



# UL Guide for Conveyor 2000



*"The Ovention oven not only kept up but it also saved me \$80,000 because I didn't need to invest in a hood system and other fire-suppression equipment."  
- Happy Ovention Customer*

For additional information, please visit [OventionOvens.com](http://OventionOvens.com)

# Table of Contents

Spec Sheet.....	3
UL Certificate.....	5
Ovention, Inc. KNLZ.....	7
KNLZ Explained.....	8
EPA Letter for C2600.....	10
Letter Report EPA 202 Clarification.....	13
San Certificate.....	14
Energy Report.....	16

Looking for something else? Let us know!

[connect@oventionovens.com](mailto:connect@oventionovens.com)

Project: \_\_\_\_\_

Item No: \_\_\_\_\_

Quantity: \_\_\_\_\_

## The Conveyor 2000-1ph Oven



**MORE AIR = BETTER QUALITY, FASTER**

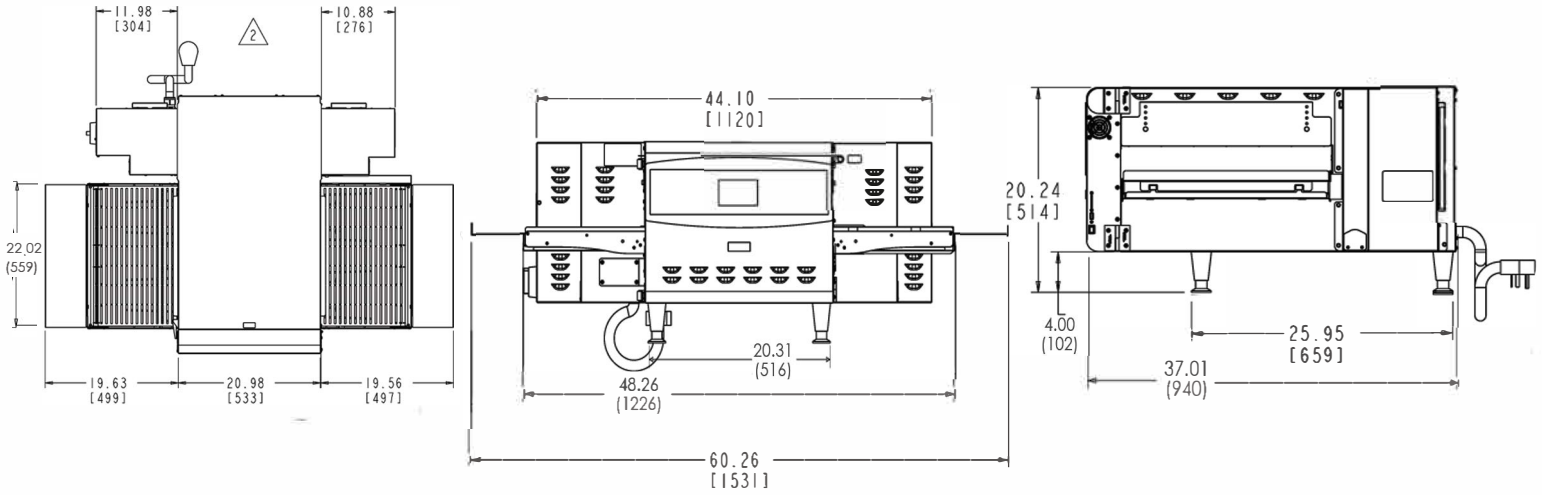
Patented air flow technology means 3x more air than traditional impingement.

