



Summary of Substantive Changes
between
the 2013 and the 2009 editions, including the 2009 and 2001 addenda,
of
ANSI Z21.10.1 • CSA 4.1, “Gas Water Heaters Volume I, Storage Water Heaters
With Input Ratings of 75,000 Btu Per Hour or Less”
(The addenda are designated ANSI Z21.10.1a • CSA 4.1a and ANSI Z21.10.1b • CSA 4.1b)

Presented to the IAPMO Standards Review Committee on September 8, 2014

General: The changes to this standard might have an impact on currently listed products. The substantive changes are:

- Added a test method to cover appliances that have combustion air intake openings in addition to an outdoor combustion air duct (see Section 2.23)
- Revised the performance requirement limiting the entrance of water into electric enclosures (see Section 2.32)

Section 2.23, Draft Tests For Water Heaters Equipped With Power Burners: Added a test method to cover appliances that incorporate combustion air intake openings in addition to the outdoor combustion air duct, and a provision for appliances that do not incorporate an automatic main gas shut off control, as follows:

The construction of a water heater equipped with a power burner or operating under forced or induced draft shall be such that its performance is not impaired by chimney drafts or ~~chimney stoppage obstructions in the exhaust venting system or outdoor air inlet~~. This provision...

2.23.1

With the ~~flue outlet or outlet of the draft diverting device, if one is provided~~, following blocked to any degree up to and including...

Method of test

a) The appliance shall be operated at...

b) If the appliance incorporates combustion air intake openings in addition to the outdoor combustion air duct, these shall not be blocked during these tests.

The appliance shall be operated at normal test pressure and maximum vent length for at least 15 minutes. When the appliance incorporates a control to automatically shut off the main gas supply under blocked air inlet conditions, the area of the air inlet shall be gradually decreased to the lowest point at which the control will allow main gas flow including tolerances as specified by the manufacturer. The minimum operating point of the control shall be recorded. A sample of the flue gases shall then be secured and analyzed as specified by 2.4.1.

When the appliance does not incorporate a control to automatically shut off the main gas supply under blocked air inlet conditions, the area of the air inlet shall be completely closed off and a sample of the flue gases secured and analyzed as specified in 2.4.1.



Section 2.32, Rain Tests: Revised the performance requirement limiting the entrance of water into electric enclosures, as follows:

The appliance shall function normally during exposure to the simulated rainstorm. Upon completion of exposure to the simulated rainstorm, there shall be no evidence of damage or malfunctioning of any part of the appliance, nor ~~evidence of water from the simulated rainstorm retained in any part of the appliance~~ detrimental accumulation of water in any part of the appliance. The test is not to result in the entrance of water into any electric enclosure above the lowest live part or in wetting live parts, except motor windings may be judged by the dielectric strength test provided the motor(s) is constructed, located or shielded so the windings are not directly exposed to water.