Irish Standard
I.S. EN 60974-8:2009

Arc welding equipment -- Part 8: Gas consoles for welding and plasma cutting systems (IEC 60974-8:2009 (EQV))

I.S. EN 60974-8:2009

Incorporating amendments/corrigenda issued since publication:

This document replaces:	*This document is based on:*	*Published:*
I.S. EN 60974-8:2004	EN 60974-8:2009 EN 60974-8:2004	18 March, 2009 2 April, 2004

This document was published under the authority of the NSAI and comes into effect on:

12 June, 2009

ICS number:
25.160

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W **NSAI.ie**

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Price Code:
H

Údarás um Chaighdeáin Náisiúnta na hÉireann

I.S. EN 60974-8:2009

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60974-8

March 2009

ICS 25.160

Supersedes EN 60974-8:2004

English version

Arc welding equipment - Part 8: Gas consoles for welding and plasma cutting systems
(IEC 60974-8:2009)

Matériel de soudage à l'arc -
Partie 8: Consoles de gaz pour soudage et systèmes de coupage plasma
(CEI 60974-8:2009)

Lichtbogenschweißeinrichtungen -
Teil 8: Gaskonsolen für Schweiß- und Plasmaschneidsysteme
(IEC 60974-8:2009)

This European Standard was approved by CENELEC on 2009-03-01. 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, 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

Ref. No. EN 60974-8:2009 E

Foreword

The text of document 26/381/CDV, future edition 2 of IEC 60974-8, prepared by IEC TC 26, Electric welding, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60974-8 on 2009-03-01.

This European Standard supersedes EN 60974-8:2004.

The significant changes with respect to EN 60974-8:2004 are the following:

– removal of intrinsically safe design;

– introduction of gas mixing function;

– new informative rating plate layout;

– induced changes due to publication of EN 60974-1:2005.

This standard is to be used in conjunction with EN 60974-1.

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)	2009-12-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2012-03-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60974-8:2009 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 60204-1:2006 (modified).
IEC 60664-1	NOTE	Harmonized as EN 60664-1:2007 (not modified).
IEC 60974-2	NOTE	Harmonized as EN 60974-2:2008 (not modified).
IEC 60974-3	NOTE	Harmonized as EN 60974-3:2007 (not modified).
IEC 60974-7	NOTE	Harmonized as EN 60974-7:2005 (not modified).
IEC 61010-1	NOTE	Harmonized as EN 61010-1:2001 (not modified).

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.

Publication	Year	Title	EN/HD	Year
IEC 60050-151	-[1)]	International Electrotechnical Vocabulary (IEV) - Part 151: Electrical and magnetic devices	-	-
IEC 60529	-[1)]	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991[2)] 1993
IEC 60974-1	2005	Arc welding equipment - Part 1: Welding power sources	EN 60974-1	2005

[1)] Undated reference.

[2)] Valid edition at date of issue.

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ARC WELDING EQUIPMENT –

Part 8: Gas consoles for welding and plasma cutting systems

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.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60974-8 has been prepared by IEC technical committee 26: Electric welding.

This standard is to be used in conjunction with IEC 60974-1.

This second edition cancels and replaces the first edition published in 2004. This edition constitutes a technical revision.

The significant changes with respect to the previous edition are the following:

removal of intrinsically safe design;

introduction of gas mixing function;

new informative rating plate layout;

induced changes due to publication of IEC 60974-1, edition 3.

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

CDV	Report on voting
26/381/CDV	26/391/RVC

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

The French version of this standard has not been voted upon.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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.

ARC WELDING EQUIPMENT –

Part 8: Gas consoles for welding and plasma cutting systems

1 Scope

This part of IEC 60974 specifies safety and performance requirements for gas consoles intended to be used with combustible gases or oxygen. These gas consoles are designed to supply gases for use in arc welding, plasma cutting, gouging and allied processes in non-explosive atmospheres.

The gas console can be external or internal to the power source enclosure. In the latter case, this standard also applies to the power source.

NOTE See Annex A for mechanised plasma system diagram.

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 60050-151, *International Electrotechnical Vocabulary – Part 151: Electrical and magnetic devices*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

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

3 Terms and definitions

For the purposes of this document, the following terms and definitions, as well as those of IEC 60050-151and IEC 60974-1, apply.

3.1
gas console
device for gas-flow routing, mixing or both that contains electrical apparatus in a single or multiple enclosure, or open structure

3.2
lower explosion limit
LEL
concentration of flammable gas or vapour in air, below which the gas atmosphere is not explosive

[IEV 426-02-09, modified] [1][1]

---

1 Figures in square brackets refer to the bibliography.