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**Gas cylinders — Seamless  
aluminium-alloy gas cylinders —  
Periodic inspection and testing**

*Bouteilles à gaz — Bouteilles à gaz sans soudure en alliage  
d'aluminium — Contrôles et essais périodiques*



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Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 10461 was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 4, *Operational requirements for gas cylinders*.

This second edition cancels and replaces the first edition (ISO 10461:1993), which has been technically revised.

## Introduction

The principal aim of a periodic inspection and testing procedure is to be satisfied that at the completion of the inspection and test, the cylinders (single or those from bundles) can be reintroduced into service for a further period of time.

The inspection and test are to be carried out only by persons who are authorized under the relevant regulations and competent in the subject to assure all concerned that the cylinders are fit for continued safe use.

The results of inspection and testing for the cylinders that are specified in this International Standard determine whether a cylinder should be returned to service.

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# Gas cylinders — Seamless aluminium-alloy gas cylinders — Periodic inspection and testing

## 1 Scope

This International Standard deals with seamless aluminium-alloy transportable gas cylinders intended for compressed and liquefied gases under pressure, of water capacity from 0,5 l to 150 l; it also applies, as far as practical, to cylinders of less than 0,5 l water capacity.

This International Standard specifies the requirements for periodic inspection and testing to verify the integrity of such gas cylinders for further service.

This International Standard does not apply to periodic inspection and testing of acetylene cylinders or composite cylinders with aluminium-alloy liners.

## 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.

ISO 9712, *Non-destructive testing — Qualification and certification of personnel*

ISO 11114-2:2000, *Transportable gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 2: Non-metallic materials*

ISO 11621, *Gas cylinders — Procedures for change of gas service*

ISO 13341, *Transportable gas cylinders — Fitting of valves to gas cylinders*

ISO 13769, *Gas cylinders — Stamp marking*

## 3 Intervals between periodic inspections and tests

A cylinder shall be due for a periodic inspection and test on its first receipt by a filler after the expiry of the interval in accordance with the requirements of the United Nations *Recommendations on the Transport of Dangerous Goods, Model Regulations* or as specified by national or international authorities (see examples in Annex A).

Provided the cylinder has been subjected to normal conditions of use and has not been subjected to abusive and abnormal conditions rendering the cylinder unsafe, there is no general requirement for the user to return a gas cylinder before the contents have been used even though the periodic inspection and test interval may have lapsed.

It is the responsibility of the owner or user to submit the cylinder for a periodic inspection and test within the interval specified by national or international authorities, or as specified in the relevant cylinder design standard if this is shorter.