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Arc welding equipment - Part 8: Gas consoles for welding and plasma cutting systems

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/22

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EN IEC 60974-8

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2021

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Supersedes EN 60974-8:2009 and all of its amendments
and corrigenda (if any)

English Version

**Arc welding equipment - Part 8: Gas consoles for welding and
plasma cutting systems
(IEC 60974-8:2021)**Matériel de soudage à l'arc - Partie 8: Consoles de gaz
pour soudage et systèmes de coupage par plasma
(IEC 60974-8:2021)Lichtbogenschweißeinrichtungen - Teil 8: Gaskonsolen für
Schweiß- und Plasmaschneidsysteme
(IEC 60974-8:2021)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 60974-8:2021 (E)

European foreword

The text of document 26/719/FDIS, future edition 3 of IEC 60974-8, prepared by IEC/TC 26 "Electric welding" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60974-8:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-06-15
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-09-15

This document supersedes EN 60974-8:2009 and all of its amendments and corrigenda (if any).

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This document has been prepared under a Standardization Request given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For the relationship with EU Directive(s) / Regulation(s), see informative Annex ZZ, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 60974-8:2021 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 60974-2	NOTE	Harmonized as EN IEC 60974-2
IEC 60974-3	NOTE	Harmonized as EN IEC 60974-3
IEC 60974-7	NOTE	Harmonized as EN IEC 60974-7
IEC 61010-1:2010	NOTE	Harmonized as EN 61010-1:2010 (not modified)
ISO 3821	NOTE	Harmonized as EN ISO 3821

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-151	2001	International Electrotechnical Vocabulary – Part 151: Electrical and magnetic devices (available at: http://www.electropedia.org)	-	-
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
			+ corrigendum May	1993
			+ A1	2000
			+ A2	2013
			+ AC	2016
			+ A2:2013/AC	2019
IEC60974-1	2017	Arc welding equipment – Part 1: Welding power source	EN60974-1	2018
IEC60974-1 AMD1	2019	Arc welding equipment – Part 1: Welding power source	EN IEC60974-1 A1	2019

EN IEC 60974-8:2021 (E)

Annex ZZ (informative)

Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European standard has been prepared under a Commission's standardisation request relating to harmonised standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZ.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Table ZZ.1 — Correspondence between this European standard and Annex I of Directive 2014/35/EU [2014 OJ L96]

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
(1)(a)	Clauses 12, 13.1, 13.2	
(1)(b)	Clause 9, 13.1	
(1)(c)	Clauses 1, 3, 4	
(2)(a)	Clauses 6.1, 6.2, 6.2.3, 6.2.5, 6.2.6, 6.3, 11	
(2)(b)	Clauses 6.1, 6.2, 6.3, 7, 9.3.3, 11	Hazards arising from electric, magnetic, and electromagnetic fields, other ionizing and non-ionizing radiation are covered in separate standards
(2)(c)	Clauses 9, 9.1, 9.2, 9.3, 10	
(2)(d)	Clause 6.1	
(3)(a)	Clauses 4, 6.2.1, 9, 9.1, 9.2, 9.3, 9.3.3.2, 10, 10.1, 10.2, 10.3, 13.1 b)	
(3)(b)	Clauses 4, 6.2.1, 9, 10	
(3)(c)	Clause 9	

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IEC 60974-8

Edition 3.0 2021-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Arc welding equipment –
Part 8: Gas consoles for welding and plasma cutting systems**

**Matériel de soudage à l'arc –
Partie 8: Consoles de gaz pour soudage et systèmes de coupage par plasma**





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IEC 60974-8

Edition 3.0 2021-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Arc welding equipment –
Part 8: Gas consoles for welding and plasma cutting systems**

**Matériel de soudage à l'arc –
Partie 8: Consoles de gaz pour soudage et systèmes de coupage par plasma**

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

This third edition cancels and replaces the second edition, published in 2009. This edition constitutes a technical revision.

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

- changes induced by the publication of IEC 60974-1:2017;
- requirements for the rating plate as in IEC 60974-1:2017, Clause 15;
- requirements for the instructions in 13.2.

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

The text of this International Standard is based on the following documents:

FDIS	Report on voting
26/719/FDIS	26/723/RVD

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

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

In this standard, the following print types are used:

- conformity statements: in *italic type*.
- terms defined in Clause 3: in SMALL ROMAN CAPITALS.

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

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

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

INTRODUCTION

If the console is designed to operate with explosive gases, the manufacturer should perform an assessment for applicability of local legislation for explosive atmospheres (example: ATEX regulation).

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, the power source shall meet the requirements of both IEC 60974-1 and this document.

NOTE See Annex A for mechanised plasma system diagram.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60050-151:2001, *International Electrotechnical Vocabulary (IEV) – Part 151: Electrical and magnetic devices*

IEC 60050-151:2001/AMD1:2013

IEC 60050-151:2001/AMD2:2014

IEC 60050-151:2001/AMD3:2019

IEC 60050-151:2001/AMD4:2020

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60529:1989/AMD1:1999

IEC 60529:1989/AMD2:2013

IEC 60664-1, *Insulation coordination for equipment within low-voltage supply systems – Part 1: Principles, requirements and tests*

IEC 60974-1:2017, *Arc welding equipment – Part 1: Welding power sources*

IEC 60974-1:2017/AMD1:2019

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

ISO 10225, *Gas welding equipment — Marking for equipment used for gas welding, cutting and allied processes*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN