

**Summary of Substantive Changes  
Between the 2004 and the 2011 Editions of  
ANSI Z21.10.3/CSA 4.3 “Gas Water Heaters (Volume III, Storage, with Input  
Ratings Above 75,000 BTU per Hour, Circulating and Instantaneous Water  
Heaters”)**

(The editions compared include the 2007, and 2008 addenda, designated ANSI Z21.10.3a/4.3a and  
ANSI Z21.10.3b/4.3b respectively)

**General:** There were technical changes to this standard; however, they are installation related and it appears that the changes will not affect current listings because they are not used for certification. The changes primarily affect water heaters with direct ignition systems and combination water/space heaters.

Section 1.10.2: Changed the specifications for direct ignitions systems as follows:

~~the application of direct ignition systems is limited to appliances having~~ For water heaters where all air for combustion is supplied by mechanical means, a direct ignition system may be used provided the total input is less than or equal to 2,500,000 Btu/hr (732 678 W). For water heaters utilizing natural draft atmospheric burners, the application of direct ignition systems is limited to burners having input ratings of 400,000 Btu/hr (117 228 W) or less per ignition system. When multiple direct ignition system are used, there shall be no interconnection between the combustion zones served by separate ignition systems at any point below the draft hood (or the flue outlet if no draft hood is used).

Section 2.2, Test Gases: added the option of a test gas for performance test as follows:

*An appliance for use with natural, manufactured and mixed gases shall be tested with test Gases A and G or H, as specified in 2.2-a, and test Gas B.*

Section 2.8, Direct Ignition Systems: added:

For water heaters where all air for combustion is supplied by mechanical means, a direct ignition system may be used provided the total input is less than or equal to 2,500,000 Btu/hr (732 678 W). For water heaters utilizing natural draft atmospheric burners, the application of direct ignition systems is limited to burners having input ratings of 400,000 Btu/hr (117 228 W) or less per combustion chamber under control of the ignition system.

Section 2.27.3: Added the following hydrostatic test requirements for combination water/space heaters:

The space heating circuit integral to the construction of a combination water/space heater shall withstand a hydrostatic test pressure of two times the manufacturer’s rated maximum working pressure, but not less than 300 psi (2.07 MPa), without rupture or visible permanent deformation.

Section 2.27.4: Added the following hydrostatic test requirements for combination water/space heaters:

For combination water heaters that have separate water and space heating circuits, the space heating circuit integral to the construction of a combination water/space heater shall withstand a hydrostatic test pressure of two times the manufacturer’s rated maximum working pressure, but not less than 30 psi (2.07 MPa), without rupture or visible permanent deformation.