



(This report is not endorsed)

Test Report Number: 0405.

Item Under Test (IUT):

Make: Little Cracker
Model: The Multi-Fuel
Type: Freestanding

Client Details:

Attention: Mr. Bert van Beuzekom
Company Name: Tarlan Technical Ltd
Company Address: 66 Amesbury Road RD7, Rangiora 7477
Phone: 03 313 6271
Manufacturer: As above

Client Instructions:

The client requested that the heater be tested to establish the maximum power output when installed into a calorific room as per the Home Heating Association test method written by Applied Research Services Limited. The heater was tested to soft wood and coal.

Content

The heater was tested as per the above instructions.
Testing was completed on the 30/06/2015

Summary

The **AVERAGE** maximum output power observed using the above test method for the second stable sixty minute period were:

Soft wood **5.91 kW**
Coal **6.85 kW**

The **INSTANTANEOUS PEAK** output power observed at any point in time during the testing were:

Soft wood **6.23 kW**
Coal **7.33 kW**



Checked by
Mr. P. Sparrow
Authorized Signatory



Tested by
Mr. P. Chen
Compliance Engineer

Issue Date 21/08/2015



Section 1: Description

Overall external dimensions:

The heater had the following overall external dimensions.

Height	665 mm	- measured to the highest point of the heater (including flue spigot)
Width	262 mm	- measured at the widest points of the heater (including heat shields)
Depth	423 mm	- measured from the rear most heat shield panel to the door (including door lip)

Refer to design drawings for detailed dimensions.

Firebox internal dimensions:

The fire box had the following basic internal dimensions;

Height	160 mm	- measured between metal floor and metal ceiling baffle.
Width	188 mm	- measured between the interior metal side walls.
Depth	329 mm	- measured between the rear metal interior wall and door aperture lip.

Refer to design drawings for detailed dimensions.

Removable grilles and cook tops:

The heater did not have any removable grille or cook tops.

Fuel loading doors:

The door consisted of a one piece steel frame with a rectangular glass window.

Overall dimensions of the door were:

Height	150 mm
Width:	185 mm

The lowest edge of the glass was located 436 mm above the floor.

The viewing glass measured 80 high and 120 wide.

Refer to design drawings for detailed dimensions.

Refractory materials and gaskets:

The heater was not fitted with fire bricks.

The heater was fitted with a fire resistant rope to seal the gap between the door glass and the firebox aperture.

Refer to design drawings for material dimensions and specifications.

Water heating device:

The heater was not fitted with a water heating device.

Air circulation Fan:

This heater was not fitted with an air circulation fan.

Catalytic combustor:

This heater was not fitted with a catalytic combustor.

Bypass damper:

The heater was not fitted with a bypass damper.



Section 2: Air inlets and outlet

Primary air:

The primary air supply entered the heater via two rectangular openings located at the top of the fuel loading door. There were additional primary air entered the heater via two rectangular openings at the lower ash removing door.

Both primary airs were controlled by metal sliding covers.

Refer to design drawings for detailed dimensions.

Baffle Bypass Control:

There was a push/pull lever to control the baffle bypass.

Primary air test burn settings:

Air control setting	Slide opening
Maximum setting	27 mm <i>Fuel loading door</i>
	15 mm <i>Ash removing door</i>

To achieve the maximum power the heater was operated with both maximum primary airs opened and baffle bypass control lever fully pushed out.

Flue gas outlet:

The flue gas outlet spigot was positioned centrally when viewed from the front of the firebox and the spigot's axial centre was 73 mm from the rear wall of the firebox.

The flue spigot had an internal diameter of 78 mm.

Refer to design drawings for detailed dimensions.

Cross sectional area:

The maximum primary air entering the firebox (High) was calculated to be 1680 mm²
The flue spigot outlet aperture was calculated to be 4778 mm²

Refer to design drawings for detailed dimensions.