<p><b>STANDARD FEATURES</b></p> <ul style="list-style-type: none"> <li>• Independently controlled top and bottom blowers w/ speeds up to 741 CFM (ft<sup>3</sup>/min)</li> <li>• Quiet work environment – maximum (dB) of 72</li> <li>• Reduced energy consumption (documentation available)</li> <li>• Less impact on HVAC costs (documentation available)</li> <li>• Precision Impingement™ utilizes hot air for a fast, high-quality cook without microwaves</li> <li>• Warranty - 1 year parts and labor</li> <li>• Includes (2) 6" end stops. Larger extensions available to accommodate a full-size sheet pan</li> </ul>
<p><b>OPERATION</b></p> <ul style="list-style-type: none"> <li>• Intuitive, one-touch display</li> <li>• Easy to program up to 36 conveyor presets</li> <li>• Operationally friendly with front screen</li> <li>• USB port – upload and download recipes, view cook logs, diagnostic mode</li> </ul>
<p><b>PERFORMANCE</b></p> <ul style="list-style-type: none"> <li>• Cook 80 pizzas per hour in conveyor mode (10" pie, product dependent)</li> <li>• Fits up to 18" pizza or a full size sheet pan</li> <li>• Grill, roast, bake, steam, broil, and air fry</li> <li>• Use any oven-safe pans. Specialty pans available</li> <li>• 50/50 Split belt option available</li> </ul>
<p><b>CONSTRUCTION</b></p> <ul style="list-style-type: none"> <li>• 304 stainless steel interior</li> <li>• 430 stainless steel exterior</li> <li>• Easy to clean design (filters and jet plates are dishwasher safe)</li> </ul>
<p><b>VENTILATION</b></p> <ul style="list-style-type: none"> <li>• No hood system required*</li> <li>• UL listed for multiple stacking configurations</li> <li>• Performs 2.5x better than the required UL grease emissions standard</li> </ul> <p><small>*Type 2 hood necessary if HVAC cannot accommodate thermal load</small></p>

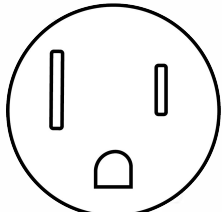
**PROUDLY MADE IN THE USA**



## The Conveyor 2000-1ph Oven



Measurement Units: Inches (Millimeters)

DIMENSIONS			ELECTRICAL SPECIFICATIONS		
Height	16.24"	413 mm	Temperature Range	82-525°F	28-274°C
With Legs	20.24"	514 mm	Voltage	208-240 VAC	 NEMA 6-50
Width	48.26"	1226 mm	Watts	9.2kW/11.8kW	
Depth	37.01"	940 mm	Amperage	44/49 Amp	
Weight	226 lbs.	102.5 kg	Phase	1 ph	
Minimum Clearance	0" Top	0 mm Top	Frequency	60Hz	
	2" Back	51 mm Back	Cord Length	72"	1829 mm
	0" Side	0 mm Side	<b>SHIPPING SIZE</b>		
OVEN CAVITY DIMENSIONS			Cube (L x W x H)	68" x 41" x 31"	727 mm x 1041 mm x 787 mm
Height	3.5"	89 mm	Shipping Weight	313 lbs.	142 kg
Width	20"	508 mm	Freight Class	175	
Depth	21"	533 mm	FOB	Sturgeon Bay, Wisconsin, USA	

\*Ovention, Inc. reserves the right to make technical improvements

**PROUDLY MADE IN THE USA**

# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20180706-E351658  
**Report Reference** E351658-20130725  
**Issue Date** 2018-JULY-06

**Issued to:** OVENTION INC  
SUITE 128, 10500 METRIC DR  
DALLAS TX 75243

**This is to certify that  
representative samples of**

COMMERCIAL COOKING APPLIANCES WITH INTEGRAL  
SYSTEMS FOR LIMITING THE EMISSION OF GREASE  
LADEN AIR

See Addendum

Have been investigated by UL in accordance with the  
Standard(s) indicated on this Certificate.

**Standard(s) for Safety:** UL 197, Commercial Electric Cooking Appliances  
CSA/CAN C22.2 No. 109, Commercial Cooking Appliances,

**Additional Information:** See the UL Online Certifications Directory at  
[www.ul.com/database](http://www.ul.com/database) for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's  
Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please  
contact a local UL Customer Service Representative at <http://ul.com/about/locations/>



# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20180706-E351658  
**Report Reference** E351658-20130725  
**Issue Date** 2018-JULY-06

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

USL - Convection Oven, Conveyor Type, with Integral System for Limiting the Emission of Grease-Laden Air, Model C1200+, C2000.

USL - Convection Oven, "Shuttle" Conveyor Type, with Integral System for Limiting the Emission of Grease-Laden Air, Model S1200+, S2000.

USL, CNL - Convection Oven, Conveyor Type, with Integral System for Limiting the Emission of Grease-Laden Air, Model C1200+, C1200CSA, C2000CSA, C12003PH, C20003PH, C2600.

USL, CNL - Convection Oven, "Shuttle" Conveyor Type, with Integral System for Limiting the Emission of Grease-Laden Air, Model S1200+, S1200CSA, S12003PH, S1600, S2000CSA, and S20003PH.

