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JOINT CANADA-UNITED STATES
NATIONAL STANDARD

ANSI/CAN/UL/ULC 125:2020

STANDARD FOR SAFETY

Flow Control Valves for Anhydrous Ammonia and LP-Gas



ANSI/UL 125-2020



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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 new edition of ANSI/CAN/UL/ULC 125 dated July 27, 2020 has been issued to reflect the latest ANSI and SCC approval dates, and to incorporate the proposals dated January 24, 2020 and May 5, 2020.

The new requirements are substantially in accordance with Proposal(s) on this subject dated January 24, 2020 and May 5, 2020.

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ANSI/UL 125-2020

JULY 27, 2020



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ANSI/CAN/UL/ULC 125:2020

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

The first through seventh editions were titled Standard for Valves for Anhydrous Ammonia and LP-Gas (Other Than Safety Relief).

First Edition – October, 1956
Second Edition – July, 1973
Third Edition – February, 1974
Fourth Edition – February, 1980
Fifth Edition – March, 1993
Sixth Edition – February, 1997
Seventh Edition – April, 2007
Eighth Edition – June, 2009
Ninth Edition – March, 2014

Tenth Edition

July 27, 2020

This ANSI/CAN/UL Safety Standard consists of the Tenth Edition.

The most recent designation of ANSI/UL 125 as an American National Standard (ANSI) occurred on July 6, 2020. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, Preface or SCC Foreword.

This standard has been designated as a National Standard of Canada (NSC) on July 27, 2020.

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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). ULC Standards is accredited by 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).

Comments or proposals for revisions on any part of the Standard may be submitted at any time. Proposals should be submitted via a Proposal Request in the On-Line Collaborative Standards Development System (CSDS) at <https://csds.ul.com>.

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

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

STP 125 Membership

Name	Representing	Interest Category	Region
Bathalon, Susan	U S Consumer Product Safety Commission	Non voting member	USA
Blackwell, Robert	Independent Propane Co	Supply Chain	USA
Fredenburg, Richard	North Carolina Department of Agriculture & Consumer Services	AHJ	USA

STP 125 Membership Continued on Next Page

STP 125 Membership Continued

Name	Representing	Interest Category	Region
Hoffmann, Richard	R A Hoffman Engineering P C, DBA Hoffman & Feige	General Interest	USA
Ko, Solomon	TSSA	AHJ	Ontario
Lemoff, Theodore	T Lemoff	General Interest	USA
Mailvaganam, Miles	M Mailvaganam	General Interest	Ontario
Petersen, James	Petersen Engineering	General Interest	USA
Prusko, Jeffrey	Underwriters Laboratories Inc.	Project Manager – Non-voting	USA
Saunders, Kirk	White Mountain Oil & Propane Inc	Commercial / Industrial User	USA
Sculthorp, Robert	Underwriters Laboratories of Canada Inc.	Non-voting member	Canada
Swiecicki, Bruce	National Propane Gas Association	General Interest	USA
Thomas, Chad	Engineered Controls International Inc	Producer	USA
Vandini, Thomas	Quality Steel Corp	Producer	USA
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Wolf, Erich	Cavagna North America	Producer	USA
Wolff-Klammer, Edgar	UL LLC	Testing and Standards Org	USA
Zuck, Jim	Marshall Excelsior Corp	Producer	USA

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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.

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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.

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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