

Standard Information

Standard Number: UL 1769

Standard Name: Cylinder Valves

Standard Edition and Issue/Revision Dates: 4th Edition Issued June 30, 2006 Revised April 15, 2011, December 3, 2014 and 5th Edition Issued June 25, 2015, Revised April 27, 2016

Date of Previous Revision to Standard: 4th Edition Revised December 16, 2009

Effective Date of New/Revised Requirements

Effective Date (see Schedule below): **July 28, 2017**

Impact, Overview, Fees and Action Required

Impact Statement: A review of all Listing Reports is necessary to determine which products comply with new/revised requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

Overview of Changes (specific details of new/revised requirements are found in table below):

- Changes to the Moist-Ammonia Air Stress Cracking Test and addition of requirements for LP-Gas valves for industrial truck applications
- Addition of construction and performance requirements for CGA 793 connections
- Includes the addition of requirements for refrigerant
- Adds requirements for valves with quick coupling connections

If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).

Schedule: So that shipping of products with Listing Marks will not be interrupted, an **approximate** schedule has been established to ensure Listing Reports are found compliant by Effective Date:

- November 28, 2016 = 8 Month Report Review – Intertek will review all Reports. Update if compliance is verified or issue Findings Letter/Quote for any re-evaluations needed
- January 27, 2017 = 6 Month Quote Cut-off – Quotes returned for necessary re-evaluations
- **July 28, 2017** = Effective Date – ATM Suspended for all non-compliant Reports

Fees: An initial review of Listing Report (s) will be covered by a direct billing project and will be invoiced at not more than \$1000 per report.

Client Action Required:

Information – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.

Standards Update Notice (SUN)

Issued: September 7, 2016

Description of New/Revised Technical Requirements

Clause	Verdict	Comment
The <u>April 15, 2011</u> revision includes the following changes:		
7	Info	Materials
7.10 (4 th Ed.) 7.13 (5 th Ed.)		Pressure confining parts of each size of valve that are made from brass containing more than 15% zinc will be required to be subjected to a new moist ammonia-air stress cracking test in accordance with Section 23.
23 (4 th Ed.) 25 (5 th Ed.)		A new moist ammonia test method will be required to be conducted on valve pressure confining parts. The test method is based on ASTM B858 and will require one sample of each size of valve to be tested. If cracks are observed, leakage or hydrostatic strength test will be used to determine conformance with requirements.
11A and 25A (4 th Ed.) 12 and 28 (5 th Ed.)		Sections 12 and 28 were added to include new requirements for Service Valves for LP-Gas for Use On Industrial Truck Type Containers
The <u>December 3, 2014</u> revision includes the following changes:		
5	Info	General (CONSTRUCTION)
5.7		<p><i>Additions to existing requirements are <u>underlined</u></i></p> <p>A valve for LP-Gas for use on nominal 4 – 40 pound nominal LP-Gas capacity (10.2 – 95.3 pound water capacity) shall be provided with all of the following:</p> <ul style="list-style-type: none"> a) A CGA 791, <u>CGA 793</u>, or CGA 810 (Type I or Type II) outlet connection complying with the Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections, CGA V-1. b) An overfilling prevention device complying with the Standard for Overfilling Prevention Devices, UL 2227. c) A fixed maximum liquid level gauge including a dip tube. The vent valve portion of the gauge shall be of the type that incorporates a flat-bladed screwdriver slot for operation. d) The fixed maximum liquid level gauge (vent valve) shall have the vent stem retained, such as by staking or crimping, so that it cannot be removed from the valve body by reverse rotation. <p>Exception No. 1: Valves intended for use on cylinders used in industrial truck service (including forklift truck cylinders) and cylinders identified and used in industrial welding and cutting gas applications, are not required to comply with the requirements noted in (a), (b), and (c) above.</p> <p><u>Exception No. 2: A CGA 793 outlet connection complying with the Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections, CGA V-1 shall be limited to use on composite cylinders between 2.2 and 19 lbs propane capacity.</u></p>
8	Info	Connections