Section 3: Procedure

Softwood:

Testing was carried out according to the Home Heating Associations maximum output test method. Fuel is loaded in a random direction approximately every 10 minutes to encourage rapid combustion and maintained between the required fueling levels. The fuel loading rate was approximately 2.4 kg per hour (approximately 0.4 kg every 10 minutes).

Coal:

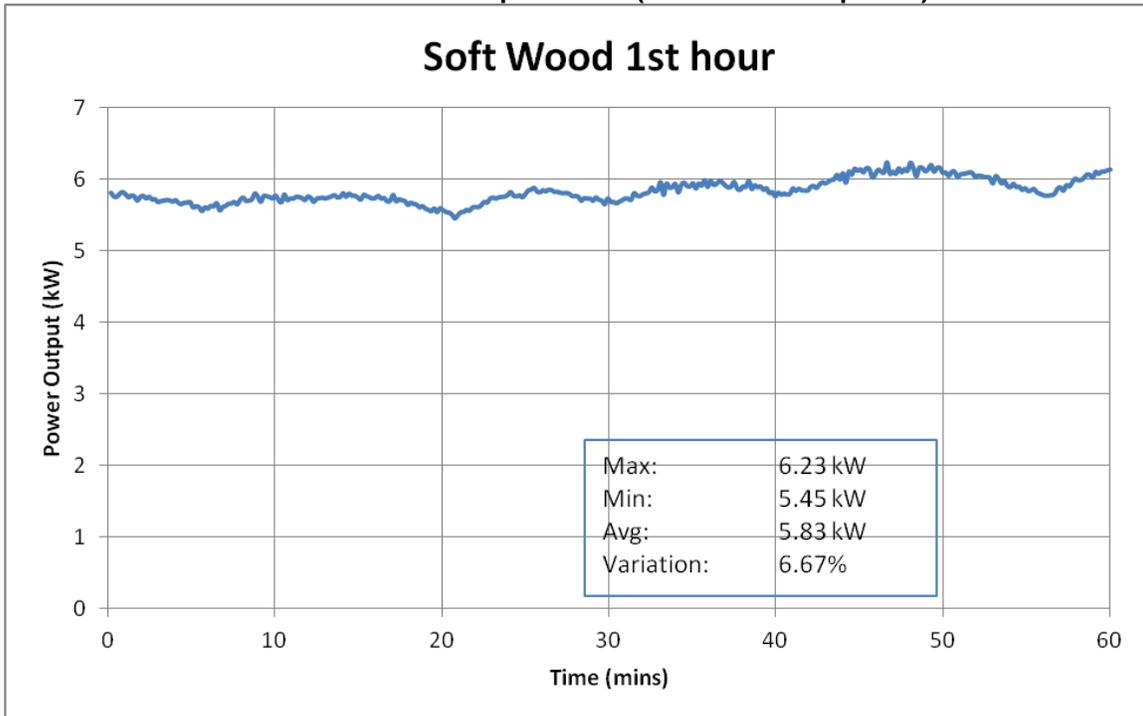
Testing was carried out according to the Home Heating Associations maximum output test method. The fuel loading rate was approximately 3.0 kg per hour (approximately 0.5 kg every 10 minutes).

Section 4: Results

Ambient Temperature range recorded during test was 16.07 °C to 18.35 °C
Wall Temperature range during test was 17.70 °C to 32.50 °C

