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ANSI/CAN/UL/ULC 125:2021 (R2026)

STANDARD FOR SAFETY

Flow Control Valves for Anhydrous Ammonia and LP-Gas

Approved American National Standard
ANSI

ANSI/UL 125-2021 (R2026)

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UL Standard for Safety for Flow Control Valves for Anhydrous Ammonia and LP-Gas, ANSI/CAN/UL/ULC 125

Tenth Edition, Dated July 27, 2020

Summary of Topics

This reaffirmation of ANSI/CAN/UL/ULC 125 dated January 9, 2026 is issued to update the title page to reflect the latest ANSI and SCC approval dates as a Reaffirmed American National Standard (ANS) and National Standard of Canada (NSC). No changes in requirements are involved.

Text that has been changed in any manner or impacted by ULSE's electronic publishing system is marked with a vertical line in the margin.

The requirements are substantially in accordance with Proposal(s) on this subject dated November 7, 2025.

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ANSI/UL 125-2021 (R2026)

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ANSI/CAN/UL/ULC 125:2021 (R2026)

Standard for Flow Control Valves for Anhydrous Ammonia and LP-Gas

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Tenth Edition

July 27, 2020

This ANSI/CAN/UL/ULC Safety Standard consists of the Tenth Edition including revisions through January 9, 2026.

The most recent designation of ANSI/UL 125 as a Reaffirmed American National Standard (ANS) occurred on January 9, 2026. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, Preface or SCC Foreword.

This Standard has been reaffirmed as a National Standard of Canada (NSC) on January 9, 2026.

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Preface

This is the Tenth Edition of ANSI/CAN/UL/ULC 125, Standard for Flow Control Valves for Anhydrous Ammonia and LP-Gas.

UL is accredited by the American National Standards Institute (ANSI) and the Standards Council of Canada (SCC) as a Standards Development Organization (SDO).

This Standard has been developed in compliance with the requirements of ANSI and SCC for accreditation of a Standards Development Organization.

This ANSI/CAN/UL/ULC 125 Standard is under continuous maintenance, whereby each revision is approved in compliance with the requirements of ANSI and SCC for accreditation of a Standards Development Organization. In the event that no revisions are issued for a period of four years from the date of publication, action to revise, reaffirm, or withdraw the standard shall be initiated.

In Canada, there are two official languages, English and French. All safety warnings must be in French and English. Attention is drawn to the possibility that some Canadian authorities may require additional markings and/or installation instructions to be in both official languages.

This joint American National Standard and National Standard of Canada is based on, and now supersedes, the Ninth Edition of UL 125 and ULC/ORD-C125-92 (R2018).

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This Edition of the Standard has been formally approved by the Technical Committee (TC) on Valves and Safety Relief Valves for Anhydrous Ammonia and LP-Gas, TC 125.

This list represents the TC 125 membership when the final text in this standard was balloted. Since that time, changes in the membership may have occurred.

TC 125 Membership

Name	Representing	Interest Category	Region
Paras Bhattal	UL Solutions	Testing and Standards Org	USA
Richard Fredenburg	NC Department of Agriculture and Consumer Services	Authorities Having Jurisdiction / Regulator	USA
Kurt Freiburg	Woodward Inc.	Producer	USA
Richard Hoffman	R A Hoffman Engineering P C, Dba Hoffman & Feige	General Interest	USA
Yeon Kim	U.S. Consumer Product Safety Commission	Non-voting member	USA
Solomon Ko	TSSA	Authorities Having Jurisdiction / Regulator	Canada

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Theodore Lemoff	TLemoff Engineering	General Interest	USA
Samuel Oyen	Algas-SDI	General Interest	USA
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Jim Zuck	Marshall Excelsior Corp.	Producer	USA

International Classification for Standards (ICS): 23.060; 75.160.30

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This Standard is intended to be used for conformity assessment.

The intended primary application of this Standard is stated in its scope. It is important to note that it remains the responsibility of the user of the standard to judge its suitability for this particular application.

