



International

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**Gas cylinders — Non-refillable  
metallic gas cylinders —  
Specification and test methods**

*Bouteilles à gaz — Bouteilles à gaz métalliques non  
rechargeables — Spécifications et méthodes d'essai*

**ISO 11118**

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**Third edition  
2025-01**

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ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

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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)).

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This document was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 3, *Cylinder design*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 23, *Transportable gas cylinders*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 11118:2015), which has been technically revised. It also incorporates the Amendment ISO 11118:2015/Amd 1:2019.

The main changes are as follows:

- the normative references have been updated;
- verification of minimum cylinder shell wall thickness has been added;
- the calculation of determination of minimum wall thickness has been simplified by fixing the “F” factor;
- welding qualification, including defining process and operator, has been modified;
- testing of nonrefillable valve sampling has been clarified;
- marking requirements based on UN Model Regulation requirements have been clarified.

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).

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The purpose of this document is to facilitate agreement on the design and manufacture of non-refillable metallic gas cylinders and their sealing devices in all countries. The requirements are based on knowledge of, and experience with, materials, design requirements, manufacturing processes and controls in common use for the manufacture of gas cylinders.

This document has been written so that it is suitable to be referenced in the UN Model Regulations<sup>[10]</sup>.

In this document, the unit bar is used, due to its universal use in the field of technical gases. It should, however, be noted that bar is not an SI unit, and that the corresponding SI unit for pressure is Pa (1 bar =  $10^5$  Pa =  $10^5$  N/m<sup>2</sup>).

Pressure values given in this document are given as gauge pressure (pressure exceeding atmospheric pressure) unless noted otherwise.

Any tolerances given in this document include measurement uncertainties.