



Food Service Technology Center Appliance Test Summary Report

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Manufacturer	XLT Ovens
Model	XLT 3270-TS
Appliance	Conveyor Oven - Gas

Report Number	5012.09.30
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.

Energy Input Rate

Rated Energy Input Rate (Btu/h)	180,000
Measured Energy Input Rate (Btu/h)	180,260
Difference (%)	0.1
Electric Energy Input Rate (kW)	0.97

Preheat to 465°F

Duration (min)	9.25
Gas Energy Consumption (Btu)	22,076
Electric Energy Consumption (kWh)	0.15
Preheat Rate (°F/min)	42.96

Idle at 475°F

Idle Energy Rate (Btu/h)	46,017
Electric Energy Rate (kW)	0.83

Heavy-Load Cooking Energy Efficiency ^a

Food Product	12" Cheese Pizza
Cook Time (min)	4.32
Test Time (min)	7.09
Cooking Energy Rate (Btu/h)	99,682
Electric Energy Rate (kW)	0.83
Energy to Food (Btu/lb)	128
Energy to Appliance (Btu/lb)	274
Cooking-Energy Efficiency (%)	46.9 ± 3.3
Production Capacity (pizzas/h)	253.9 ± 20.0

^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)	4.32
Test Time (min)	8.58
Cooking Energy Rate (Btu/h)	64,636
Electric Energy Rate (kW)	0.84
Energy to Food (Btu/lb)	135
Energy to Appliance (Btu/lb)	1,633
Cooking-Energy Efficiency (%)	8.3 ± 0.4
Production Capacity (pizzas/h)	28.0 ± 0.4

^a based on a minimum of three test replicates.

Heavy-Load Test Data

	Test #1	Test #2	Test #3
Measured Values			
Number of Pizzas	30	30	30
Cook Time (min)	4.32	4.32	4.32
Test Time (min)	7.07	6.88	7.33
Gas Energy to Oven (Btu)	11,971	11,427	11,948
Electric Energy to Oven (Btu)	332	327	348
Initial Pizza Weight (lb)	44.285	44.285	44.320
Final Pizza Weight (lb)	42.725	42.725	42.770
Initial Pizza Temperature (°F)	39.0	39.0	39.0
Final Pizza Temperature (°F)	195.8	197.2	197.8
Calculated Values			
Sensible Heat (Btu)	4,118	4,155	4,172
Latent – Heat of Vaporization (Btu)	1,532	1,532	1,522
Total Energy to Food (Btu)	5,650	5,686	5,694
Energy To Food (Btu/lb)	128	128	129
Total Energy to Oven (Btu)	12,303	11,754	12,296
Energy per Pound of Food Cooked (Btu/lb)	278	265	277
Cooking-Energy Efficiency (%)	45.9	48.4	46.3
Cooking-Energy Rate (Btu/h)	101,592	99,653	97,801
Cooking-Energy Rate (kW)	0.83	0.83	0.84
Production Capacity (Pizzas/h)	254.6	261.6	245.6
Production Capacity (lb/h)	375.8	386.2	362.8

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Light-Load Test Data

	Test #1	Test #2	Test #3
Measured Values			
Number of Pizzas	4	4	4
Cook Time (min)	4.32	4.32	4.32
Test Time (min)	8.58	8.59	8.56
Gas Energy to Oven (Btu)	9,239	9,239	9,239
Electric Energy to Oven (Btu)	410	411	410
Initial Pizza Weight (lb)	5.900	5.910	5.920
Final Pizza Weight (lb)	5.665	5.650	5.655
Initial Pizza Temperature (°F)	39.0	39.0	39.0
Final Pizza Temperature (°F)	195.8	193.7	195.6
Calculated Values			
Sensible Heat (Btu)	549	542	550
Latent – Heat of Vaporization (Btu)	231	255	260
Total Energy to Food (Btu)	780	797	810
Energy To Food (Btu/lb)	132	135	137
Total Energy to Oven (Btu)	9,649	9,650	9,649
Energy per Pound of Food Cooked (Btu/lb)	1,636	1,633	1,630
Cooking-Energy Efficiency (%)	8.08	8.26	8.40
Cooking-Energy Rate (Btu/h)	64,610	64,535	64,761
Cooking-Energy Rate (kW)	0.84	0.84	0.84
Production Capacity (Pizzas/h)	28.0	27.9	28.0
Production Capacity (lb/h)	41.3	41.3	41.5

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