



# Food Service Technology Center Appliance Test Summary Report

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<b>Manufacturer</b>	Vulcan
<b>Model</b>	GCO2D-10 SN: 481663103
<b>Appliance</b>	half-size 5 rack convection oven - Gas

<b>Report Number</b>	501310088
<b>Test Date</b>	January, 2011
<b>Tested By</b>	K.Sham

## Purpose of Testing

This testing determined the energy input rate, preheat time and energy, idle energy rate, and heavy-load cooking-energy efficiency of the oven by applying ASTM F1496.

## Cavity Volume

Internal Oven-Cavity Volume (CuFt)	3.65
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## Energy Input Rate

Rated Energy Input Rate (Btu/h)	25,000
Measured Energy Input Rate (Btu/h)	25,040
Difference (%)	0.2
Fan/Control Energy Rate (kW)	0.44

## Preheat to 340°F

Duration (min)	8.50
Energy Consumption (Btu)	3,375
Preheat Rate (°F/min)	30.9

## Idle at 350°F

Idle Energy Rate (Btu/h)	4,293
Control Idle Energy Rate (kW)	0.44

## Heavy-Load Cooking Energy Efficiency <sup>a</sup>

Food Product	Russet Potatoes
Oven Temperature Set-point (°F)	350
Cook Time (min)	46.43
Cooking Energy Rate (Btu/h)	19,832
Cooking Energy Rate (kW)	0.44
Energy to Food (Btu/lb)	230
Energy to Appliance (Btu/lb)	450
Cooking-Energy Efficiency (%)	51.2 ± 1.4
Production Capacity (lb/h)	47.4 ± 2.5

<sup>a</sup> based on a minimum of three test replicates.

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## Vulcan Hart Corporation

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<b>Manufacturer</b>	Baker's Pride
<b>Model</b>	GCO2D-10 SN:481663103
<b>Appliance</b>	Half-size 5 rack convection oven - Gas

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## Heavy-Load Potato Test Data

	Test #1	Test #2	Test #3
<b>Measured Values</b>			
<b>Cook Time (min)</b>	<b>46.53</b>	<b>47.60</b>	<b>45.17</b>
<b>Electric Energy to Oven (kWh)</b>	<b>0.34</b>	<b>0.35</b>	<b>0.33</b>
Heating Value (Btu/scf)	1,019	1,019	1,019
Initial Weight of Potatoes (lb)	36.85	36.81	36.41
Final Weight of Potatoes (lb)	32.10	32.00	32.08
Initial Temperature of Potatoes (°F)	76.1	76.3	77.2
Final Temperature of Potatoes (°F)	205	205	205
<b>Calculated Values</b>			
Sensible Heat (Btu)	3,989	3,979	3,909
Latent - Heat of Vaporization (Btu)	4,599	4,665	4,204
Total Energy to Food (Btu)	8,588	8,643	8,113
<b>Energy to Food (Btu/lb)</b>	<b>233</b>	<b>235</b>	<b>223</b>
Total Energy to Oven (Btu)	16,751	17,091	15,698
<b>Energy per Pound of Food Cooked (Btu/lb)</b>	<b>455</b>	<b>464</b>	<b>431</b>
<b>Cooking-Energy Efficiency (%)</b>	<b>51.3</b>	<b>50.6</b>	<b>51.7</b>
<b>Electric-Only Cooking-Energy Rate (kW)</b>	<b>0.44</b>	<b>0.44</b>	<b>0.44</b>
<b>Gas-Only Cooking Energy Rate (Btu/h)</b>	<b>20,104</b>	<b>20,037</b>	<b>19,356</b>
<b>Production Capacity (lb/h)</b>	<b>47.5</b>	<b>46.4</b>	<b>48.4</b>

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