



(SUBJECT TO DEED OF COMPANY ARRANGEMENT)

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Emissions and Efficiency Test Report
Masport I5000HW (Hardwood) Insert Wood Burning Heater

Customer: Glen Dimplex Australasia Ltd.
P.O. Box 58473
Botany
MANUKAU 2163

Report 10/2320

October 29th, 2010

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Attention: Andy Weir

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1.0 Introduction

Flue gas emissions of a sample of the appliance described below were tested for compliance to the requirements of the joint Australian/New Zealand Standard 4013:1999. The test was carried out in conjunction with a measurement of power output and efficiency using the methods set out in the joint Australian/New Zealand Standard 4012:1999.

Appliance	Masport I5000HW
Manufacturer	Glen Dimplex Australasia Ltd
Type of Appliance	Insert (hardwood) wood burning heater
Test Personnel	Michael de Vigne
Location of Tests	Applied Research Services, Beatty St Laboratory
Month of Testing	October 2010

1.1 Accreditation

Laboratory Registration Number 395

This laboratory is accredited by International Accreditation New Zealand (IANZ). The tests reported herein have been performed in accordance with the terms of our accreditation. This accreditation does not extend to any opinions or any interpretations of test results contained in this report.



IANZ has a Mutual Recognition Arrangement (MRA) with the National Association of Testing Authorities (NATA), Australia, such that both organizations recognize accreditations by IANZ and NATA as being equivalent. Users of test reports are recommended to accept test reports in the name of either accrediting body.

During the tests the heater is stabilised with the air controls at a chosen position. A test load of wood is then burnt and emissions, output, efficiency and other data are collected during the time it takes to burn the test fuel.

3.1 Details of Test Runs

Prior to testing the heater was conditioned with the test fuel and the control set on high.

Tests fuel loads were prepared in accordance with AS/NZS 4012. Details of the fuel load are given in Table 1. The test pieces were stacked in accordance with AS/NZS4012. A photograph of a typical test load is shown in Figure 2.

The test fuel was added to a bed of embers weighing between 24% and 26% of the total fuel weight. For tests on medium and low burn rates the air control was left fully open until 20% (by weight) of the fuel load had been consumed. The air control was then set to the appropriate position for the required burn rate.

4.0 Variations from the Tested Appliance

The manufacturer has requested whether a variation from the tested appliance will meet the requirements of AS/NZS4013:1999 Section 9 for a retesting exemption. The change is to include packing washers under the door hinge so that the door is raised 3mm. This would result in the distance from the floor to the door glass increasing from 202mm to 205mm.

The door seal operates by pressing the steel around the door aperture into a heat resistant rope on the door. In the appliance tested this occurred near the top of the rope. The proposed change would allow the seal to occur in the centre of the rope. We would not expect this change to measurably affect any air flows in of around the appliance nor the flow of heat from the firebox. We would not therefore expect it to measurably affect emissions from the heater.

5.0 Results

A summary of the data obtained from these tests is given in Table 2 and an estimate of the uncertainties in individual measurements is given in Table 4.

5.1 Appliance Air Flow Test

The air flow was measured in the flue before and after the tests and the results were found to comply with the requirements of the standard (less than 25% change). The measured air flow in cubic metres per minute based on uniform flow through a 150mm diameter (0.0177m²) duct corrected to 20°C and 101.3kPa was

Before Test (m ³ /min)	0.519
After Test (m ³ /min)	0.495
Difference (%)	5

5.2 Efficiency

Average efficiencies for the tests are given below. The average is taken over all the tests reported. Results for efficiency for each burn cycle and means for each burn rate are detailed in Table 2.

Average Space Heating Efficiency (%)	56
Average Water Heating Efficiency (%)	0
Average Overall Efficiency (%)	56

5.3 Particulate Emissions

Average Particulate Emissions Rate (g/kg)	1.5
Average Particulate Emissions Rate (mg/MJ)	128

5.4 Additional Runs with Fan

Additional high runs were carried out with the fan set on its low setting. The details of these runs are detailed in Table 3.


6.0 Compliance

The joint Australian/New Zealand Standard 4013:1999 requires that the particulate emission factor calculated by averaging the results for the high, medium and low burns be not greater than 4.0 g/kg for an appliance without a catalytic converter. On the basis of the result in Section 4.3 the appliance tested complies with the joint Australian/New Zealand Standard 4013:1999.

This report relates only to the product sample tested. Any modifications to the product may invalidate the compliance results.

This report:

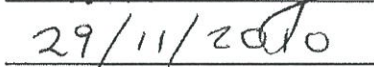
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Approved by: W. S. Webley



Release Date:



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