+ Models C1200 and S1200 with 30A plug are USL only. Models C1200 and S1200 with 50A plug are USL/CNL.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/about/locations/>



# KNLZ.E351658 - COMMERCIAL COOKING APPLIANCES WITH INTEGRAL SYSTEMS FOR LIMITING THE EMISSION OF GREASE-LADEN AIR

## Commercial Cooking Appliances with Integral Systems for Limiting the Emission of Grease-laden Air

See General Information for Commercial Cooking Appliances with Integral Systems for Limiting the Emission of Grease-laden Air

### **OVENTION INC**

E351658

635 S 28Th St  
Milwaukee, WI 53215 USA

**Convection Ovens with Integral Systems for Limiting the Emission of Grease-laden Air**, Model(s) Elixir(a), M360-14, -14-3PH, -12, -12-3PH

**Convection ovens, conveyor type, with integral system for limiting the emission of grease-laden air**, Model(s) C1200\*a, C12003PH\*a, C1200CSA\*a, C2000\*a, C20003PH\*a, C2000CSA\*a, C2600\*a

**Convection ovens, matchbox type, with integral system for limiting the emission of grease-laden air**, Model(s) M1313\*a, M1313-3PH\*a, M1313CSA\*a, M1718\*a, M1718-3PH\*a, M1718CSA\*a

**Convection ovens, shuttle conveyor type, with integral system for limiting the emission of grease-laden air**, Model(s) S1200\*a, S12003PH\*a, S1200CSA\*a, S1600\*a, S2000\*a, S20003PH\*a, S2000CSA\*a

**Infra-Red/Convection Ovens with Integral Systems for Limiting the Emission of Grease-laden Air**, Model(s) MiLO-14(!), MiLO-16 (!), MiLO2-16(!)

(!) - may be f/b "-", may be f/b up to ten alphanumeric suffixes.

(a) - May be followed by prefixes or suffixes Oven with Integral Systems for Limiting the Emission of Grease-laden Air.

\*a - May be stacked up to 2 high using stacking kit.

Last Updated on 2019-04-02

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2019 UL LLC"

# KNLZ.GuidelInfo - COMMERCIAL COOKING APPLIANCES WITH INTEGRAL SYSTEMS FOR LIMITING THE EMISSION OF GREASE-LADEN AIR

## [Heaters and Heating Equipment] (Heaters, Cooking Appliances) Commercial Cooking Appliances with Integral Systems for Limiting the Emission of Grease-laden Air

See General Information for Heaters, Cooking Appliances

### USE AND INSTALLATION

This category covers cooking equipment intended for commercial use, such as pressurized deep fat fryers and other appliances for use in commercial kitchens, restaurants or other business establishments where food is prepared. Each appliance covered under this category is manufactured with an integral system feature to limit the emission of grease-laden air from the cooking process to the room ambient.

These appliances have been investigated for the limit of 5 mg/m<sup>3</sup> for the emission of grease-laden air to the room ambient in accordance with the recommendations of ANSI/NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations," using the EPA-202 test method prescribed for cooking appliances provided with integral recirculating air systems.

These products are not intended for connection to a ducted exhaust system.

Appliances in this category are not provided with an integral fire extinguishing system. Authorities having jurisdiction should be consulted as to the requirements for this equipment with respect to fire extinguishing systems, such as the need for field installed systems in accordance with ANSI/NFPA 96.

In cases where the nature or construction of equipment is such that special precautions beyond the requirements of ANSI/NFPA 70, "National Electrical Code," must be observed in installations or use, suitable warning or special instructions are marked on the equipment.

Appliances covered under this category are suitable for wiring with either copper or aluminum power-supply conductors unless marked "Use Copper Wire Only For Power Supply Connections."

Commercial cooking appliances of certain types are designed for permanent connections to water supply and sewer lines at the point of installation. Authorities having jurisdiction should be consulted as to the requirements for this equipment with respect to sanitation and connection to water supply and waste disposal lines.

### FACTORS NOT INVESTIGATED

Neither the toxicity of coatings nor the physiological effects on persons consuming food products prepared by use of these appliances has been investigated.

### PRODUCT IDENTITY

One of the following product identities appears on the product:

Commercial Cooking Appliance with Integral System for Limiting the Emission of Grease-laden Air

Cooking Appliance with Integral System for Limiting the Emission of Grease-laden Air

Other product identities may be used as shown in the individual certifications, followed by the words "with Integral System for Limiting the Emission of Grease-laden Air."

### RELATED PRODUCTS

For products with integral recirculating systems including fire extinguishing systems, see Commercial, with Integral Recirculating Systems (KNKG).



