

NFPA 1964

Standard for Spray Nozzles

2003 Edition



NFPA, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101
An International Codes and Standards Organization

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NFPA 1964
Standard for
Spray Nozzles

2003 Edition

This edition of NFPA 1964, *Standard for Spray Nozzles*, was prepared by the Technical Committee on Fire Hose and acted on by NFPA at its November Association Technical Meeting held November 16–20, 2002, in Atlanta, GA. It was issued by the Standards Council on January 17, 2003, with an effective date of February 6, 2003, and supersedes all previous editions.

This edition of NFPA 1964 was approved as an American National Standard on January 17, 2003.

Origin and Development of NFPA 1964

The first edition of NFPA 1964 was adopted in 1988 based on a need for a standard that applied to portable adjustable-pattern nozzles for general fire department use and for use on hose attached to standpipes. In the second edition, the text was editorially reworked to make the document more usable, and the details of a few of the test procedures were revised to better reflect how the nozzles are used in the field. The 1998 edition allowed for rating nozzles at other than the traditional 6.9 bar (100 psi), added requirements for marine nozzles, and clarified the testing process, methods, and procedures to improve the understanding of the compliance testing required.

This edition expands the document to cover master stream spray nozzles up to 7570 L/min (2000 gpm) in addition to handline spray nozzles. Requirements for marking nozzles are allowed to be in either metric or inch-pound units. The pass/fail criteria for some tests have been revised to base them on requirements for the nozzle in the standard rather than results of previous testing. The parenthetical expression “(Shutoff and Tip)” has been removed from the title of the standard. The document was completely reviewed as part of formatting it into the revised NFPA *Manual of Style* and changes made to improve understanding of the requirements.

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Committee Scope: This Committee shall have primary responsibility for documents on the size and design of fire hose connections, and the performance, maintenance, and selection of all types of fire hose, couplings, nozzles, and accessory equipment.

This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

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NFPA 1964

Standard for Spray Nozzles

2003 Edition

NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

Information on referenced publications can be found in Chapter 2 and Annex B.

Chapter 1 Administration

1.1* Scope. This standard covers the requirements for new adjustable-pattern spray nozzles intended for general fire-fighting use, for marine and offshore platform fire-fighting use, or for use with fire hoses affixed to standpipe systems.

1.2 Purpose. The purpose of this standard shall be to provide minimum performance requirements for fire-fighting spray nozzles to assure purchasers or authorities having jurisdiction that nozzles that comply with this standard are suitable for fire suppression use.

1.3 Application. These requirements shall apply to the following:

- (1) Manually operated basic spray, constant gallonage, and constant pressure spray nozzles whether designed as hand-line nozzles or master stream nozzles
- (2) Nozzles that have a rated discharge of 7570 L/min (2000 gpm) or less
- (3) Nozzles for use on Class A and Class B fires

1.4 Equivalency. Nothing in this standard shall prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by this standard. Technical documentation shall be submitted to the authority having jurisdiction to demonstrate equivalency. The system, method, or device shall be approved for the intended purpose by the authority having jurisdiction.

1.5* Units of Measurement. In this standard, metric values for measurement are followed by an equivalent in inch-pound units. Either set of values can be used, but the same set of values (either metric or inch-pound units) shall be used throughout.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publication. National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

NFPA 1963, *Standard for Fire Hose Connections*, 1998 edition.

2.3 Other Publications.

2.3.1 ASTM Publications. American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM B 117, *Standard Practice for Operating Salt Spray (Fog) Apparatus*, 1997.

ASTM D 395, *Standard Test Methods for Rubber Property — Compression Set*, 1998.

ASTM D 412, *Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers — Tension*, 1998.

ASTM D 573, *Standard Test Method for Rubber — Deterioration in an Air Oven*, 1999.

2.3.2 ISO Publications. International Standards Organization, 1 Rue de Varembe, Case postale 56, CH-1211 Genève 20, Switzerland.

ISO 9001, *Quality Systems — Model for quality assurance in design, development, production, installation, and servicing*, 1994.

ISO 9002, *Quality Systems — Model for quality assurance in production, installation, and servicing*, 1994.

Chapter 3 Definitions

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not included, common usage of the terms shall apply.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). The organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure.

3.2.3 Shall. Indicates a mandatory requirement.

3.2.4 Should. Indicates a recommendation or that which is advised but not required.

3.3 General Definitions.

3.3.1* Basic Spray Nozzle. An adjustable-pattern spray nozzle in which the rated discharge is delivered at a designated nozzle pressure and nozzle setting.

3.3.2* Constant Gallonage Spray Nozzle. An adjustable-pattern spray nozzle that discharges a constant discharge rate throughout the range of patterns from a straight stream to a wide spray at a designed nozzle pressure.

3.3.3* Constant Pressure (Automatic) Spray Nozzle. An adjustable-pattern spray nozzle in which the pressure remains relatively constant through a range of discharge rates.

3.3.4* Constant/Select Gallonage Spray Nozzle. A constant discharge rate spray nozzle with a feature that allows manual adjustment of the orifice to effect a predetermined discharge rate while the nozzle is flowing.

3.3.5* Flush. A nozzle feature that allows the orifice to be opened so that small debris that could otherwise be trapped in the nozzle, causing pattern disruptions and discharge variation, can pass through.