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**Gas welding equipment — Air-  
aspirated hand blowpipes —  
Specifications and tests**

*Équipement de soudage aux gaz — Chalumeaux manuels aéro-gaz à  
air aspiré — Spécifications et essais*



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## 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 document 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](http://www.iso.org/directives)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 8, *Equipment for gas welding, cutting and allied processes*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding and allied processes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 9012:2008), which has been technically revised.

The main changes are as follows:

- entries [3.4](#) and [3.5](#) added;
- in [Clause 4](#), the “types of aspiration” in [Figures 2](#) to [4](#) rearranged and [Table 1](#) revised;
- in [5.1.3](#), text revised and NOTES 1 and 2 added;
- in [6.5](#), ISO/TR 28821 referred to instead of the withdrawn ISO 3253;
- in [6.6](#), NOTES 1 and 2 added because there are cases where airtightness cannot be obtained even if the adjustment of air inlet (item 12) is set to the closed position;
- in [6.9](#), requirements added;
- in [7.1](#), the accuracy of gas pressure and flow rate measuring equipment from [7.7](#) added;
- in [7.6](#), the number of cycles for the life cycle test changed from 5 000 cycles to 1 500 cycles;
- in the Bibliography, ISO/TR 28821 referred to instead of the withdrawn ISO 3253.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html). Official interpretations of ISO/TC 44 documents, where they exist, are available from this page: <https://committee.iso.org/sites/tc44/home/interpretation.html>.



# Gas welding equipment — Air-aspirated hand blowpipes — Specifications and tests

## 1 Scope

This document specifies requirements and test methods for air-aspirated hand blowpipes.

This document applies to blowpipes for brazing, soldering, heating, fusion and other allied thermal processes which use a fuel gas and aspirated air (injector-type blowpipes) and are intended for manual use.

This document is applicable to:

- air-aspirated hand blowpipes which are fed with a fuel gas in the gaseous phase, at a controlled pressure by a regulator, through a gas supply hose;
- air-aspirated hand blowpipes which are fed with a liquefied fuel gas in the gaseous phase at the container pressure, through a gas supply hose;
- so-called liquid-phase blowpipes which are fed with a fuel gas in the liquid phase, and where thermal evaporation takes place within the blowpipe.

It does not apply to blowpipes in which the fuel gas leaves the injector in the liquid phase, or to so-called “cartridge” blowpipes where the gas supply is fixed directly onto the blowpipe and possibly constitutes the shank.

NOTE [Figures 1](#) to [4](#) are given for guidance only, to facilitate the explanation of the terms. They do not specify the construction details, which are left to the discretion of the manufacturer.

## 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.

ISO 554, *Standard atmospheres for conditioning and/or testing — Specifications*

ISO 9090, *Gas tightness of equipment for gas welding and allied processes*

ISO 9539, *Gas welding equipment — Materials for equipment used in gas welding, cutting and allied processes*

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

## 3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>