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## Kärnor av mjukmagnetiskt material – Mätmetoder – Del 1: Artspecifikation

*Cores made of soft magnetic materials –  
Measuring methods –  
Part 1: Generic specification*

Som svensk standard gäller europastandarden EN 62044-1:2002. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62044-1:2002.

### Nationellt förord

Europastandarden EN 62044-1:2002<sup>\*)</sup>

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 62044-1, First edition, 2002 - Cores made of soft magnetic materials - Measuring methods - Part 1: Generic specification**

utarbetad inom International Electrotechnical Commission, IEC.

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<sup>\*)</sup> EN 62044-1:2002 ikraftsattes 2003-02-28 som SS-EN 62044-1 genom offentliggörande, d v s utan utgivning av något svenskt dokument.

### *Standarder underlättar utvecklingen och höjer elsäkerheten*

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

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Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

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EUROPEAN STANDARD

**EN 62044-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2002

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ICS 29.100.10

English version

**Cores made of soft magnetic materials -  
Measuring methods  
Part 1: Generic specification  
(IEC 62044-1:2002)**

Noyaux en matériaux magnétiques doux -  
Méthodes de mesure  
Partie 1: Spécification générique  
(CEI 62044-1:2002)

Kerne aus weichmagnetischen  
Werkstoffen -  
Messmethoden  
Teil 1: Fachgrundspezifikation  
(IEC 62044-1:2002)

This European Standard was approved by CENELEC on 2002-07-01. CENELEC 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 CENELEC 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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

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Ref. No. EN 62044-1:2002 E

### Foreword

The text of document 51/660/FDIS, future edition 1 of IEC 62044-1, prepared by IEC TC 51, Magnetic components and ferrite materials, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62044-1 on 2002-07-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2003-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-07-01

Annexes designated "normative" are part of the body of the standard. In this standard, annex ZA is normative. Annex ZA has been added by CENELEC.

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### Endorsement notice

The text of the International Standard IEC 62044-1:2002 was approved by CENELEC as a European Standard without any modification.

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## **Annex ZA** (normative)

### **Normative references to international publications with their corresponding European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068	Series	Environmental testing	EN 60068	Series

## Numérotation des publications

Depuis le 1er janvier 1997, les publications de la CEI sont numérotées à partir de 60000. Ainsi, la CEI 34-1 devient la CEI 60034-1.

## Editions consolidées

Les versions consolidées de certaines publications de la CEI incorporant les amendements sont disponibles. Par exemple, les numéros d'édition 1.0, 1.1 et 1.2 indiquent respectivement la publication de base, la publication de base incorporant l'amendement 1, et la publication de base incorporant les amendements 1 et 2.

## Informations supplémentaires sur les publications de la CEI

Le contenu technique des publications de la CEI est constamment revu par la CEI afin qu'il reflète l'état actuel de la technique. Des renseignements relatifs à cette publication, y compris sa validité, sont disponibles dans le Catalogue des publications de la CEI (voir ci-dessous) en plus des nouvelles éditions, amendements et corrigenda. Des informations sur les sujets à l'étude et l'avancement des travaux entrepris par le comité d'études qui a élaboré cette publication, ainsi que la liste des publications parues, sont également disponibles par l'intermédiaire de:

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## Publication numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series. For example, IEC 34-1 is now referred to as IEC 60034-1.

## Consolidated editions

The IEC is now publishing consolidated versions of its publications. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

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The technical content of IEC publications is kept under constant review by the IEC, thus ensuring that the content reflects current technology. Information relating to this publication, including its validity, is available in the IEC Catalogue of publications (see below) in addition to new editions, amendments and corrigenda. Information on the subjects under consideration and work in progress undertaken by the technical committee which has prepared this publication, as well as the list of publications issued, is also available from the following:

- **IEC Web Site ([www.iec.ch](http://www.iec.ch))**
- **Catalogue of IEC publications**

The on-line catalogue on the IEC web site ([www.iec.ch/catlg-e.htm](http://www.iec.ch/catlg-e.htm)) enables you to search by a variety of criteria including text searches, technical committees and date of publication. On-line information is also available on recently issued publications, withdrawn and replaced publications, as well as corrigenda.
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**NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD**

**CEI  
IEC**

**62044-1**

Première édition  
First edition  
2002-05

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**Noyaux en matériaux magnétiques doux –  
Méthodes de mesure –**

**Partie 1:  
Spécification générique**

**Cores made of soft magnetic materials –  
Measuring methods –**

**Part 1:  
Generic specification**

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International Electrotechnical Commission  
Международная Электротехническая Комиссия

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CORES MADE OF SOFT MAGNETIC MATERIALS –  
MEASURING METHODS –**

**Part 1: Generic specification**

**FOREWORD**

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
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International Standard IEC 62044-1 has been prepared by IEC technical committee 51: Magnetic components and ferrite materials.

This standard cancels and replaces clauses 6.2 to 6.4 and Annexes A to D of IEC 60367-1 (1982). The remaining clauses of IEC 60367-1 will be replaced by IEC 62044-2 and IEC 62044-3 (2000).

The text of this standard is based on the following documents:

FDIS	Report on voting
51/660/FDIS	51/677/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

The committee has decided that this publication remains valid until 2006. At this date, in accordance with the committee's decision, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

# CORES MADE OF SOFT MAGNETIC MATERIALS – MEASURING METHODS –

## Part 1: Generic specification

### 1 Scope and object

This International standard applies to magnetic cores made of soft magnetic materials used in inductors, transformers and devices used to suppress electromagnetic interference.

This standard is to provide guidance for the specification of measuring methods for both magnetic and non-magnetic (for example, mechanical, electrical, etc.) properties.

This standard is limited to the general principles to be followed for the various possible test methods. For the magnetic properties, it should be considered that the measurement result using a measuring coil can be directly related to a specified parameter (for example inductance) of a magnetic component using the magnetic core. In this case, the measuring method should be chosen in order to obtain a good correlation with the corresponding magnetic component measurement results.

### 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.

IEC 60068 (all parts), *Environmental testing*