

Standard Information

Standard Number: ANSI Z83.8 / CSA 2.6

Standard Name: Gas unit heaters, gas packaged heaters, gas utility heaters, and gas-fired duct furnaces

Standard Edition and Issue Date: 6th Edition Dated January 1, 2016

Date of Previous Revision to Standard: 5th Edition Revised April 1, 2013

Effective Date of New/Revised Requirements

Effective Date (see Schedule below): **June 15, 2017**

Impact, Overview, Fees and Action Required

Impact Statement: A review of all Listing Reports is necessary to determine which products comply with new/revised requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

Overview of Changes:

- Clauses 4.30.4 and 4.31.11 are revised with the intent to include listed venting systems that have been found suitable for use with the appliance without requiring the manufacturer to list every non-unique part of the system.
- Clause 5.25.1 is revised to add coverage that reflects that the pressure switch or other sensing device(s) that protect the appliance operation under blockage be conducted at the tolerance(s) that would result in the most safety for the end user. The clause is also expanded to include a test for blocked or restricted outside air intake connections for appliances with fan assisted combustion.
- Clause 5.29.4 is revised to remove the 0.3% limitation on the change in CO₂ concentration from still air to operation under wind conditions. The remainder of the wind test is unchanged.

Specific details of new/revised requirements are found in table below.

If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).

Schedule: So that shipping of products with Listing Marks will not be interrupted, an **approximate** schedule has been established to ensure Listing Reports are found compliant by Effective Date:

- October 14, 2016 = 8 Month Report Review – Intertek will review all Reports. Update if compliance is verified or issue Findings Letter/Quote for any re-evaluations needed
- December 15, 2016 = 6 Month Quote Cut-off – Quotes returned for necessary re-evaluations
- **June 15, 2017** = Effective Date – ATM Suspended for all non-compliant Reports

Fees: An initial review of Listing Report (s) will be covered by a direct billing project and will be invoiced at not more than \$1000 per report.

Client Action Required:

Information – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.

Description of New/Revised Technical Requirements

Clause	Verdict	Comment
4.30	Info	Instructions
4.30.4 f		<p>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</p> <p>These instructions shall indicate the following:</p> <p>f) for a Category II, III, or IV Appliance:</p> <p>i) when the <u>appliance</u> manufacturer supplies the venting system, the instructions shall include a parts list and instructions covering the installation of properly identified parts to provide for the venting of the vent gases to the outdoors (see Clause 4.1.15.);</p> <p>ii) <u>Category II and IV</u> - when the parts for venting the vent gases are not provided by the appliance manufacturer and they are specific types listed by a nationally recognized testing agency, these the instructions shall clearly identify and specify the use of the specific parts <u>the category and required vent temperature rating</u> (see Clause 4.31.12.); <u>and</u></p> <p>iii) <u>Category III – when the parts for venting the vent gases are not provided by the appliance manufacturer and they are specific types listed by a nationally recognized testing agency, the instructions shall specify the use of approved venting systems, including any unique parts required for proper operation, or may specify “any listed vent system manufacturer”. The instructions shall also state not to intermix different vent system parts from different manufacturers in the same venting system. (See Clause 4.31.13.)</u></p>
4.31	Info	Marking
4.31.11		<p><i>New clause added;</i></p> <p>When the appliance manufacturer supplies the venting system, a Category II, III, or IV appliance shall bear a Class III marking which states:</p> <p>“This appliance requires a special flue gas venting system. Refer to installation instructions No. _____ for unique parts list and method of installation.”</p> <p>On parts supplied by the appliance manufacturer for venting vent gases from the appliance to the outdoors, the parts shall be identified.</p>

Standards Update Notice (SUN)

Issued: June 23, 2016

Clause	Verdict	Comment
		<p>When the parts for the vent system are not provided by the appliance manufacturer and a specific vent manufacturer or model or venting system is not required, a Category II, III, or IV appliance shall bear a Class III marking which states:</p> <p>"This appliance requires a Category ____ venting system. Refer to the appliance manufacturer's installation instructions No. ____ for proper vent installation."</p>
5.25	Info	<p>Draft tests for appliances not equipped with draft hoods</p> <p><i>Additions to existing requirements are <u>underlined</u> below.</i></p> <p>With the flue outlet blocked to any degree up to and including complete closure, the concentration of carbon monoxide in an air-free sample of the flue gases shall not exceed 0.04 percent when the appliance is tested in an atmosphere having a normal oxygen supply. Should outage occur, raw gas shall not be forced into the combustion chamber on reopening the flue outlet.</p> <p>During conduct of this test, flue gas shall not be emitted from the condensate drain line.</p> <p>Method of Test</p> <p>The appliance shall be operated for at least 15 minutes at normal inlet test pressure. When the appliance incorporates a control to automatically shut off the main gas supply under blocked flue conditions, the area of the flue outlet shall be gradually decreased to the lowest point at which the control will remain in its open position. <u>The test shall be conducted at the most critical operating point of the control with tolerances included.</u> A sample of the flue gases shall then be secured and analyzed as specified in Clause 5.5.1.</p> <p>In the event of outage, the blocked condition shall be maintained for 3 minutes to allow for operation of safety devices and then removed and observation made.</p> <p><u>For appliances with an air intake pipe for conveying combustion air from outdoors to the appliances, the test shall be repeated by blocking the inlet air pipe.</u></p> <p><u>If the appliance design incorporates additional air intake openings in the appliance cabinet, these openings shall not be blocked during conduct of this test.</u></p>
5.29	Info	<p>Separated combustion systems and appliances vented by means other than conventional venting systems</p>
5.29.4		<p><i>Additions to existing requirements are <u>underlined</u> and deletions are shown lined out below.</i></p> <p>The operating characteristics of an appliance shall not be affected by the wind conditions specified in Clause 5.29.3.</p> <p>This provision shall be deemed met when the variation in the carbon dioxide concentration in the flue gases is not in excess of the limits specified in the following Method of Test.</p> <p>Method of Test</p> <p>Burner and primary air adjustments shall be made in accordance with Clause 5.3.3.</p>

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Clause	Verdict	Comment
		<p>The appliance shall be operated under a still air condition at normal inlet test pressure until a constant flue gas temperature is attained. A flue gas sample shall then be secured and analyzed for carbon dioxide <u>monoxide</u>.</p> <p>The appliance shall then be adjusted to provide the increased input rate specified in 2.5.1 and, following a purge period of at least 2 minutes, another flue gas sample shall be secured under a still air condition and analyzed for carbon dioxide.</p> <p>The appliance shall be readjusted to operate at normal inlet test pressure and operated until a constant flue gas temperature is again attained. The wind conditions specified in Clause 5.29.3 shall then be imposed on the vent-air intake terminal(s) and sufficient flue gas samples secured and analyzed under the various wind conditions to determine the carbon dioxide concentration.</p> <p>The carbon dioxide concentration with the appliance subject to any of the wind velocities specified in Clause 5.29.3 shall not exceed by more than 0.3 percent the carbon dioxide concentration produced by the appliance when operated at increased input rate under a still air condition and shall not be less than 50 percent of the carbon dioxide concentration produced by the appliance when operated at normal inlet test pressure under a still air condition.</p> <p>At the discretion of the testing agency, additional tests may be conducted with winds of the same velocities directed from other directions.</p>
		<p>CUSTOMERS PLEASE NOTE: This Table and column "Verdict" can be used in determining how your current or future production is or will be in compliance with new/revised requirements.</p>