PUBLIC REVIEW DRAFT

Suction Relief Valves
IAPMO Notes

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(2) The use of IAPMO Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards.
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(4) During its development, this Standard was made available for public review, thus providing an opportunity for additional input from stakeholders from industry, academia, regulatory agencies, and the public at large. Upon closing of public review, all comments received were duly considered and resolved by the IAPMO Standards Review Committee.
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(6) Although the intended primary application of this Standard is stated in its scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.
(7) IAPMO Standards are subject to periodic review and suggestions for their improvement will be referred to the IAPMO Standards Review Committee. To submit a proposal for change to this Standard, you may send the following information to the International Association of Plumbing and Mechanical Officials, Attention Standards Department, at standards@IAPMOstandards.org or, alternatively, at 4755 East Philadelphia Street, Ontario, California, 91761, and include “Proposal for change” in the subject line:
(a) standard designation (number);
(b) relevant section, table, or figure number, as applicable;
(c) wording of the proposed change, tracking the changes between the original and the proposed wording; and
(d) rationale for the change.
(8) Requests for interpretation should be clear and unambiguous. To submit a request for interpretation of this Standard, you may send the following information to the International Association of Plumbing and Mechanical Officials, Attention Standards Department, at standards@IAPMOstandards.org or, alternatively, at 4755 East Philadelphia Street, Ontario, California, 91761, and include “Request for interpretation” in the subject line:
(a) the edition of the standard for which the interpretation is being requested;
(b) the definition of the problem, making reference to the specific section and, when appropriate, an illustrative sketch explaining the question;
(c) an explanation of circumstances surrounding the actual field conditions; and
(d) the request for interpretation phrased in such a way that a “yes” or “no” answer will address the issue.
(9) IAPMO does not “approve”, “rate”, or endorse any item, construction, proprietary device, or activity.
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(11) Participation by federal or state agency representative(s) or person(s) affiliated with industry is not to be interpreted as government or industry endorsement of this Standard.
1 Purpose

1.1 Scope
The purpose of This Standard is to establish an acceptable minimum standard for the manufacture of the covers suction relief valves. Its purpose is to serve as a guide for manufacturers, architects, engineers, contractors, plumbers, inspectors and users; to promote an understanding regarding materials and installation; and to provide for identifying suction relief valves conforming to this Standard, and specifies requirements for materials, physical characteristics, performance testing, and markings.

1.2 Alternative Materials
The provisions of this Standard are not intended to prevent the use of any alternate materials or methods of construction, provided any such alternate alternatives meets the intent and requirements of this Standard.

1.3 Terminology
In this Standard,
(a) “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy to comply with the Standard;
(b) “should” is used to express a recommendation, but not a requirement;
(c) “may” is used to express an option or something permissible within the scope of the Standard; and
(d) “can” is used to express a possibility or a capability.

Notes accompanying sections of the Standard do not specify requirements or alternative requirements; their purpose is to separate explanatory or informative material from the text. Notes to tables and figures are considered part of the table or figure and can be written as requirements.

1.4 Units of Measurement
SI units are the primary units of record in global commerce. In this Standard, the inch/pound units are shown in parentheses. The values stated in each measurement system are equivalent in application, but each unit system is to be used independently. All references to gallons are to U.S. gallons.

1.5 Amendments
Proposals for amendments to this Standard will be processed in accordance with the standards-writing procedures of IAPMO.
2 Scope

2.1 This Standard covers the physical, performance and testing requirements for vacuum, seal, proper spring tension and other specific properties of construction and finish together with methods of marking and identification.

2 Reference Publications

This Standard refers to the following publications and, where such reference is made, it shall be to the current edition of those publications, including all amendments published thereto.

ANSI/APSP 16          Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs

3 Definitions and Abbreviations

This section is reserved for later use.

34 General Requirements

3.14.1 Materials

4.1.1 The suction valve body shall meet the material requirements of ANSI/ASME A112.19.8M

ANSI/APSP 16.

3.34.1.2 All internal components shall be corrosion resistant.

3.24.2 Craftsmanship

Suction relief valves covered by this standard shall follow the following requirements:
(a) The valve body and cap shall be a smooth finish, free of any flaws, voids or interior sharp edges.
(b) The inside of the valve body shall be smooth with no voids or cracks.
(c) All edges of the cap and plunger shall be free of excessive material.
(d) The cap shall be firmly attached.

3.3 All internal components shall be corrosion resistant.

3.44.3 Elastomeric Seals

If used, elastomeric seals shall be of Buna/Nitrile material or equal.

3.5 Detailed installation instruction shall be provided with the valve.

3.6 Installation instruction shall specify that the air inlet of the suction relief valve shall not be located within the interior of the wall of the fixture or in a location subject to flooding.
45 Testing Requirements

4.15.1 Test Specimen
Five valves shall be selected at random and tested as follows in the order listed and all shall pass.

4.35.2 Test Apparatus
Each valve shall be tested for two (2) functions. The following items are required to perform the test:
- Vacuum pump (minimum 508 mm (20 inches) Hg),
- Vacuum gauge (-508 to 2540 mm (20 to 100 inches) H2O scale),
- Vacuum gauge (0 to 762 mm (0 to 30 in) Hg, inches scale).

4.25.3 Cycle Testing.
The integrity of the spring/O-ring seal shall be conducted as follows:
(a) tested for 50,000 cycles at 635 mm (25 inches) Hg, cycled at five (5) second intervals to test the integrity of the spring/O ring seal.
(b) Testing for Spring Tension. The valve shall be subjected to vacuum equal to the manufacturer’s indicated design value;
(a) A gauge reading vacuum on the H2O scale is to be placed on top of the valve. No vacuum shall be present; and
(b) Valve Opening Point. The vacuum level shall be raised 50.8 mm (2"-in) Hg (691 mm (27.2"-in) H2O) above the indicated design value. The gauge shall read between the indicated design value and 50.8 mm (2"-in) Hg (691 mm (27.2"-in) H2O) above the indicated design value immediately. Failure to open immediately constitutes failure.

5.4 Performance Requirements
The valve shall open immediately when the vacuum gauge reads above the indicated design value.

56 Markings and Identification Accompanying Literature

5.16.1 Markings
Valves complying with this standard shall be permanently marked with the following:
(a) Manufacturer’s name or trademark;
(b) Model number; and
(c) Pressure differential value in psi at which the valve will open.

3.56.2 Installation Instructions
Detailed installation instruction shall be provided with the valve specifying at least:
Installation instruction shall specify that the air inlet of the suction relief valve shall not be located within the interior of the wall of the fixture or in a location subject to flooding.