CETTE NORME NATIONALE DU CANADA EST DISPONIBLE EN VERSIONS FRANÇAISE ET ANGLAISE

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INTRODUCTION

1 Scope

1.1 These minimum requirements cover the following types of anhydrous ammonia and liquefied petroleum gas (LP-Gas) valves that are used to control the flow of liquid and/or vapor into and out of containers, or in piping systems between containers, or between containers and utilization equipment, and are for use at temperatures within the range of -40 °C (-40 °F) to 55 °C (130 °F):

a) Shutoff Valves (primary or secondary, and manual or automatic),

b) Excess Flow Valves,

c) Back Pressure Check Valves,

d) Filler Valves,

e) Vapor Return Valves,

f) Actuated Liquid Withdrawal Excess-Flow Valves,

g) Multiple function valves,

h) Internal valve,

i) Emergency shutoff valve,

j) Lever operated transfer valve, and

k) LP-Gas Hose Nozzle Valve.

1.2 Products covered by this Standard are intended to be installed and used in accordance with the applicable Codes and Regulations as determined by the Authority Having Jurisdiction (AHJ), such as, but not limited to:

a) In the United States:

1) Safety Requirements for the Storage and Handling of Anhydrous Ammonia, ANSI/CGA G-2.1;

2) Liquefied Petroleum Gas Code, NFPA 58; and

3) Utility LP-Gas Plant Code, NFPA 59;

b) In Canada:

a) Propane storage and handling code, CSA B149.2; and

b) Provincial or other Regulations.

1.3 These requirements do not cover shutoff valves of the type commonly referred to as "cylinder valves" used on containers constructed under Department of Transportation (DOT) Specifications. Requirements for these valves are contained in the Standard for Cylinder Valves, UL 1769.

1.4 These requirements do not cover safety relief valves. Requirements for these valves are contained in the Standard for Safety Relief Valves for Anhydrous Ammonia and LP Gas, UL 132 and Safety Relief Valves for Anhydrous Ammonia and Propane, ULC/ORD-C132.

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1.5 These requirements do not cover automatic shutoff valves that use electricity to actuate the valve member. Requirements for these valves are contained in the Standard for Electrically Operated Valves, UL 429 and Electrically Operated Valves, CSA-C22.2 No. 139.

1.6 These requirements do not apply to LP-Gas valves for use on containers or in systems for the following:

a) Refrigerated storage systems and

b) Marine and pipeline terminals, chemical plants, natural gas processing plants, refineries or tank farms, where "tank farms" do not include storage at industrial locations.

1.7 These requirements do not apply to valves for anhydrous ammonia for use on containers or in systems for the following:

a) Refrigerated storage systems,

b) Ammonia manufacturing plants,

c) Refrigeration plants where ammonia is used solely as a refrigerant, and

d) Ammonia transportation pipelines.

1.8 Except for such observations as are required to ascertain performance characteristics, the assigning of flow capacity ratings, other than for excess flow valves, is not within the scope of these requirements.

2 Service Pressure Rating

2.1 The service pressure rating of a valve intended for use in anhydrous ammonia service shall not be less than 1.7 MPa (250 psig) and shall not exceed 1/5 of its hydrostatic strength test pressure.

2.2 The service pressure rating of a valve intended for use in LP-Gas service shall not exceed 1/5 of its hydrostatic strength test pressure and shall be in accordance with Table 2.1.

Table 2.1
Service pressure rating of LP-Gas valves

Service	Minimum pressure rating
LP-Gas vapor at operating pressure of 0.9 MPa (125 psig) or less	0.9 MPa (125 psig)
LP-Gas liquid, or vapor at operating pressure over 0.9 MPa (125 psig) and at or below container pressure	1.7 MPa (250 psig)
Higher than container pressure	2.4 MPa (350 psig), or the MAWP, whichever is higher

3 Components

3.1 Except as indicated in 3.2, a component of a product covered by this standard shall comply with the requirements for that component.

