

Svenska Elektriska Kommissionen, SEK

Fastställd	Utgåva	Sida	Ingår i
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Elektrisk utrustning för mätning, styrning och för laboratorieändamål – Säkerhet –

Del 2-020: Särskilda fordringar på laboratoriecentrifuger

*Safety requirements for electrical equipment for measurement, control and laboratory use –
Part 2-020: Particular requirements for laboratory centrifuges*

Som svensk standard gäller europastandarden EN 61010-2-020:2006. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61010-2-020:2006.

Nationellt förord

Europastandarden EN 61010-2-020:2006

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61010-2-020, Second edition, 2006 - Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-020: Particular requirements for laboratory centrifuges**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden skall användas tillsammans med SS-EN 61010-1, utgåva 2, 2001.

Tidigare fastställd svensk standard SS-EN 61010-2-020, utgåva 1, 1995 och SS-EN 61010-2-020/A1, utgåva 1, 1996, gäller ej fr o m 2009-07-01.

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven 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.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

Svenska Elektriska Kommissionen, SEK, svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

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).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK

Box 1284
164 29 Kista
Tel 08-444 14 00
www.sekom.se

**Safety requirements for electrical equipment
for measurement, control, and laboratory use
Part 2-020: Particular requirements
for laboratory centrifuges
(IEC 61010-2-020:2006)**

Règles de sécurité pour appareils
électriques de mesure, de régulation
et de laboratoire
Partie 2-020: Exigences particulières
pour centrifugeuses de laboratoire
(CEI 61010-2-020:2006)

Sicherheitsbestimmungen für
elektrische Mess-, Steuer-, Regel- und
Laborgeräte
Teil 2-020: Besondere Anforderungen
an Laborzentrifugen
(IEC 61010-2-020:2006)

This European Standard was approved by CENELEC on 2006-07-01. 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, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the 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

Foreword

The text of document 66/367/FDIS, future edition 2 of IEC 61010-2-020, prepared by IEC TC 66, Safety of measuring, control, and laboratory equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61010-2-020 on 2006-07-01.

This European Standard supersedes EN 61010-2-020:1994 + A1:1996.

It has been updated to provide more specific wording for some of the instructions or subclauses, and the language has been updated to reflect current terminology used in the industry today.

This Part 2-020 is to be used in conjunction with EN 61010-1:2001, Safety requirements for electrical equipment for measurement, control and laboratory use – Part 1: General requirements. Consideration may be given to future editions of, or amendments to, EN 61010-1.

This Part 2-020 supplements or modifies the corresponding clauses of EN 61010-1:2001 so as to convert it into the European Standard "Safety requirements for laboratory centrifuges".

Where a particular clause or subclause of Part 1 is not mentioned in this Part 2-020, that clause or subclause applies as far as is reasonable. Where this part states "addition", "modification" or "replacement", the relevant text of Part 1 is to be adapted accordingly.

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) | 2007-04-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2009-07-01 |

In this standard:

- 1) the following print types are used:
 - requirements: in roman type;
 - NOTES: in small roman type;
 - *conformity and tests: italic type*;
 - terms used throughout this standard which have been defined in Clause 3: SMALL ROMAN CAPITALS;
- 2) subclauses, figures, tables and notes which are additional to those in Part 1 are numbered starting from 101; additional annexes are lettered AA, BB, etc.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61010-2-020:2006 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60034	NOTE	Harmonized as EN 60034 (Series) (not modified).
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Annex ZA
(normative)

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

Addition to annex ZA of EN 61010-1:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 3864	Series	Graphical symbols - Safety colours and safety - signs		-

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SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE –

Part 2-020: Particular requirements for laboratory centrifuges

1 Scope and object

This clause of Part 1 is applicable except as follows:

1.1 Scope

Replacement:

This Part 2 is applicable to electrically powered LABORATORY CENTRIFUGES.

NOTE If all or part of the equipment falls within the scope of one or more other Part 2 standards of IEC 61010 as well as within the scope of this standard, it will also need to meet the requirements of those other Part 2 standards.

1.1.2 Equipment excluded from scope

Addition:

Add the following new item:

- aa) IEC 60034 (Rotating electrical machinery);

1.2 Object

1.2.1 Aspects included in scope

Addition:

Add the following five new items:

- aa) contact with moving parts (see 7.2);
- bb) LABORATORY CENTRIFUGE movement during any DISRUPTION (see 7.3.101);
- cc) high energy chemical reaction after ROTOR DISRUPTION (see 7.6.101.2 I);
- dd) ineffectiveness of BIOSEALS (see 13.101)

1.2.2 Aspects excluded from scope

Addition:

Add the following two new items:

- aa) additional precautions which may need to be observed when centrifuging materials which are flammable or explosive (see 5.4.101);
- bb) additional precautions which may need to be observed when centrifuging materials that could react chemically with sufficient vigour to cause a HAZARD (see 5.4.101).

1.4 Environmental conditions

1.4.1 Normal environmental conditions

Modification:

Modify item c) as follows:

c) temperature 2 °C to 40 °C;

1.4.2 Extended environmental conditions

Modification:

Modify item c) as follows:

c) ambient temperatures below 2 °C or above 40 °C;

2 Normative references

This clause of Part 1 is applicable except as follows:

Addition:

ISO 3864 (all parts), *Graphical symbols – Safety colours and safety signs*.