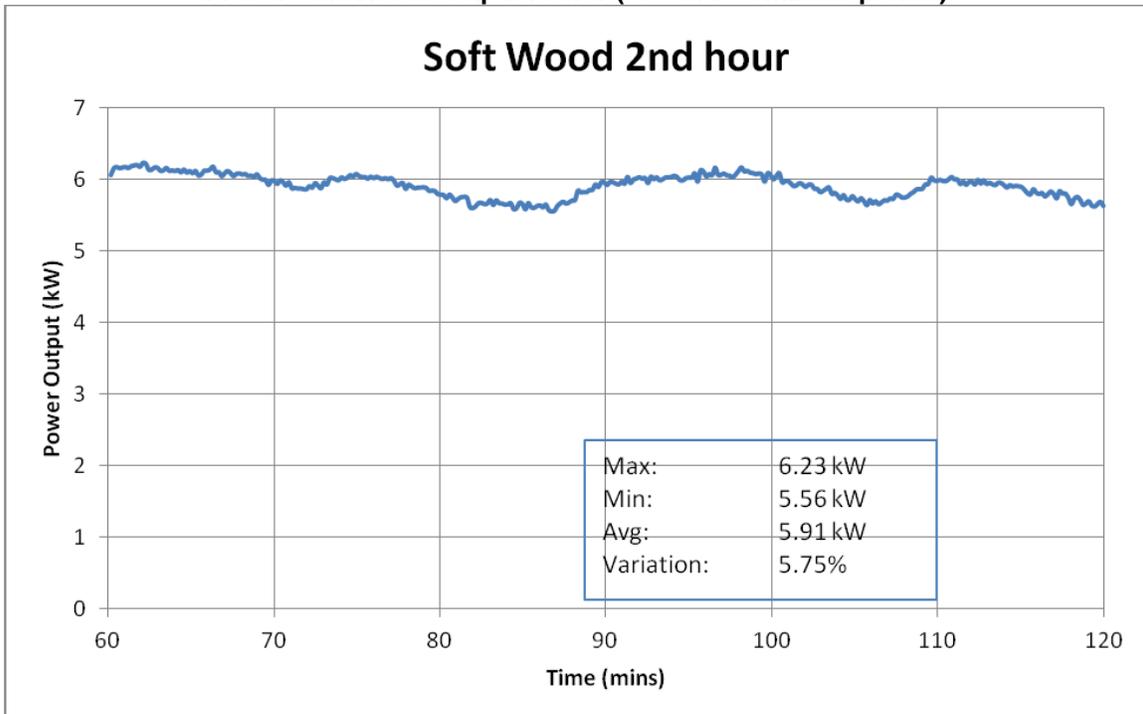


Plot of Soft Wood Output Power (First 60 minute period)



The calculated average power output for the first sixty minute period was 5.83 kW +/-6.67%

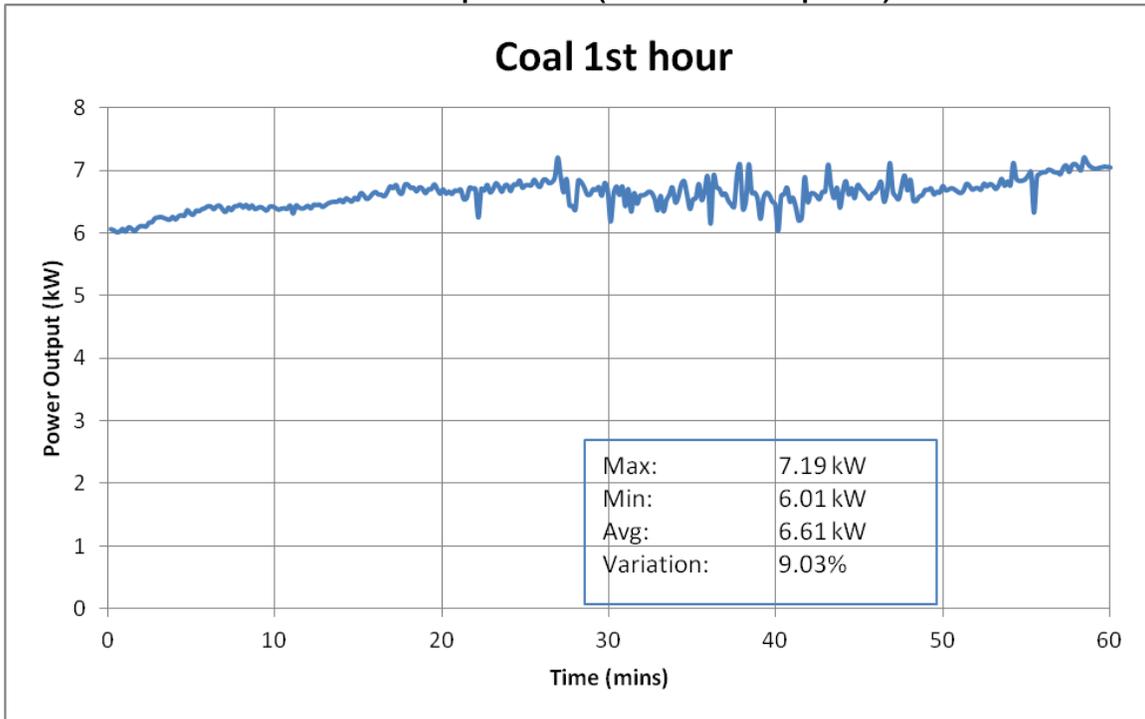
Plot of Soft Wood Output Power (Second 60 minute period)



