

# BEXAR METROPOLITAN WATER DISTRICT MATERIALS SPECIFICATIONS

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## Section 033

### Cold Water Detector Check and Detector Check Valve

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#### 033.1 Scope of Work

This specification covers cold water detector checks and detector check valves in sizes of 6, 8, and 10 inches designed for water works service.

#### 033.2 General Requirements

1. Except as otherwise modified or supplemented herein, the latest revision of AWWA Standard C703-79, Standard for Cold Water Meters - Fire Service Type and AWWA C701-78 Standard for Cold Water Meters - Turbine Type for Customer Service or the latest revision, shall govern the design, component materials, manufacture and testing of all detector checks and detector check valves.
2. The above AWWA Specification C703-79 and C701-78 are not specifically written for the design of detector checks and detector check valves; however, these specifications shall apply wherever the operation, design component materials, manufacture and testing are identical or similar in its use and operation.

#### 033.3 Design Requirements

1. The detector check device shall operate in a manner to detect leakage or unauthorized use of water from fire systems and prevent loss of water for fire services or "wet pipe" sprinkler systems.
2. The detector check valve shall consist of a mainline valve with a bypass line equipped with a check valve and a magnetic turbine meter.
3. With mainline valve closed, low rates of flow are to be registered through the bypass turbine meter. When low flows create a pressure loss of about 1.5 psi through the bypass line, the mainline valve shall open automatically allowing unrestricted flow. The flow through the mainline valve will not be registered.
4. The following features shall be incorporated into the design of the detector check and detector check valve:
  - A. Economical design
  - B. Light weight
  - C. Compact
  - D. Low pressure loss
  - E. Easily maintained without special tools
  - F. Counterbalanced lever or spring action on the mainline valve to provide quick opening and closing.
  - G. Bronze or resilient material for seats.

- H. Stainless steel shaft
  - I. Bronze clapper arm
  - J. Unobstructed flow through mainline
  - K. Galvanized cast iron or steel body in one piece; steel to be furnished with epoxy coating
  - L. Body to be tapped on both sides to provide flexibility for tight installations
  - M. An eye bolt shall be placed on body to facilitate installation
  - N. Air vent screw shall be placed on cover
  - O. Maximum working pressure - 175 psi
  - P. The bypass line shall be elevated about center line of mainline and equipped with a shutoff valve, swing check and a magnetic turbine meter
  - Q. The meter register shall read in cubic feet
  - R. The warranty by manufacturer shall include a guarantee against defective parts and workmanship for a period of ten years from date of shipment.
5. BMWWD may, at no cost to the manufacturer, subject random valves to testing by an independent laboratory for compliance with these standards.

Any visible defect or failure to meet the quality standards herein will be grounds for rejecting the entire order.

- 6. The attached qualified products list identifies specific manufacturers that are approved.

**033.4 Approved Manufacturers List**

Hersey Products, Inc. Model EDC III Sizes 4", 6", 8" and 10"
Mueller Company
Ames Company
Febco
Watts 07F

END OF SECTION