

**Rotating electrical machines - Part 2-2: Specific
methods for determining separate losses of large
machines from tests - Supplement to IEC 60034-2-1**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60034-2-2:2010 sisaldab Euroopa standardi EN 60034-2-2:2010 ingliskeelset teksti.

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**Rotating electrical machines -
Part 2-2: Specific methods for determining separate losses of large
machines from tests -
Supplement to IEC 60034-2-1
(IEC 60034-2-2:2010)**

Machines électrique tournantes -
Partie 2-2: Méthodes spécifiques
pour déterminer les pertes séparées
des machines de grande taille
à partir d'essais -
Complément à la CEI 60034-2-1
(CEI 60034-2-2:2010)

Drehende elektrische Maschinen -
Teil 2-2: Besondere Verfahren
zur Bestimmung der Einzelverluste großer
elektrischer Maschinen aus Prüfungen -
Ergänzung zu IEC 60034-2-1
(IEC 60034-2-2:2010)

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CENELEC

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

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Foreword

The text of document 2/1585/FDIS, future edition 1 of IEC 60034-2-2, prepared by IEC TC 2, Rotating machinery, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60034-2-2 on 2010-06-01.

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

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) | 2011-03-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2013-06-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60034-2-2:2010 was approved by CENELEC as a European Standard without any modification.

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 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 60034-1	-	Rotating electrical machines - Part 1: Rating and performance	EN 60034-1	-
IEC 60034-2-1	-	Rotating electrical machines - Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)	EN 60034-2-1	-

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ROTATING ELECTRICAL MACHINES –

Part 2-2: Specific methods for determining separate losses of large machines from tests – Supplement to IEC 60034-2-1

1 Scope

This part of IEC 60034 applies to large rotating electrical machines and establishes additional methods of determining separate losses and to define an efficiency supplementing IEC 60034-2-1. These methods apply when full-load testing is not practical and result in a greater uncertainty.

NOTE In situ testing according to the calorimetric method for full-load conditions is recognized.

The specific methods described are:

- Calibrated-machine method.
- Retardation method.
- Calorimetric method.

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 60034-1, *Rotating electrical machines – Part 1: Rating and performance*

IEC 60034-2-1, *Rotating electrical machines – Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60034-1 and IEC 60034-2-1 apply, as well as the following.

3.1

calibrated machine

machine whose mechanical power input/output is determined, with low uncertainty, using measured electrical output/input values according to a defined test procedure

3.2

calibrated-machine method

method in which the mechanical input/output to/from an electrical machine under test is determined from the measurement of the electrical input/output of a calibrated machine mechanically coupled to the test machine

3.3

retardation method

method in which the separate losses in a machine under test are deduced from the measurements of the deceleration rate of its rotating components when only these losses are present