The calculated average power output for the second sixty minute period was 5.91 kW +/-5.75%

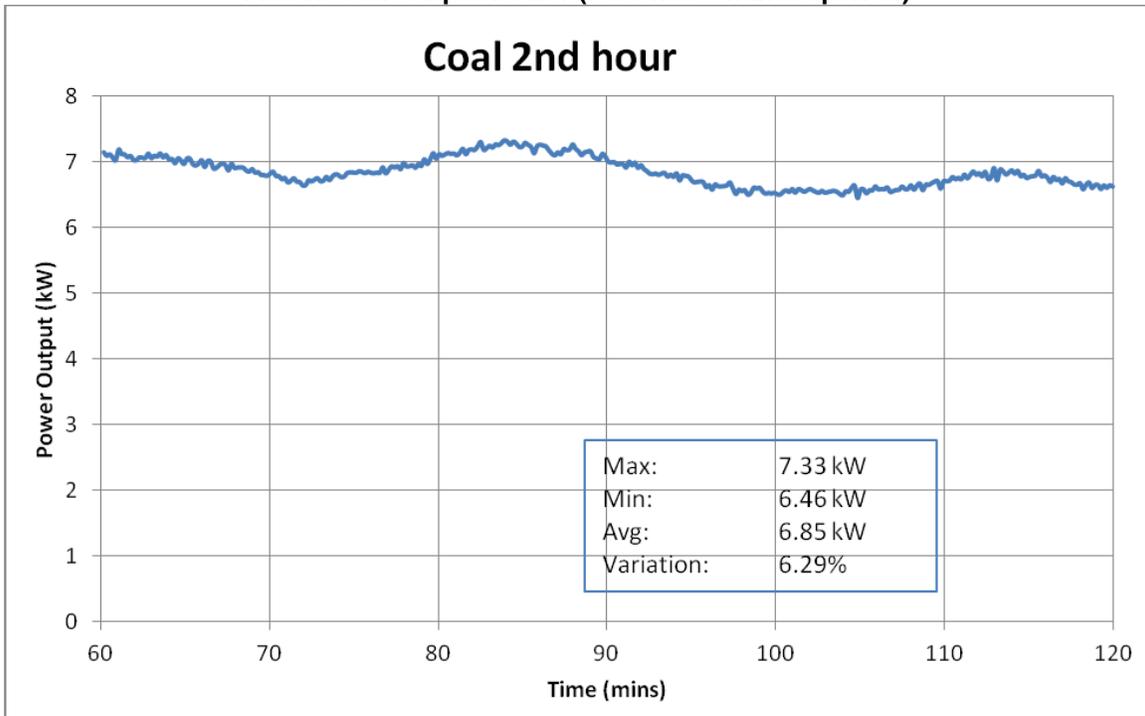


Plot of Coal Output Power (First 60 minute period)



The calculated average power output for the second sixty minute period was 6.61 kW +/-9.03%

Plot of Coal Output Power (Second 60 minute period)



The calculated average power output for the second sixty minute period was 6.85 kW +/-6.29%



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