

**INTERNATIONAL ASSOCIATION OF PLUMBING
AND MECHANICAL OFFICIALS**

IAPMO GUIDE CRITERIA

FOR

**ONE TIME USE WATER
HEATER EMERGENCY SHUT-OFF DEVICES**

IGC 175-2003 (R2013)

1. PURPOSE

- 1.1** The purpose of this standard is to provide the minimum design and performance criteria for water heater emergency shut off devices that are designed to shut off the cold water and the fuel supply to the water heater upon actuation when the water heater storage tank leaks from the heater into the safety pan. This standard is intended to serve as a guide for producers, distributors, architects, engineers, contractors, installers, inspectors, and users; to promote understanding regarding materials, manufacture and installation; and to provide for identifying water heater emergency shut off devices that conform with this standard.
- 1.2** The provisions of this standard are not intended to prevent the use of any alternate material, or method of construction, provided any such alternate meets or exceeds the intent of this standard.

2. SCOPE

- 2.1** This standard applies to automatic water supply shutoff valve and component(s) (see Part IV, Definitions), hereinafter referred to as valve, and component(s) constructed entirely of new, unused parts and materials, which is intended for use with gas fired hot water heaters.
- 2.2** This standard covers, reference standards, definitions, general requirements, materials, test requirements, and marking and identification for water heater emergency shut off devices.

3. REFERENCED STANDARDS

- 3.1** All standards referenced herein shall be the current edition of that standard as published in Table 14-1 of the Uniform Plumbing Code.

ASME B1.1	Unified Inch Screw Threads (UN and UNR Thread Form)
ASME B1.13	Metric Screw Threads – M Profile
ASME B1.20.1	Pipe Threads, General Purpose (Inch)
ASTM A240/A	Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels
NSF 61	Drinking Water Systems Components – Health Effects

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4. DEFINITIONS

- 4.1 Components** – Accessories required to connect the valve to the water heater and the cold water supply.
- 4.2 Automatic Water Shutoff Valves** – Mechanism that acts to shut off the cold water and the gas supply to the water heater.

5. GENERAL REQUIREMENTS

- 5.1 Shut-off Valves.** Automatic water shut-off valves shall shut off the cold water and the gas supply to the water heater upon actuation.
- 5.1.1** Compliance of a valve and component(s) with this standard does not imply that such a valve or component(s) is acceptable for use on gas fired water heaters without supplemental tests with the valve and component(s) applied to the particular appliance design.
- 5.1.2** Each Valve and component(s) shall be capable of operation throughout an ambient temperature range of 32° F to 125° F (0°C to 52°C). A higher than 125°F, lower than 32°F, or both higher and lower temperature may be specified by the manufacturer.
- 5.2 Values.** If a value for measurement as given in this standard is followed by an equivalent value in other units, the first stated value is to be regarded as the specification.
- 5.3 Pressure.** All references to psi throughout this standard are to be considered gage pressures unless otherwise specified.

6. MATERIALS

- 6.1 Body.** The valve body and its operating parts shall be made of compatible corrosion resistant materials. The body shall be made of brass containing at least 60 % copper.
- 6.2 Spring.** An internal spring used in the shut off mechanism of the valve shall be made of material having corrosion resistance equivalent to that of AISI 302 stainless steel found in ASTM A240/A.
- 6.3** All materials coming in contact with potable water shall be non-toxic and shall comply with section 8 of NSF 61.
- 6.4 Threaded Fasteners.** Bolts, nuts, screws and other threaded parts used in covers, housings, casings and external mounting brackets shall have threads conforming to ASME B1.1 or ASME B1.13M. Pipe threads shall conform to ASME B1.20.1

7. TESTING REQUIREMENTS

- 7.1** The valve and the component(s), shall be tested with the test water heater supplied by the manufacturer, unless otherwise specified herein.

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