



**SLOVENSKI STANDARD**  
**SIST EN 61176:1998**

**01-januar-1998**

---

**Hand-held electric mains voltage operated circular saws - Methods for measuring the performance (IEC 1176:1993)**

Hand-held electric mains voltage operated circular saws - Methods for measuring the performance

Handgeführte elektrisch betriebene Kreissägen - Prüfverfahren zur Bestimmung der Gebrauchseigenschaften

Scies circulaires électroportatives alimentées sur le réseau - Méthodes de mesure de l'aptitude à la fonction

**ITeh STANDARD PREVIEW**  
**(standards.iteh.ai)**  
<https://standards.iteh.ai/catalog/standards/sist/ed143580-30bf-4c5f-8187-64f9911b99d4/sist-en-61176-1998>

**Ta slovenski standard je istoveten z: EN 61176:1993**

---

**ICS:**

25.140.20      Električna orodja      Electric tools

**SIST EN 61176:1998**      **en**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 61176:1998

<https://standards.iteh.ai/catalog/standards/sist/ed143580-30bf-4c5f-8187-64f911b99d4/sist-en-61176-1998>

---

UDC 621.9-182.4-83:621.932:620.1

Descriptors: Hand-held electric tools, performance, circular saws,  
methods of measurement, tests

#### ENGLISH VERSION

Hand-held electric mains voltage operated circular  
saws - Methods for measuring the performance  
(IEC 1176:1993)

Scies circulaires  
électroportatives alimentées sur  
le réseau - Méthodes de mesure  
de l'aptitude à la fonction  
(CEI 1176:1993)

Handgeführte elektrisch  
betriebene Kreissägen  
Prüfverfahren zur Bestimmung  
der Gebrauchseigenschaften  
(IEC 1176:1993)

---

This European Standard was approved by CENELEC on 1993-07-06.  
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,  
Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg,  
Netherlands, Norway, Portugal, 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

---

FOREWORD

The text of document 59J(CO)7, as prepared by Sub-Committee 59J: Handheld electric tools, of IEC Technical Committee 59: Performance of household electrical appliances, was submitted to the IEC-CENELEC parallel vote in July 1992.

The reference document was approved by CENELEC as EN 61176 on 6 July 1993.

The following dates were fixed:

- latest date of publication of an identical national standard (dop) 1994-08-01
- latest date of withdrawal of conflicting national standards (dow) 1994-08-01

Annexes designated "normative" are part of the body of the standard. In this standard, annex ZA is normative.

**SIST EN 61176:1998**

ENDORSEMENT NOTICE

The text of the International Standard IEC 1176:1993 was approved by CENELEC as a European Standard without any modification.

-----

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD  
WITH THE REFERENCES OF THE RELEVANT 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.

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

IEC Publication -----	Date ----	Title -----	EN/HD -----	Date ----
160	1963	Standard atmospheric conditions for test purposes	-	-
745-2-5	1993	Safety of hand-held motor-operated electric tools - Part 2: Particular requirements for circular saws and circular knives	-	-

-----

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 61176:1998

<https://standards.iteh.ai/catalog/standards/sist/ed143580-30bf-4c5f-8187-64f911b99d4/sist-en-61176-1998>

**NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD**

**CEI  
IEC**

**61176**

Première édition  
First edition  
1993-08

**Scies circulaires électroportatives  
alimentées sur le réseau –  
Méthodes de mesure de l'aptitude  
à la fonction**

**iTeh STANDARD PREVIEW**

**(standards.iteh.ai)**

**Hand-held electric mains voltage  
operated circular saws –**

**Methods for measuring the performance**

© IEC 1993 Droits de reproduction réservés — Copyright - all rights reserved

Aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'éditeur.

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission  
Telefax: +41 22 919 0300

3, rue de Varembe Geneva, Switzerland  
e-mail: [inmail@iec.ch](mailto:inmail@iec.ch) IEC web site <http://www.iec.ch>



Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

CODE PRIX  
PRICE CODE

**N**

For price, voir catalogue en vigueur  
For price, see current catalogue

## CONTENTS

	Page
FOREWORD .....	5
Clause	
1 Scope and object .....	7
2 Normative references .....	7
3 Definitions .....	7
4 General notes on measurements .....	11
5 Methods of measurement .....	13
6 Additional features to be reported .....	23
Figures .....	24

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN 61176:1998](https://standards.iteh.ai/catalog/standards/sist/ed143580-30bf-4c5f-8187-64f911b99d4/sist-en-61176-1998)