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Clause	Verdict	Comment
8.1		<p><i>Additions to existing requirements are <u>underlined</u></i></p> <p>The inlet of a valve shall comply with one of the following standards:</p> <p>a) Compressed Gas Cylinder Valve Outlet and Inlet Connections, CGA V-1, for the gas involved or</p> <p>b) Pipe Threads, General Purpose (Inch) Revision and Redesignation of ASME/ANSI B2.1-1968 (R2001), ANSI/ASME B1.20.1.</p> <p>c) <u>A CGA 793 cylinder valve shall only be constructed with an inlet thread that has a M34 X 1.5 straight thread connection into cylinder and is only to be used on composite cylinders between 2.2 lbs and 19 lbs propane capacity.</u></p> <p>Exception: Valves intended for use in installations where pipe fittings incorporate other than NPT type threads shall be permitted to be provided with pipe threads complying with a national pipe thread standard compatible with those fittings. The pipe thread type shall be identified in accordance with 27.10.</p>
8.2		<p><i>Additions to existing requirements are <u>underlined</u></i></p> <p>The outlet of a valve shall comply with the Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections, CGA V-1, for the gas involved.</p> <p>Exception No. 1: A valve that is marked in accordance with 27.4 is not prohibited from being used with an outlet that complies with one of the following:</p> <p>a) The Standard for Pipe Threads, General Purpose (Inch) Revision and Redesignation of ASME/ANSI B2.1-1968 (R2001), ANSI/ASME B1.20.1;</p> <p>b) Automotive Tube Fittings, SAE J512; and</p> <p>c) Cast Copper Alloy Fittings for Flared Copper Tubes, ANSI/ASME B16.26.</p> <p>Exception No. 2: A valve intended for use with LP-Gas is not prohibited from being used with an outlet that complies with Acme Screw Threads, ANSI/ASME B1.5.</p> <p>Exception No. 3: A valve is not prohibited from being used with an outlet connection other than those previously described, if it is marked in accordance with 27.3.</p> <p><u>Exception No. 4: Composite cylinders using between 2.2 lbs and 19 lbs propane capacity shall only be equipped with a CGA 793 outlet connection and metallic cylinders are prohibited from being equipped with a CGA 793 connection regardless of the above exceptions.</u></p>
8.3		<p><i>Additions to existing requirements are <u>underlined</u></i></p> <p>A valve provided with a CGA 791, <u>CGA 793</u>, or CGA 810 (Type I or Type II) outlet connection shall also comply with the Standard for Adapters and Cylinder Connection Devices for Portable LP-Gas Cylinder Assemblies, UL 2061.</p>
17 (4 th Ed.) 18 (5 th Ed.)	info	Hydrostatic-Pressure Test
17.1 (4 th Ed.)		<i>Additions to existing requirements are <u>underlined</u></i>

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Clause	Verdict	Comment
18.1 (5 th Ed.)		All parts of a valve, including the check modules on CGA 791, <u>CGA 793</u> , and CGA 810 connections, shall withstand, without rupture or permanent distortion, a hydrostatic pressure as specified in Table 17.1 for a minimum of one minute. The valve shall be pressurized from the inlet side of the valve. For valves having CGA 791, <u>CGA 793</u> , or CGA 810 connection outlets, the test is first conducted without an adapter connected to the outlet, which will keep the check valve in the closed position. The test is then repeated with an adapter connected to the outlet, which will keep the check valve in an open position. The outlet of the adapter shall be closed or plugged. "Without permanent distortion" is defined as compliance with the requirements of the External Leakage Test, Section 14. Pressure relief device portions of the valve are exempt from this requirement.
The <u>June 25, 2015</u> issued includes the following changes:		
1.6		New clause added; The type of refrigerant used in the system shall comply with the Standard for Refrigerants, UL 2182.
23		New section added; Tests of Gaskets and Seals Used in Refrigerant Systems Gaskets and seals of neoprene, rubber, or polymeric material used to prevent refrigerant leaks shall comply with the requirements in 23.2.1 – 23.4.1.
The <u>April 27, 2016</u> revision includes the following changes:		
17	Info	Endurance Test
17.2		<i>Additions to existing requirements are <u>underlined</u></i> A valve with a handwheel, <u>or quick coupling outlet connection</u> , is to be subjected to 6,000 cycles of opening and closing.
17.4		<i>Additions to existing requirements are <u>underlined</u></i> A valve for use only with LP-Gas, or one for use with either LP-Gas or anhydrous ammonia, is to be tested with the valve outlet plugged, the valve body filled with n-hexane, and the valve inlet subjected to a pressure of 250 psig (1.7 MPa). <u>Exception: A valve with a quick coupling outlet connection is to be tested with air or nitrogen.</u>
CUSTOMERS PLEASE NOTE: This Table and column "Verdict" can be used in determining how your current or future production is or will be in compliance with new/revised requirements.		