



SUBMISSION ON PRODUCT PROFILE: Residential Space Heaters in Australia and New Zealand.

Date: 18<sup>th</sup> June 2021

Jetmaster Fireplaces Australia has been selling wood and gas fireplaces in Australia since 1980.

Jetmaster Universal Open fronted heaters have been extensively sold in New Zealand since 1985.

Our business sells open fronted heat circulating wood and gas inserts, balanced flue gas fireplace inserts, and slow combustion wood fireplaces, Electric fireplaces, outdoor gas and wood barbeques.

We note the following gaps in the product profile document:

Page 10.

GAS DECORATIVE should incorporate:

Sub Types:

Type 1 Burners only. Radiant (used for installing into existing wood fireplaces)

Type 2 Appliance incorporating burner, enclosure and flue system. Radiant, convection or combined.

These products although not meeting 60% efficiency are still able to provide radiant and heated air depending on the design of the product. A 72mj input Type 2 open fronted heat circulating heater at 40% efficient will still produce effective heating i.e. 28mj heat output. Compared to 60% efficient 30MJ input heater producing 18MJ output. Therefore the "Space heated" should read "room" not "does not supply heat".

End -Use Efficiency should read from 5% to 59%.

Typical sizing range should read 3kw -9kw.

SOLID FUEL COMBUSTION HEATERS -Subtypes should include:

- Open Fronted Heat Circulating insert (These units are tested under AS 4013 /4012 clause (f) which excludes them from meeting 60% efficiency. Due to only burning on high with no turndown capabilities.

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Space Heated should read room/ whole house.

End Use efficiency should read 40%-90%.

PAGE 16

Gas consumption should read 20MJ to 72MJ. (NOT 60MJ)

PAGE 17

SOLID FUEL COMBUSTION HEATERS should include:

. OPEN FRONTED HEAT CIRCULATING INSERTS

These fireplaces due to the nature of not being able to turn down to smolder overnight with restricted airflow and can only be burnt on high have a test that allows for units that pass this test to be Excluded under the Standard 4013/4012.

“1.2.3 (f) appliances that when fired at the high burn rate prescribed in this Standard have a maximum carbon dioxide output from the combustion chamber of less than 5% by volume with any optional doors fitted and closed.”

These heaters cannot be tampered with by a consumer’s wishing to obtain longer burning once passed and installed as there is no ability whatsoever to tamper with air inputs due to open fronted nature.

These heaters are used as supplementary heaters to add ambience and heat to an existing heat source rather than be considered the primary heat source. Are used for short intense periods to obtain maximum heat rather than long burns as is the nature of slow combustion heaters.

PAGE 19

No photo of Open Fronted Heat-Circulating Fireplace as category.

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PAGE 64- Policies and Standards:

### SOLID FUEL COMBUSTION HEATERS

Meet minimal thermal energy efficiency..... or

Meet Exclusion test 1.2.3 “appliances that when fired at the high burn rate prescribed in this Standard have a maximum carbon dioxide output from the combustion chamber of less than 5% by volume with any optional doors fitted and closed.”

PAGE 70

VENTILATION in home if done correctly will ensure adequate air in the home without excessive heat loss. Homes always require appropriate air changes. Ventilation of gas flued heaters appropriately to ensure air space remains warm whilst ensuring space heater has sufficient air. Ventilation low down in the room the heater is situated allows stack ventilation principal of cold gravity cooler air remaining low whilst ventilating high in home through flue. Air in the home remains warm but fresh as air enters heater low entering flue and exiting high up. Fire heats and ventilates home at the same time.

PAGE 113

Wood Heaters (firewood logs) there are two types enclosed and open.

- 1) **Enclosed heaters** have glass fronts with air controls and heat through radiation and convection.
- 2) **Open fronted Heat Circulating inserts** have no glass front with no air controls to restrict air to the fire. Have casing around firebox designed to produce warm air and open fronted nature allows radiant heat from exposed steel surfaces.

Open fronted Heat Circulating inserts were tested on hardwood in Technical Report No 5 in Australia which was a study done on all heater types and wood types in Australia.

Results indicated that burning hardwood on high efficiency of 40% were obtained for these types of units and emission rates of 2.2 grams per kg.

Although efficiency is lower and emissions slightly higher than allowable rates for enclosed fires the standard has recognized the alternate nature of the use for these products has high short term heat demand products that mainly are burnt on high to obtain heat over short periods of use. These products cannot be turned down. They are often used as inserts into existing open fires to increase efficiency and heat whilst still maintaining open fire nature. Used as supplementary heaters rather than primary heat sources.

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The following companies have sold Open fronted Inserts within both New Zealand and Australia Heatmaster Fireplaces, Jetmaster Fireplaces ,Warmington Fireplaces, Delta Heat, Firefox, and Heatform.

Our company within Australia have sold approximately 2000- 5000 units annually since 1980. We believe there are in excess of 100 000 Open fronted units within the market currently and as a result this product should be identified as a category within the wood heating market.

These units have been tested when burning wood on high to produce 16Kw of heat per hour. Although less efficient a heat source will still produce effective clean Greenhouse neutral energy and as a result need to be incorporated within effective Space Heating now and into future.

Attached

Relevant Sections relating to testing of Open fronted Heat Circulating inserts in Technical Report No.5 included in submission.

Copy of Australian Standards with Exemption test 1.2.3(f)

Please feel free to contact us should you require any further clarification of information.

Yours Sincerely,

Joel Belnick

Director.

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