UL 1726

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Automatic Drain Valves for Standpipe Systems

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UL Standard for Safety for Automatic Drain Valves for Standpipe Systems, UL 1726

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This Standard consists of pages dated as shown in the following checklist:

Page	Date
1-10	April 18, 2001

UL 1726

Standard for Automatic Drain Valves for Standpipe Systems

First Edition – October, 1985
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Third Edition

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An effective date included as a note immediately following certain requirements is one established by Underwriters Laboratories Inc.

Revisions of this Standard will be made by issuing revised or additional pages bearing their date of issue. A UL Standard is current only if it incorporates the most recently adopted revisions, all of which are itemized on the transmittal notice that accompanies the latest set of revised requirements.

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FOREWORD

A. This Standard contains basic requirements for products covered by Underwriters Laboratories Inc. (UL) under its Follow-Up Service for this category within the limitations given below and in the Scope section of this Standard. These requirements are based upon sound engineering principles, research, records of tests and field experience, and an appreciation of the problems of manufacture, installation, and use derived from consultation with and information obtained from manufacturers, users, inspection authorities, and others having specialized experience. They are subject to revision as further experience and investigation may show is necessary or desirable.

B. The observance of the requirements of this Standard by a manufacturer is one of the conditions of the continued coverage of the manufacturer's product.

C. A product which complies with the text of this Standard will not necessarily be judged to comply with the Standard if, when examined and tested, it is found to have other features which impair the level of safety contemplated by these requirements.

D. A product employing materials or having forms of construction which conflict with specific requirements of the Standard cannot be judged to comply with the Standard. A product employing materials or having forms of construction not addressed by this Standard may be examined and tested according to the intent of the requirements and, if found to meet the intent of this Standard, may be judged to comply with the Standard.

E. UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. The opinions and findings of UL represent its professional judgment given with due consideration to the necessary limitations of practical operation and state of the art at the time the Standard is processed. UL shall not be responsible to anyone for the use of or reliance upon this Standard by anyone. UL shall not incur any obligation or liability for damages, including consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Standard.

F. Many tests required by the Standards of UL are inherently hazardous and adequate safeguards for personnel and property shall be employed in conducting such tests.

INTRODUCTION

1 Scope

1.1 These requirements cover automatic drain valves that are intended to drain water from cavities in standpipe systems intended usually to be empty, such as those between a hose valve and hose rack, and pipe sections between fire department connections and check valves.

1.2 The valves covered by these requirements are intended for installation and use in accordance with the Standard for the Installation of Sprinkler Systems, ANSI/NFPA 13-1999, and The Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems, ANSI/NFPA 14-2000.

2 Units of Measurement

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

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

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 Undated References

4.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

CONSTRUCTION

5 General

5.1 A valve shall be made of brass, bronze, or equivalent corrosion resistant material.

6 Valve Inlets

6.1 A valve for use with hose valves shall be fitted with a swivel.

6.2 The width of a gasket recess in a swivel shall be 3/16 inch (4.8 mm) for 1-1/2 inch (38.1 mm) nominal size couplings, 1/4 inch (6.4 mm) for 2-1/2 inch (63.5 mm) nominal size couplings, and 5/16 inch (7.9 mm) for 3 inch (76.2 mm) nominal size and larger couplings. See Table 6.1.

Table 6.1
Nominal valve size dimensions

Nominal size, inches	Outside diameter	
	Inches	(mm)
1/2	0.840	(21.34)
3/4	1.050	(26.67)
1	1.315	(33.40)
1-1/2	1.900	(48.26)
2-1/2	2.875	(73.03)
3	3.500	(88.90)

6.3 A threaded valve inlet and swivel shall have at least three V-shaped grooves in the grooved surface securing the swivel to the tail piece.

6.4 The wire component of a valve inlet that utilizes a wire-groove and swivel shall have a round or square cross-section, and shall be fitted smoothly into the grooves of the swivel and valve.

6.5 For a valve inlet having an interlock and swivel, the depth of the groove or overlapping surface of the flange of the swivel shall not be less than 3/32 inch (2.4 mm).

6.6 A swivelled valve inlet shall be provided with a resilient gasket fitted accurately into the recess of the swivel. The gasket shall be 1/8 inch (3.2 mm) thick for 1-1/2 inch (38.1 mm) nominal size couplings, 3/16 inch (4.8 mm) thick for 2-1/2 inch (63.5 mm) nominal size couplings, and 1/4 inch (6.4 mm) thick for 3 inch (76.2 mm) nominal size and larger couplings.

6.7 A valve inlet that is provided with male or female pipe threads shall comply with the Standard for Pipe Threads, General Purpose (Inch), Revision and Redesignation of ASME/ANSI B2.1-1968 R(1992).

7 Valve Outlets and Threads

7.1 A valve outlet is not prohibited from having a nipple with male or female hose or NPT threads.

7.2 An outlet with hose threads shall be cast integrally with the valve body.

7.3 Hose threads provided at the outlet of a valve shall be threaded in accordance with the Standard for Fire Hose Connections, ANSI/NFPA 1963-1998, unless specifically intended to fit existing equipment not having these threads.

PERFORMANCE

8 Valve Closing Test

8.1 A valve shall close at an applied pressure of 10 psig (68.9 kPa) or less.

8.2 A valve of each size installed in its intended position is to be connected to a water source and slowly pressurized. The pressure at which the flow is reduced to 0.75 gallons per minute (2.8 L/m), or less, is defined as closing.

9 Valve Opening Test

9.1 A valve shall open at a pressure of not less than 5 psig (34.5 kPa).

9.2 The test apparatus utilized to determine compliance with the requirement of 9.1 is to be a horizontal and level piping assembly consisting, in sequence, of:

a) A quarter-turn ball valve connected to a water source;

b) A tee with the stem pointing vertically upward;

c) A needle valve; and

d) The drain valve under test.

A manometer is to be fitted to the vertical stem of the tee, and the end of the manometer is to be open to the atmosphere.

9.3 With the needle valve closed, the ball valve is to be opened and water is to flow in the assembly until the drain valve closes and water rises in the manometer. The ball valve then is to be closed and the needle valve opened so that the water level in the manometer decreases. When the drain valve opens, the water level in the manometer shall be equivalent to a pressure of not less than 5 psig (34.5 kPa).