



Food Service Technology Center Appliance Test Summary Report

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Manufacturer	XLT Ovens
Model	XLT 3855-TS
Appliance	Conveyor Oven - Gas

Report Number	5012.09.31
Report Date	September, 2009
Tested By	A. Spitz

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 conveyor oven by applying the ASTM F1817-97 Standard Test Method.

NOTE: The following results consequent from testing the oven with a "3 Finger" heating configuration above the conveyor belt.

Energy Input Rate

Rated Energy Input Rate (Btu/h)	160,000
Measured Energy Input Rate (Btu/h)	149,472
Difference (%)	6.6
Electric Energy Input Rate (kW)	0.50

Preheat to 465°F

Duration (min)	9.00
Gas Energy Consumption (Btu)	17,343
Electric Energy Consumption (kWh)	0.08
Preheat Rate (°F/min)	43.71

Idle at 475°F

Idle Energy Rate (Btu/h)	45,004
Electric Energy Rate (kW)	0.45

Heavy-Load Cooking Energy Efficiency ^a

Food Product	12" Cheese Pizza
Cook Time (min)	4.42
Test Time (min)	6.27
Cooking Energy Rate (Btu/h)	92,803
Electric Energy Rate (kW)	0.43
Energy to Food (Btu/lb)	127
Energy to Appliance (Btu/lb)	279
Cooking-Energy Efficiency (%)	45.4 ± 3.6
Production Capacity (pizzas/h)	229.7 ± 5.1

^a based on a minimum of three test replicates.



XLT Ovens
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Light-Load Cooking Energy Efficiency ^a

Food Product	12" Cheese Pizza
Cook Time (min)	4.42
Test Time (min)	8.84
Cooking Energy Rate (Btu/h)	53,114
Electric Energy Rate (kW)	0.44
Energy to Food (Btu/lb)	131
Energy to Appliance (Btu/lb)	912
Cooking-Energy Efficiency (%)	14.4 ± 0.5
Production Capacity (pizzas/h)	40.7 ± 0.2

^a based on a minimum of three test replicates.

Heavy-Load Test Data

	Test #1	Test #2	Test #3
Measured Values			
Number of Pizzas	24	24	24
Cook Time (min)	4.42	4.42	4.42
Test Time (min)	6.21	6.28	6.32
Gas Energy to Oven (Btu)	9,301	9,913	9,884
Electric Energy to Oven (Btu)	153	154	155
Initial Pizza Weight (lb)	35.155	35.405	35.420
Final Pizza Weight (lb)	33.940	34.200	34.245
Initial Pizza Temperature (°F)	39.0	38.0	38.0
Final Pizza Temperature (°F)	195.2	194.7	197.0
Calculated Values			
Sensible Heat (Btu)	3,256	3,291	3,339
Latent – Heat of Vaporization (Btu)	1,193	1,183	1,154
Total Energy to Food (Btu)	4,449	4,474	4,493
Energy To Food (Btu/lb)	127	126	127
Total Energy to Oven (Btu)	9,454	10,067	10,038
Energy per Pound of Food Cooked (Btu/lb)	269	284	283
Cooking-Energy Efficiency (%)	47.1	44.4	44.8
Cooking-Energy Rate (Btu/h)	89,866	94,712	93,831
Cooking-Energy Rate (kW)	0.43	0.43	0.43
Production Capacity (Pizzas/h)	231.9	229.3	227.9
Production Capacity (lb/h)	339.7	338.3	336.3

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Light-Load Test Data

	Test #1	Test #2	Test #3
Measured Values			
Number of Pizzas	6	6	6
Cook Time (min)	4.42	4.42	4.42
Test Time (min)	8.85	8.82	8.85
Gas Energy to Oven (Btu)	7,829	7,824	7,823
Electric Energy to Oven (Btu)	221	220	221
Initial Pizza Weight (lb)	8.850	8.795	8.835
Final Pizza Weight (lb)	8.495	8.475	8.470
Initial Pizza Temperature (°F)	39.0	39.0	39.0
Final Pizza Temperature (°F)	192.3	197.7	194.3
Calculated Values			
Sensible Heat (Btu)	804	828	813
Latent – Heat of Vaporization (Btu)	349	314	358
Total Energy to Food (Btu)	1,153	1,142	1,172
Energy To Food (Btu/lb)	130	130	133
Total Energy to Oven (Btu)	8,051	8,044	8,044
Energy per Pound of Food Cooked (Btu/lb)	910	915	910
Cooking-Energy Efficiency (%)	14.3	14.2	14.6
Cooking-Energy Rate (Btu/h)	53,079	53,225	53,036
Cooking-Energy Rate (kW)	0.44	0.44	0.44
Production Capacity (Pizzas/h)	40.7	40.8	40.7
Production Capacity (lb/h)	60.0	59.8	59.9

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