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**Reciprocating internal combustion  
engine driven alternating current  
generating sets —**

**Part 6:  
Test methods**

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

*Partie 6: Méthodes d'essai*



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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 8528-6 was prepared by Technical Committee ISO/TC 70, *Internal combustion engines*.

This second edition cancels and replaces the first edition (ISO 8528-6:1993), which has been technically revised.

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 11: Rotary uninterruptible power systems — Performance requirements and test methods<sup>1)</sup>*
- *Part 12: Emergency power supplies to safety services*

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1) Part 11 will be published as ISO/IEC 88528-11.

# Reciprocating internal combustion engine driven alternating current generating sets —

## Part 6: Test methods

### 1 Scope

This part of ISO 8528 specifies the test methods to be used for characterizing an entire generating set. It applies to alternating current (a.c.) generating sets driven by reciprocating internal combustion (RIC) engines for land and marine use, excluding generating sets used on aircraft or to propel land vehicles and locomotives.

For some specific applications (e.g. essential hospital supplies, high-rise buildings) supplementary requirements may be necessary. The provisions of this part of ISO 8528 are intended as a basis for establishing any supplementary requirements.

For a.c. generating sets driven by other reciprocating type prime movers (e.g. steam engines), this part of ISO 8528 is intended as a basis for establishing these requirements.

**NOTE** Existing test methods for the engine (ISO 3046-1 and ISO 3046-3) and generator (IEC 60034-2) are applicable for those components. The generating set manufacturer is responsible for specifying these characteristics and the tests to be performed to verify them.

### 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 3046-1, *Reciprocal internal combustion engines — Performance — Part 1: Declarations of power, fuel and lubricating oil consumptions, and test methods — Additional requirements for engines for general use*

ISO 3046-3, *Reciprocating internal combustion engines — Performance — Part 3: Test measurements*

ISO 8528-1<sup>2)</sup>, *Reciprocating internal combustion engine driven alternating current generating sets — Part 1: Application, ratings and performance*

ISO 8528-5<sup>2)</sup>, *Reciprocating internal combustion engine driven alternating current generating sets — Part 5: Generating sets*

IEC 60034-2, *Rotating electrical machines — Part 2: Methods for determining losses and efficiency of rotating electrical machinery from tests (excluding machines for traction vehicles)*

IEC 60034-5, *Rotating electrical machines — Part 5: Classification of degrees of protection provided by enclosures for rotating machines*

IEC 60947-1, *Low-voltage switchgear and control gear — Part 1: General rules*

2) ISO 8528-1 and ISO 8528-5 are under revision.