

Roterende elektrische machines - Deel 9: Geluidgrenzen (IEC 60034-9:2003,MOD)

Rotating electrical machines - Part 9: Noise limits (IEC 60034-9:2003,MOD)

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ICS 29.160.01

Vervangt NEN-EN-IEC 60034-9:1997

Als Nederlandse norm is aanvaard:

- EN 60034-9:2005,IDT
- IEC 60034-9:2003,MOD

Nederlands Elektrotechnisch Comité (NEC)
Normcommissie 364 002 "Elektrische machines (NEC 2)"

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Nederlands voorwoord

Voor de in deze norm vermelde normatieve verwijzingen bestaan in Nederland de volgende equivalenten:

<u>vermelde norm</u>	<u>Nederlandse norm</u>	<u>titel</u>
IEC 60034-1	NEN-EN-IEC 60034-1	Roterende elektrische machines - Deel 1: Kengegevens en eigenschappen (en,fr)
IEC 60034-5	NEN-EN-IEC 60034-5	Roterende elektrische machines - Deel 5: Beschermingsgraden gebaseerd op het integrale ontwerp (IP-codering) - Indeling (en,fr)
IEC 60034-6	NEN 10034-6	Roterende elektrische machines - Koelmethode (IC-codering) (en,fr)
IEC 60034-17	-	-
ISO 3741	NEN-EN-ISO 3741	Akoestiek - Bepaling van geluidvermogen-niveaus van geluidbronnen met gebruik van geluiddruk - Precisiemethode voor nagalmkamers (en)
ISO3743-1	-	-
ISO 3743-2	NEN-EN-ISO 3743-2	Akoestiek - Bepaling van geluidvermogen-niveaus van geluidbronnen gebaseerd op de meting van de geluiddruk - Praktijkmethoden voor kleine, verplaatsbare bronnen in galmvelden - Deel 2: Methoden voor speciale nagalmkamers (en)
ISO 3744	NEN-EN-ISO 3744	Akoestiek - Bepaling van geluidvermogen-niveaus van geluidbronnen via de meting van geluiddrukken - Praktijkmethode voor vrijeveld-omstandigheden boven een reflecterend oppervlak (en)
ISO 3745	NEN-EN-ISO 3745	Akoestiek - Bepaling van geluidvermogen-niveaus van geluidbronnen bij gebruik van geluiddruk - Precisiemethoden die gebruik maken van een echovrije of semi-echovrije ruimte (en)
ISO 3746	NEN-EN-ISO 3746	Akoestiek - Bepaling van geluidvermogen-niveaus van geluidbronnen - Globale methode met gebruik van een omhullend meetoppervlak boven een reflecterend oppervlak (en)
ISO 3747	NEN-EN-ISO 3747	Akoestiek - Bepaling van geluidvermogen-niveaus van geluidbronnen met geluidsdruk - Vergelijkingsmethode voor gebruik in situ (en)
ISO 4871	NEN-EN-ISO 4871	Akoestiek - Opgave en verificatie van geluidemissiewaarden van machines en apparaten (en)
ISO 9614-1	NEN-EN-ISO 9614-1	Akoestiek - Bepaling van geluidvermogen-niveaus van geluidbronnen via de meting van geluidintensiteiten - Deel 1: Metingen op vaste punten (en)
ISO 9614-2	NEN-EN-ISO 9614-2	Akoestiek - Bepaling van geluidvermogen-niveaus van geluidbronnen via de meting van geluidintensiteiten - Deel 2: Zwaalmethode (en)

English version

Rotating electrical machines
Part 9: Noise limits
(IEC 60034-9:2003, modified)Machines électriques tournantes
Partie 9: Limites de bruit
(CEI 60034-9:2003, modifiée)Drehende elektrische Maschinen
Teil 9: Geräuschgrenzwerte
(IEC 60034-9:2003, modifiziert)

This European Standard was approved by CENELEC on 2005-03-01. 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, 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.

CENELECEuropean 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 the International Standard IEC 60034-9:2003, prepared by IEC TC 2, Rotating machinery, together with the common modifications prepared by the Technical Committee CENELEC TC 2, Rotating machinery, was submitted to the formal vote and was approved by CENELEC as EN 60034-9 on 2005-03-01.

