



**CSA/ANSI HGV 4.4:21**  
(ISO 19880-3:2018, MOD)  
National Standard of Canada  
American National Standard



**CSA/ANSI HGV 4.4:21**  
**Gaseous hydrogen — Fuelling stations —**  
**Valves**  
(ISO 19880-3:2018, MOD)



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*National Standard of Canada  
American National Standard*

*CSA/ANSI HGV 4.4:21  
Gaseous hydrogen — Fuelling  
stations — Valves  
(ISO 19880-3:2018, MOD)*

Prepared by  
International Organization for Standardization



Reviewed by



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**IGAC**

Interprovincial Gas Advisory Council

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# CSA/ANSI HGV 4.4:21

## Gaseous hydrogen — Fuelling stations — Valves

(ISO 19880-3:2018, MOD)

### CSA Preface

This is the second edition of CSA/ANSI HGV 4.4, *Gaseous hydrogen — Fuelling stations — Valves*, which is an adoption, with North American deviations, of ISO (International Organization for Standardization) Standard 19880-3 (first edition, 2018-06), *Gaseous hydrogen — Fuelling stations — Part 3: Valves*. It supersedes the previous edition, published in 2013 as ANSI/CSA HGV 4.4, *Breakaway devices for compressed hydrogen dispensing hoses and systems*. It also replaces ANSI/CSA HGV 4.6-2013, *Manually operated valves for use in gaseous hydrogen vehicle fueling stations*, and ANSI/CSA HGV 4.7-2013, *Automatic valves for use in gaseous hydrogen vehicle fueling stations*. At the time of publication, ISO 19880-3:2018 is available from ISO in English only. CSA Group will publish the French version when it becomes available from ISO.

For brevity, this Standard will be referred to as “CSA/ANSI HGV 4.4” throughout.

This edition of CSA/ANSI HGV 4.4 harmonizes with other North American requirements, including those referenced in CAN/BNQ-1784-000, *Canadian Hydrogen Installation Code*.

The North American deviations are intended to

- a) correct inaccuracies; and
- b) replace references to ISO Standards with references to North American Standards, where applicable.

This Standard provides safety performance requirements and test methods for valves to be used in gaseous hydrogen environments. This Standard is based on engineering principles, research, and the combined expertise of manufacturers, users, and others having specialized experience.

Nothing in this Standard is to be considered in any way as indicating a measure of quality beyond compliance with the provisions it contains. It is designed to allow compliance of products that may exceed that specified in the provisions herein. In its preparation, full recognition has been given to possibilities of improvement through ingenuity of design. This Standard is subject to revision as further experience and investigation might show that it is necessary and desirable.

Users of this Standard are advised that the devices/products/activities within its scope could be subject to regulation at the federal, state, or local levels. Users are strongly urged to investigate this possibility through appropriate channels. In the event of a conflict with this Standard, the federal, state, or local regulations should be followed.

CSA Group acknowledges that the development of this Standard was made possible, in part, by the financial support of Natural Resources Canada.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was reviewed for North American adoption by the CSA Subcommittee on Breakaway Devices for Compressed Hydrogen Dispensing Hoses and Systems, under the jurisdiction of the CSA Technical Committee on Hydrogen Transportation and the CSA Strategic Steering Committee on Transportation, and has been formally approved by the Technical Committee and the Interprovincial/Territorial Gas Advisory Council.

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group. This Standard has been approved by the American National Standards Institute (ANSI) as an American National Standard.

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- a) Standard designation (number),
- b) relevant clause, table, and/or figure number;
- c) wording of the proposed change; and
- d) rationale for the change.

# North American deviations

The following deviations are intended to meet local product requirements and to align with valve requirements of relevant North American regulators.

*[Replace the title of this Standard with the following]*

## Gaseous hydrogen – Fuelling stations – Valves

### 1 Scope

*[Add the following note]*

NOTE 1A For North American application, all references to rated pressure are considered to be equivalent to maximum allowable working pressure (MAWP).

### 2 Normative references

*[Add the following]*

In this Standard, any reference to International Standards shall be replaced by the relevant National Standard of Canada.

Where reference is made to CSA Group publications, such reference shall be considered to refer to the latest edition and all amendments published to that edition. This Standard refers to the following publications, and the years shown indicate the latest editions available at the time of printing:

#### CSA Group

C22.2 No. 0.15-15 (R2020)  
*Adhesive labels*

ANSI/CSA CHMC 1-2014 (R2017)  
*Test methods for evaluating material compatibility in compressed hydrogen applications — Metals*

CSA/ANSI CHMC 2:19  
*Test methods for evaluating material compatibility in compressed hydrogen applications — Polymers*

#### SAE International

SAE J2719 (2020)  
*Hydrogen Fuel Quality for Fuel Cell Vehicles*

#### UL (Underwriters Laboratories Inc.)

96 (2017)  
*Standard for Marking and Labeling Systems*