



# 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%.



Amana Commercial Products

225 49<sup>th</sup> Ave Dr. SW  
Cedar Rapids, IA 52404

[www.amanacommercial.com](http://www.amanacommercial.com)

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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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