<https://standards.iteh.ai/catalog/standards/sist/ed143580-30bf-4c5f-8187-64f911b99d4/sist-en-61176-1998>



## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HAND-HELD ELECTRIC MAINS VOLTAGE  
 OPERATED CIRCULAR SAWS –  
 METHODS FOR MEASURING THE PERFORMANCE**

## 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 cooperation 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, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

<https://standards.iteh.ai/catalog/standards/sist/ed143580-30bf-4c5f-8187-649911b99d4/sist-en-61176-1998>

This International Standard has been prepared by IEC by sub-committee 59J: Hand-held electric tools, of IEC technical committee 59: Performance of household electrical appliances.

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

DIS	Report on voting
59J(CO)7	59J(CO)9

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

# HAND-HELD ELECTRIC MAINS VOLTAGE OPERATED CIRCULAR SAWS – METHODS FOR MEASURING THE PERFORMANCE

## 1 Scope and object

This International Standard applies to hand-held electrically operated circular saws, intended for household and similar use both indoor and outdoors.

Hand-held electric motor-operated circular saws that can be mounted on a support for use as fixed tools, without any fundamental alterations of the circular saw itself, are within the scope of this standard.

Circular saw attachments and cut-off discs are not covered by this standard.

The object of this standard is to state and define the principal performance characteristics of circular saws that are of interest to the user and to describe the standardized methods for measuring these characteristics.

This standard does not deal with safety requirements nor does it prescribe limits of acceptance for performance.

Safety requirements for hand-held electric circular saws are covered by IEC 745-2-5.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication of this standard, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 160: 1963, *Standard atmospheric conditions for test purposes*.

IEC 745-2-5: 1993, *Safety of hand-held motor-operated electric tools – Part 2: Particular requirements for circular saws and circular knives*.

## 3 Definitions

For the purpose of this standard, the following definitions apply.

### 3.1 Terms used to designate the hand-held electric tool and its spare parts

**3.1.1 hand-held electric circular saws:** Hand-held electric tool intended to execute mechanical work and so designed that the motor and the machine form an assembly that can easily be brought to its place of operation and which is held by hand during operation.

Circular saws may also be mounted on a support.

NOTE - In this standard, "hand-held electric motor-operated circular saws" are referred to as "saws".

3.1.2 **blade**: Detachable circular toothed tool that performs the sawing operation.

3.1.3 **main handle**: Handle to which the main effort is applied. It incorporates the switch-actuating means.

3.1.4 **auxiliary handle**: Handle which can be attached to the saw for handling or safety reasons, and which can be removed if necessary.

3.1.5 **riving knife**: Metal part placed in the plane of the blade which prevents the wood from tightening on to the rear part of the blade.

3.2 *Terms used to designate the characteristics of saws*

3.2.1 **rated frequency**: Frequency assigned to the saw by the manufacturer.

3.2.2 **rated voltage**: Voltage assigned to the saw by the manufacturer.

3.2.3 **rated input**: Input at rated voltage assigned to the saw by the manufacturer.

**iTeh STANDARD PREVIEW**

(standards.iteh.ai)

3.3 *Terms used for measuring methods*

3.3.1 **imitation blade**: The steel disc to be fitted on the saw for measurements in place of the real blade. <https://standards.iteh.ai/catalog/standards/sist/ed143580-30bf-4c5f-8187-64f9911b99d4/sist-en-61176-1998>

a) Its diameter is that of the maximum size blade which can be fitted to the saw  $\pm 1$  mm as specified by the manufacturer.

b) Its thickness is that of the riving knife (+0,05 mm) or if no riving knife is provided:

$\varnothing \leq 127$ mm	thickness = 1,00 mm $\pm$ 0,05 mm
$127 < \varnothing \leq 200$ mm	thickness = 1,20 mm $\pm$ 0,05 mm
$\varnothing > 200$ mm	thickness = 2,00 mm $\pm$ 0,05 mm

c) Its flatness is:

$\varnothing \leq 127$ mm	flatness = 0,10 mm
$127 < \varnothing \leq 200$ mm	flatness = 0,15 mm
$\varnothing > 200$ mm	flatness = 0,20 mm

3.3.2 **straight cutting**: Action of cutting when the blade is perpendicular to the guide plate.

3.3.3 **angle cutting**: Action of cutting with an angle different from  $90^\circ$  between blade and guide plate.