

Gas appliances Part 1.3: Gas space heating appliances

Amendment No. 1

Revised text amendment

Publishing and Approval Dates

Council of Standards Australia Approval: 22 October 2021

New Zealand Standards Approval Board Approval: 3 November 2021

Published: 12 November 2021

Summary

This Amendment applies to the following elements:

- Clause 1.4, Clause 5.2 and Appendix ZC.

Amendment Details

AS/NZS 5263.1.3:2021 is amended as follows. The amendments should be inserted in the locations as instructed.

Element	Instruction/New text
CI 1.4	At the end of the clause, <i>add</i> the following: ZC.108 Shutdown under negative room pressure
CI 5.2	<i>Delete</i> clause text and <i>replace</i> with the following: This Clause of AS/NZS 5263.0 applies, except as modified below.
CI 5.2.101 (new)	After Clause 5.2, <i>add</i> the following: 5.2.101 Safety shutdown under negative room pressure An open flued gas space heater shall not permit the ongoing release of combustion products into a room when subjected to a sustained negative room pressure condition when tested in accordance with Test Method ZC.108, as follows: <div style="margin-left: 20px;"> <p>(a) The CO/CO₂ ratio of combustion products when measured at the draught diverter opening(s) or relief opening or any other location from where combustion products could spill into the room shall not exceed 0.02 after 10 min of operation or the appliance shall shut down.</p> <p>(b) The appliance shall not spill combustion products for more than 15 min.</p> <p>(c) The appliance shall not shut down automatically when subjected to a negative room pressure for less than 5 min. NOTE The purpose of this requirement is to prevent nuisance shutdowns.</p> <p>(d) Shut down of the appliance shall cause non-volatile lockout. Any manual reset shall not be possible without the use of a tool.</p> <p>(e) There shall be no flame abnormality.</p> </div>

Element**Instruction/New text**

- (f) The CO concentration in the test room or test room extraction system shall not exceed 90 ppm during the test.
- (g) The functionality that enables safety shut down under the negative room pressure shall withstand 1 000 cycles of operation, without failure.
NOTE Where a defined component achieves a minimum of 1 000 cycles and it conforms to a relevant Standard, then the complete appliance does not need to be subjected to this cycle test.
- (h) Where an appliance is power flued or has a fan assisted combustion system, failure of the fan or impairment of fan performance shall not result in spillage of combustion products under the requirements of this Clause.
NOTE Impairment of fan performance is intended to simulate the effects of greater negative pressure.

App ZC.108 (new)

After Clause ZC.107.15, add the following:

ZC.108 Shut down under negative room pressure**ZC.108.1 Scope**

This test method sets out the procedure to assess the operation of an appliance when subjected to a sustained negative room pressure.

ZC.108.2 Principle

The appliance is installed in a test room. A negative pressure differential is established in the room relative to outside of the room using mechanical ventilation. The appliance is tested under this condition and also when the negative pressure is established with the appliance running. The appliance is operated and is monitored to determine the period of time taken for it to shut down under a negative room pressure condition in the event of spillage.

ZC.108.3 Apparatus

The following apparatus shall be used:

- (a) Equipment as specified in Appendix F.
- (b) A room with a volume between 30 m³ and 40 m³ with a nominal height of between 2.0 m to 3.0 m. The room is calibrated to an air change rate of 10 ± 0.5 air changes per hour at 50 Pa negative room pressure without the appliance installed. Penetrations for consumer piping, other services (excluding the appliance flue) and test equipment shall be present during the calibration and these penetrations shall be sealed. A means to avoid stratification of room air shall be incorporated.
- (c) Carbon monoxide analyser, calibrated to give accurate and reproducible results.
- (d) Carbon dioxide analyser, calibrated to give accurate and reproducible results.
- (e) Flue gas sampling probes of stainless steel.
- (f) A means of measuring pressure accurate to ± 0.5 Pa or better and ranging up to at least 50 Pa.
- (g) A means of developing a differential negative pressure from inside to outside of the room to achieve 0 to 20 Pa or a flow rate up to 250 L/s with the appliance installed.
- (h) A means to measure the air extraction rate from the test room, calibrated to give accurate and reproducible results.
- (i) Suitable timing device.
- (j) Sufficient flue length to terminate outside the test room, or the minimum length specified by the manufacturer, whichever is the greater. The flue shall be terminated with a cowl recommended by the manufacturer or a cowl complying with AS 4566 if none is recommended.

ZC.108.4 Materials