



NSAI
Standards

Irish Standard
I.S. EN 60974-9:2010

Arc welding equipment -- Part 9: Installation and use (IEC 60974-9:2010 (EQV))

I.S. EN 60974-9:2010

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EUROPEAN STANDARD

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Supersedes CLC/TS 62081:2002

English version

**Arc welding equipment -
Part 9: Installation and use
(IEC 60974-9:2010)**

Matériel de soudage à l'arc -
Partie 9: Installation et utilisation
(CEI 60974-9:2010)

Lichtbogenschweißeinrichtungen -
Teil 9: Errichten und Betreiben
(IEC 60974-9:2010)

This European Standard was approved by CENELEC on 2010-03-01. 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, Bulgaria, Croatia, 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: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 26/404/FDIS, future edition 1 of IEC 60974-9, prepared by IEC TC 26, Electric welding, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60974-9 on 2010-03-01.

This standard supersedes CLC/TS 62081:2002.

The following major differences with respect to CLC/TS 62081:2002 are to be noted:

- 4.3.3 Welding cables: Now dimensions are recommended.
- 5 Electromagnetic compatibility (EMC): this is completely new.
- 6 Electromagnetic fields (EMF): this is completely new.
- 7.3 Inspection and maintenance of the welding installation: There is now a differentiation between periodical and routine inspection.

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) 2010-12-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2013-03-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60974-9:2010 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60204-1	NOTE	Harmonized as EN 60204-1.
IEC 60364-4-41	NOTE	Harmonized as HD 60364-4-41.
IEC 60974-2	NOTE	Harmonized as EN 60974-2.
IEC 60974-3	NOTE	Harmonized as EN 60974-3.
IEC 60974-5:2007	NOTE	Harmonized as EN 60974-5:2008 (not modified).
IEC 60974-7	NOTE	Harmonized as EN 60974-7.
IEC 60974-8	NOTE	Harmonized as EN 60974-8.
IEC 61008 series	NOTE	Harmonized in EN 61008 series (partially modified).
IEC 61009 series	NOTE	Harmonized in EN 61009 series (partially modified).
IEC 61140	NOTE	Harmonized as EN 61140.
ISO 11611	NOTE	Harmonized as EN ISO 11611.

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 60245-6	-	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 6: Arc welding electrode cables	-	-
IEC/TR 60755	-	General requirements for residual current operated protective devices	-	-
IEC 60974-1	2005	Arc welding equipment - Part 1: Welding power sources	EN 60974-1	2005
IEC 60974-4	-	Arc welding equipment - Part 4: In-service inspection and testing	EN 60974-4	-
IEC 60974-6	-	Arc welding equipment - Part 6: Limited duty manual metal arc welding power sources	EN 60974-6	-
IEC 60974-10	-	Arc welding equipment - Part 10: Electromagnetic compatibility (EMC) requirements	EN 60974-10	-
IEC 60974-11	-	Arc welding equipment - Part 11: Electrode holders	EN 60974-11	-
IEC 60974-12	-	Arc welding equipment - Part 12: Coupling devices for welding cables	EN 60974-12	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ARC WELDING EQUIPMENT –

Part 9: Installation and use

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60974-9 has been prepared by IEC technical committee 26: Electric welding.

This standard cancels and replaces IEC/TS 62081, published in 1999. This first edition constitutes a technical revision. The following major differences with respect to IEC/TS 62081:1999 are to be noted:

- 4.3.3 Welding cables: Now dimensions are recommended.
- 5 Electromagnetic compatibility (EMC): this is completely new.
- 6 Electromagnetic fields (EMF) : this is completely new.

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– 5 –

- 7.3 Inspection and maintenance of the welding installation: There is now a differentiation between periodical and routine inspection.

The text of this part of IEC 60974 is based on the following documents:

FDIS	Report on voting
26/404/FDIS	26/405/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 2.

The list of all the parts of the IEC 60974 series, under the general title *Arc welding equipment*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

A bilingual version of this standard may be issued at a later date.

ARC WELDING EQUIPMENT –

Part 9: Installation and use

1 Scope

This part of IEC 60974 is applicable to the installation and use of equipment for arc welding and allied processes designed in accordance with safety requirements of IEC 60974-1, IEC 60974-6 or equivalent.

This part of IEC 60974 is applicable for the guidance of instructors, operators, welders, managers, and supervisors in the safe installation and use of equipment for arc welding and allied processes and the safe performance of welding and cutting operations.

National and local regulations take precedence over this part of IEC 60974.

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 60245-6, *Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 6: Arc welding electrode cables*

IEC/TR 60755, *General requirements for residual current operated protective devices*

IEC 60974-1:2005, *Arc welding equipment – Part 1: Welding power sources*

IEC 60974-4, *Arc welding equipment – Part 4: In-service inspection and testing*

IEC 60974-6, *Arc welding equipment – Part 6: Limited duty manual metal arc welding power sources*

IEC 60974-10, *Arc welding equipment – Part 10: Electromagnetic compatibility (EMC) requirements*

IEC 60974-11, *Arc welding equipment – Part 11: Electrode holders*

IEC 60974-12, *Arc welding equipment – Part 12: Coupling devices for welding cables*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

welding circuit

circuit that includes all conductive material through which the welding current is intended to flow

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