3.2 A component is not required to comply with a specific requirement that:

a) Involves a feature or characteristic not required in the application of the component in the product covered by this standard, or

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b) Is superseded by a requirement in this standard.

3.3 A component shall be used in accordance with its rating established for the intended conditions of use.

3.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

4 Units of Measurement

4.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

5 Reference Publications

5.1 The documents shown below are referenced in the text of this Standard. Unless otherwise stated elsewhere in this Standard such reference shall be considered to indicate the edition and/or revisions of the document available at the date on which the Committee approved this UL/ULC Standard.

Documents Published by the American Society of Mechanical Engineers (ASME)
3 Park Avenue, New York, NY 10016-5990 U.S.A.
Telephone: 800-843-2763
www.asme.org

• ASME B1.20.1, Pipe Threads, General Purpose (Inch)

• ASME B36.10M, Welded and Seamless Wrought Steel Pipe

Documents Published by the American Society for Testing and Materials (ASTM)
100 Barr Harbour Drive, West Conshohocken, PA 19428-2959 U.S.A.
Telephone: (610) 832-9585
www.astm.org

• ASTM B858, Standard Test Method for Ammonia Vapor Test for Determining Susceptibility to Stress Corrosion Cracking in Copper Alloys

• ASTM G155, Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials

• ASTM D1835, Standard Specification for Liquefied Petroleum (LP) Gases

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Document Published by the CSA Group
178 Rexdale Boulevard, Toronto, ON M9W 1R3 Canada
Telephone: (416) 747-4000 or 1-800-463-6727
www.csagroup.org

• CSA B149.2, Propane storage and handling code

• CSA C22.2 No. 139, Electrically operated valves

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Document Published by the Compressed Gas Association (CGA)
14501 George Carter Way, Suite 103 Chantilly, VA 20151
Telephone: (703)788-2700
www.cganet.com

• CGA G-2.1, Requirements for the Storage and Handling of Anhydrous Ammonia

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Documents Published by Underwriters Laboratories Inc. (UL)
333 Pfingsten Road, Northbrook, IL 60062-2096, U.S.A.
Telephone: (847) 272-8800
www.ul.com

• UL 132, Safety Relief Valves for Anhydrous Ammonia and LP-Gas

• UL 157, Gaskets and Seals

• UL 429, Electrically Operated Valves

• UL 969, Marking and Labeling Systems

• UL 1769, Cylinder Valves

6 Glossary

6.1 ACTUATED LIQUID WITHDRAWAL EXCESS FLOW VALVE – A type of excess flow valve that must have its mating fitting connected to allow flow of fluid. It is intended to be installed into a container opening to allow for fluid evacuation.

6.2 AUTHORITY HAVING JURISDICTION – The governmental body responsible for the enforcement of any part of this Standard or the official or agency designated by that body to exercise such a function.

6.3 BACK PRESSURE CHECK VALVE – A type of valve that allows fluid flow in only one direction. The amount of flow allowed in the reverse direction is outlined in the seat leakage test. The type of seat material used; i.e. resilient or metal-to-metal, further categorizes back pressure check valves.

6.4 EMERGENCY SHUTOFF VALVE[a] – A shutoff valve incorporating thermal and manual means of closing that also provides for remote means of closing.

[a] Reproduced with permission of NFPA from NFPA 58, Liquefied Petroleum Gas Code, 2020 edition. Copyright© 2019, National Fire Protection Association. For a full copy of NFPA 58, please go to www.nfpa.org.

6.5 EXCESS FLOW CHECK VALVE (or EXCESS FLOW VALVE) – A valve designed to close when the liquid or vapor passing through it exceeds a prescribed flow rate.

6.6 FILLER VALVE – A type of valve connected to a container that is intended under normal operation to allow fluid flow into a container for filling purposes, but not out of the container.

6.7 INTERNAL VALVE[a] – A container primary shutoff that can be closed remotely, which incorporates an internal excess flow valve with the seat and seat disc located within the container so that they remain in place should external damage occur to the valve.

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