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Health and safety in welding and allied processes — Equipment for capture and separation of welding fume —

Part 4: General requirements

*Hygiène et sécurité en soudage et techniques connexes —
Équipements de captage et de filtration des fumées de soudage —
Partie 4: Exigences générales*



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Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
3.9 Extraction device	3
4 Significant hazards	3
5 Requirements and verifications	3
5.1 General	3
5.2 Welding fume separation equipment	3
5.3 Extraction devices	4
5.4 Flexible arms, hoses and hoods	4
5.5 Ducting properties	5
5.6 Spark arrestor	6
5.7 Separation efficiency	6
5.8 Filter cleaning system	7
5.9 Filter changing	7
5.10 Waste handling	7
5.11 Air mover	7
5.12 Signals/indicators	8
5.13 Exhaust and cooling air	9
6 Instructions for use	9
7 Marking	10
Annex A (informative) Malfunctions and determination of minimum airflow	11
Bibliography	12

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 44, *Welding and allied processes*, Subcommittee SC 9, *Health and safety*.

ISO 15012 consists of the following parts, under the general title *Health and safety in welding and allied processes — Equipment for capture and separation of welding fume*:

- *Part 1: Requirements for testing and marking of separation efficiency*
- *Part 2: Determination of the minimum air volume flow rate of captor hoods and nozzles*
- *Part 3: Determination of the capture efficiency of on-gun welding fume extraction devices*
- *Part 4: General requirements*

Requests for official interpretations of any aspect of this International Standard should be directed to the Secretariat of ISO/TC 44/SC 9 via your national standards body. A complete listing of these bodies can be found at www.iso.org.

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Introduction

Welding and allied processes generate fumes and gases which, if inhaled, can be harmful to human health. Therefore, control of the fumes and gases generated is to be exercised to minimize worker exposure.

The most effective method of control is to capture the fumes and gases close to their source before they enter a worker's breathing zone or the general workplace environment.

Ventilation equipment used to capture the fumes and gases is to be fit for purpose because inefficient capture could result in high exposure and can be detrimental to workers' health. It is important therefore that it adheres to defined manufacturing, materials and design requirements and gives warning of malfunction.

This part of ISO 15012 defines the general requirements that are necessary for ventilation equipment to maintain exposure to fumes at acceptable levels.

This part of ISO 15012 is a type-B standard as stated in ISO 12100.

This part of ISO 15012 is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

- machine manufacturers (small, medium and large enterprises);
- health and safety bodies (regulators, accident prevention organizations, market surveillance, etc.).

Others can be affected by the level of machinery safety achieved with the means of this part of ISO 15012 by the above-mentioned stakeholder groups:

- machine users/employers (small, medium and large enterprises);
- machine users/employees (e.g. trade unions, organizations for people with special needs);
- service providers, e.g. for maintenance (small, medium and large enterprises);
- consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this part of ISO 15012.

In addition, this part of ISO 15012 is intended for standardization bodies elaborating type-C standards.

The requirements of this part of ISO 15012 can be supplemented or modified by a type-C standard.

For machines which are covered by the scope of a type-C standard and which have been designed and built according to the requirements of that standard, the requirements of that type-C standard take precedence.