



Member of the FM Global Group

Approval Standard for Wall Hydrants

Class Number 1531

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Foreword

The FM Approvals certification mark is intended to verify that the products and services described will meet FM Approvals' stated conditions of performance, safety and quality useful to the ends of property conservation. The purpose of Approval Standards is to present the criteria for FM Approval of various types of products and services, as guidance for FM Approvals personnel, manufacturers, users and authorities having jurisdiction.

Products submitted for certification by FM Approvals shall demonstrate that they meet the intent of the Approval Standard, and that quality control in manufacturing shall ensure a consistently uniform and reliable product. Approval Standards strive to be performance-oriented. They are intended to facilitate technological development.

For examining equipment, materials and services, Approval Standards:

- a) must be useful to the ends of property conservation by preventing, limiting or not causing damage under the conditions stated by the Approval listing; and
- b) must be readily identifiable.

Continuance of Approval and listing depends on compliance with the Approval Agreement, satisfactory performance in the field, on successful re-examinations of equipment, materials, and services as appropriate, and on periodic follow-up audits of the manufacturing facility.

FM Approvals LLC reserves the right in its sole judgment to change or revise its standards, criteria, methods, or procedures.

TABLE OF CONTENTS

I INTRODUCTION	1
II PERFORMANCE REQUIREMENT	1
III GENERAL REQUIREMENTS	1
3.1 Strength	1
3.2 Construction	1
3.2.1 Connections	1
3.2.2 Body	2
3.2.3 Materials	2
3.2.4 Hose Outlet Caps	2
IV MARKINGS	2
V TESTS	2
5.1 Hydrostatic	2
5.2 Other	2

I INTRODUCTION

1.1 A wall hydrant provides an outside water supply for fire hose in areas where standard hydrants are not installed. It is usually an extension of a sprinkler system.

1.2 A water control valve governs the supply to the hydrant and, in locations subject to freezing, a ball drip is provided between the two so that water in the hydrant can drain to atmosphere when the valve is closed.

1.3 FM Approval is based on satisfactory evaluation of the product and manufacturer in these major areas:

- Examinations and tests of production samples are performed to evaluate (1) the suitability of the product, (2) the proper operation and performance of the product as specified by the manufacturer and required by FM Approvals and, as far as practical, (3) the durability and reliability of the product.
- An examination of manufacturing facilities and quality control procedures is conducted to evaluate the manufacturer's ability to produce the product which is examined and tested.
- These examinations and tests are periodically repeated as part of FM Approvals' product follow-up program.
- Satisfactory field experience is the final test of Approval. Unsatisfactory field experience may result in withdrawal of FM Approval.

1.4 The requirements of this standard are guidelines reflecting current FM Approval tests and practices. Devices which do not conform to these requirements may be approved if they meet the intent of this standard. Conversely, those that do conform may not be approved if other conditions govern.

II PERFORMANCE REQUIREMENT

The device shall provide a reliable connection between a sprinkler system water supply and outside fire hose.

III GENERAL REQUIREMENTS

3.1 Strength

The rated working pressure shall be 175 psi (1207 kPa), minimum.

3.2 Construction

3.2.1 Connections

Wall hydrants shall have two 2½ in. (63.5 mm) male outside outlets which conform to NFPA Standard No. 194, "Screw Threads and Gaskets for Fire Hose Couplings". The outlets may be an integral part of the hydrant body or permanently attached to it. The hydrants shall also have a 4 in. (101.6 mm) minimum, inside inlet connection.

3.2.2 Body

The body form of the hydrant may be of the straight, 45° or 90° pattern. Outlets shall be arranged so that hose can be conveniently attached or disconnected. Waterways shall be at least 2½ in. (64 mm) ID from inlet to outlet. In any case, the minimum cross sectional area shall at least equal that of the two hose outlets.

3.2.3 Materials

All metal parts shall be at least as corrosion resistant as a bronze alloy with a minimum 80% copper content.

3.2.4 Hose Outlet Caps

Each hose outlet shall be provided with caps designed to sustain sprinkler system water pressures and to protect hose outlet threads from physical damage.

IV MARKINGS

4.1 The body of the hydrant shall be marked with the manufacturer's name or trademark, and model number.

4.2 The word HYDRANT in large letters shall be permanently affixed to the outlet side of the hydrant and visible to the user. A corrosion-resistant nameplate or equivalent marking method may be used.

V TESTS

5.1 Hydrostatic

The body of the hydrant shall be hydrostatically pressurized to four times its rated working pressure for five minutes. No distortion or failure shall result.

5.2 Other

At the discretion of FM Approvals, other tests may be performed to verify the integrity and reliability of any unusual design or material application.