
Gaseous hydrogen land vehicle refuelling connection devices

*Dispositifs de raccordement pour le ravitaillement des véhicules
terrestres en hydrogène gazeux*

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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 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).

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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.

This document was prepared by Technical Committee ISO/TC 197, *Hydrogen technologies*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 268, *Cryogenic vessels and specific hydrogen technologies applications*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 17268:2012), which has been technically revised.

The main changes compared to the previous edition are as follows:

— [Clause 1](#), [Clause 2](#), [3.1](#), [4.9](#), [5.8](#), [5.9](#), [5.17](#), [6.1](#), [6.9](#), [7.2](#), [7.5](#), [7.7](#), [7.8](#), [7.12.2](#), [7.12.3](#), [7.12.4](#), [7.16](#), [7.22](#), [7.25](#), [7.26](#), [7.27](#), [7.28](#), [Clause 9](#), [Table 1](#), [Figure 3](#), [Figure 4](#), [Annex A](#), [Annex B](#), [Annex C](#), [Annex D](#), [Annex E](#) and [Annex F](#) have been modified.

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.

Gaseous hydrogen land vehicle refuelling connection devices

1 Scope

This document defines the design, safety and operation characteristics of gaseous hydrogen land vehicle (GHLV) refuelling connectors.

GHLV refuelling connectors consist of the following components, as applicable:

- receptacle and protective cap (mounted on vehicle);
- nozzle;
- communication hardware.

This document is applicable to refuelling connectors which have nominal working pressures or hydrogen service levels up to 70 MPa.

This document is not applicable to refuelling connectors dispensing blends of hydrogen with natural gas.

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 188, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 1431-1, *Rubber, vulcanized or thermoplastic — Resistance to ozone cracking — Part 1: Static and dynamic strain testing*

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

ISO 12103-1, *Road vehicles — Test contaminants for filter evaluation — Part 1: Arizona test dust*

ISO 15501-1, *Road vehicles — Compressed natural gas (CNG) fuel systems — Part 1: Safety requirements*

3 Terms and definitions

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

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

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

3.1

communication hardware

infrared data association (IrDA) components which are used to transmit signals from the vehicle (*receptacle*) (3.15) to the dispenser (*nozzle*) (3.11) and designed to meet SAE J2799 or equivalent