part 2: Engines
- Part 3: Alternating current generators for generating sets
- Part 4: Controlgear and switchgear
- Part 5: Generating sets
- Part 6: Test methods
- Part 7: Technical declarations for specification and design
- Part 8: Requirements and tests for low-power generating sets
- Part 9: Measurement and evaluation of mechanical vibrations
- Part 10: Measurement of airborne noise by the enveloping surface method
- Part 12: Emergency power supply to safety services
- Part 13: Safety

#### ISO 8528-13:2016(E)

This corrected version of ISO 8528-13:2016 incorporates the following corrections plus other minor editorial modifications.

- 6.8.3.5 was corrected as follows:
- b) When the accessible hot surfaces are less than  $10~\text{cm}^2$  they shall be verified in accordance with 6.8.3.1.
  - b 1) The surfaces temperatures shall be verified by measurement,
  - c <del>2)</del> The generating set shall be operated at its rated power until the surface temperatures stabilize,
  - d 3) The test shall be conducted in a well-ventilated location not directly exposed to sunshine,
  - e  $\frac{4}{1}$  If the test is conducted at an ambient temperature outside of the nominal (20  $\pm$  3) °C the reported temperatures shall be corrected by Formula (1):

Annex C b) 7) was corrected as follows:

**Since** the choice of protection arrangement to be carried out depending depends on the characteristic of the generator, running conditions and scheme of grounded liaisons determined by the user, the instructions and operation and instructions manual shall contain all information needed to the user to carry out correctly these protective measures according to the user (information for grounded, allowable lengths of connection cables, devices of complementary protection, etc.).