This European Standard supersedes EN 60034-9:1997.

It includes the following significant technical changes:

- it reduces the no-load noise limits for single-speed, cage-induction motors according to Table 2;
- it provides informative guidance on
 - the measurement surface to be used during some tests,
 - a method for the determination of an average sound pressure level,
 - an indication of "uncertainty" based upon the category of test procedure.

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) 2006-03-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2008-03-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60034-9:2003 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

4 Methods of measurement

4.1 ~~Replace the note by:~~

~~NOTE It is recommended that the parallelepiped method be used for all electrical machines.~~

5 Test conditions

5.2 ~~Replace item b) by:~~

~~b) Machines shall be tested in their operating position and in case of designs for several distinct speeds or for a speed range at that speed which generates the greatest noise.~~

~~Delete item f) and rename item g) to become item f).~~

7 Determination of sound pressure level

~~Replace the first paragraph by:~~

~~Sound pressure levels are not required as part of this standard. If requested, an A-weighted sound pressure level may be determined from the test readings (see 4.1). Only if tested sound pressure values are not available, an A-weighted sound pressure level may be determined from the sound power level as follows:~~

~~Replace the last paragraph by:~~

~~S is the area in m² of a parallelepiped surface enveloping the machine at a distance from the machine of 1 m according to ISO 3744.~~

~~Delete the two columns headed "Shaft height" and "Surface area, S".~~

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE Where 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 60034-1	- ¹⁾	Rotating electrical machines Part 1: Rating and performance	EN 60034-1	2004 ²⁾
IEC 60034-5	- ¹⁾	Part 5: Degrees of protection provided by the integral design of rotating electrical machines (IP code) - Classification	EN 60034-5	2004 ²⁾
IEC 60034-6	- ¹⁾	Part 6: Methods of cooling (IC Code)	EN 60034-6	1993 ²⁾
IEC/TS 60034-17	- ¹⁾	Part 17: Cage induction motors when fed from converters - Application guide	CLC/TS 60034-17	2004 ²⁾
ISO 3741	- ¹⁾	Acoustics - Determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms	EN ISO 3741	1999 ²⁾
ISO 3743-1	- ¹⁾	Acoustics - Determination of sound power levels of noise sources using sound pressure - Engineering methods for small, movable sources in reverberant fields Part 1: Comparison method for hard- walled test rooms	EN ISO 3743-1	1995 ²⁾
ISO 3743-2	- ¹⁾	Part 2: Methods for special reverberation test rooms	EN ISO 3743-2	1996 ²⁾
ISO 3744	- ¹⁾	Acoustics - Determination of sound power levels of noise sources using sound pressure - Engineering method in an essentially free field over a reflecting plane	EN ISO 3744	1995 ²⁾

1) Undated reference.

2) Valid edition at date of issue.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 3745	- ¹⁾	Acoustics - Determination of sound power levels of noise sources - Precision methods for anechoic and semi-anechoic rooms	EN ISO 3745	2003 ²⁾
ISO 3746	- ¹⁾	Acoustics - Determination of sound power levels of noise sources using sound pressure - Survey method using an enveloping measurement surface over a reflecting plane	EN ISO 3746	1995 ²⁾
ISO 3747	- ¹⁾	Acoustics - Determination of sound power levels of noise sources using sound pressure - Comparison method in situ	EN ISO 3747	2000 ²⁾
ISO 4871	- ¹⁾	Acoustics - Declaration and verification of noise emission values of machinery and equipment	EN ISO 4871	1996 ²⁾
ISO 9614-1	- ¹⁾	Acoustics - Determination of sound power levels of noise sources using sound intensity Part 1: Measurement at discrete points	EN ISO 9614-1	1995 ²⁾
ISO 9614-2	- ¹⁾	Part 2: Measurement by scanning	EN ISO 9614-2	1996 ²⁾

**NORME
INTERNATIONALE
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**CEI
IEC**

60034-9

Quatrième édition
Fourth edition
2003-10

Machines électriques tournantes –

**Partie 9:
Limites de bruit**

Rotating electrical machines –

**Part 9:
Noise limits**



Numéro de référence
Reference number
CEI/IEC 60034-9:2003

Numérotation des publications

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