



# Food Service Technology Center Appliance Test Summary Report

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<b>Manufacturer</b>	Amana
<b>Model</b>	AXP20
<b>Appliance</b>	Counter top rapid cook oven - Electric

<b>Report Number</b>	5012.09.11
<b>Date</b>	March, 2009
<b>Tested By</b>	G. Sorensen

## 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 F2238.

## Energy Input Rate

Test Voltage (V)	208
Rated Energy Input Rate (kW)	5.7
Measured Energy Input Rate (kW)	5.43
Difference (%)	4.8

## Preheat

Voltage (V)	208
Oven Temperature (°F)	520
Duration (min)	8.80
Energy Consumption (kWh)	0.760

## Idle

Voltage (V)	208
Oven Temperature (°F)	520
Idle Energy Rate (kW)	1.57

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

Voltage (V)	208
Food Product <sup>b</sup>	Cheese Pizza
Oven Temperature (°F)	520
Cook Time (min)	1.17
Test Time (min)	12.0
Cooking Energy Rate (kW)	5.20
Energy to Food (Btu/lb)	138
Energy to Appliance (Btu/lb)	356
Cooking-Energy Efficiency (%)	38.8 ± 1.8
Production Capacity (lb/hr)	35.0 ± 2.6

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

<sup>b</sup> pizza was cooked with a single stage recipe:  
oven temperature 520°F, microwave setting 80%, i.r. setting 100%.



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### Heavy-Load Test Data

	Test #1	Test #2	Test #3
<b>Measured Values</b>			
Test Voltage (V)	208	208	208
Cook Time (min)	1.17	1.17	1.17
Test Time (min)	12.4	11.9	11.7
Electric Energy to Oven (kWh)	1.06	1.04	1.04
Number of Pizzas	7	7	7
Initial Pizza Temperature (°F)	40.0	40.0	40.0
Average Final Pizza Temperature (°F)	195.7	194.7	196.9
Initial Weight of Pizza (lb)	10.085	10.004	10.037
Final Weight of Pizza (lb)	9.606	9.550	9.549
<b>Calculated Values</b>			
Sensible Heat (Btu)	931	918	934
Latent - Heat of Vaporization (Btu)	465	440	473
Total Energy to Food (Btu)	1,396	1,358	1,407
Energy to Food (Btu/lb)	138	136	140
Total Energy to Oven (Btu)	3,618	3,550	3,550
Energy per Pound of Food Cooked (Btu/lb)	359	355	354
Cooking-Energy Efficiency (%)	38.6	38.3	39.6
Cooking-Energy Rate (kW)	5.18	5.19	5.36
Production Capacity (lb/h)	33.9	35.3	35.9

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