For cooking oil filters that are not an integral part of another appliance, see Commercial Filters for Cooking Oil (KNRF).

## ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ) and Heating, Cooling, Ventilating and Cooking Equipment (AAHC).

## REQUIREMENTS

The basic standard used to investigate products in this category is ANSI/UL 197, "Commercial Electric Cooking Appliances."

Appliances covered under this category with an integral cooking oil filter have been additionally investigated to ANSI/UL 1889, "Commercial Filters for Cooking Oil."

## UL MARK

The Certification Mark of UL on the product is the only method provided by UL to identify products manufactured under its Certification and Follow-Up Service. The Certification Mark for these products includes the UL symbol, the words "CERTIFIED" and "SAFETY," the geographic identifier(s), and a file number.

## Alternate UL Mark

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the product name "Commercial Cooking Appliance" or "Cooking Appliance," or other appropriate product name as shown in the individual Listings, together with the words "with integral system for limiting the emission of grease-laden air."

\* \* \* \* \*

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

Last Updated on 2013-05-16

---

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2019 UL LLC"



2013-09-13

Mr. Scott Smith  
Ovention Inc.  
10500 Metric Dr., Suite 128  
Dallas, TX 75243  
United States

E-mail: [ssmith@applianceinnovation.com](mailto:ssmith@applianceinnovation.com)

Our Reference: File E351658, Project 13NK05202

Subject: E351658 – EPA 202 EVALUATION OF CONVECTION OVEN MODELS S2000 AND C2000.

Mr. Smith:

Per your request, Project 13NK05202 was opened for the evaluation of grease-laden vapors produced by the Models S2000 and C2000. The model C2000 was used for test purposes, and considered representative of all other models.

The scope of the project was to test this model in accordance with EPA Method 202 test guidelines to demonstrate compliance with NFPA96, the Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, paragraph 4.1.1.2 conducted in accordance with UL710B, the Standard for Recirculating Systems, Sec. 17 for Complimentary Listing under UL's KNLZ category. The test was conducted at our facility in Northbrook, IL on May 14<sup>th</sup>, 2012. This letter will report the results of the EPA202 test.

For the record, the test was conducted on the Model C2000 conveyor oven cooking 12 in. pepperoni pizzas (Tombstone, with 19 pepperonis per pizza) as specified in Appendix A. Please see the attached page (Appendix A) for the test method and results of the tests. The results are considered to comply with UL710B, Section 17 and NFPA96, paragraph 4.1.1.2 since the measured values were less than the 5-mg/m<sup>3</sup> limit.

Should you have any questions or comments concerning the above, please feel free to contact the undersigned.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC or any authorized licensee of UL.

Sincerely,

Handwritten signature of William G. Morler in black ink.

Bill Morler  
Sr. Project Engineer  
Tel: 847-664-1852  
E-mail: [William.Morler@ul.com](mailto:William.Morler@ul.com)

Reviewed by:

Handwritten signature of Fred Zaplatosch in black ink.

Fred Zaplatosch  
Sr. Staff Engineer  
E-mail: [fred.zaplatosch@ul.com](mailto:fred.zaplatosch@ul.com)



APPENDIX: A

TEST FOR EVOLUTION OF SMOKE OR GREASE-LADEN AIR:

The Appliance Innovation Inc. Model C2000 conveyor oven was tested using the method derived from EPA Method 202.

A 12 in. by 6 in. rectangular, 108 in. tall sheet metal stack was constructed on top of a sheet metal hood and mounted above the exhaust vent of the induction cooker. A sampling port was located approximately 80 in. downstream from the hood exhaust, at which point it was determined there was laminar flow. The hood exhaust was maintained at 500 CFM throughout the duration of testing. The sampler was assembled and an out of stack filter was used. A pre-leak check was conducted and determined to be < 0.02 ft/min. Sampling was done at 8 traverse points.

The oven with integral system was operated normally by cooking the following foods:

12 in. pepperoni pizza (Tombstone, with 19 pepperonis per pizza), each cooked for 3 minutes with 0 seconds between loads for 8 hours (total of 426 pizzas). Oven was set to maintain 525 °F

Temp	Event #	% Time.	% Top Fan	% Bottom Fan	% Microwave Energy
525°F	1	3:00	85	85	n/a

During the cooking operation, it was noted whether or not visible effluents evolved from the air exhaust of the hood. Gauge, meter and temperature readings were taken and recorded every 10 min. After cooking, the condition of the duct was noted and a post-leak check was conducted and determined to be < 0.02 ft<sup>3</sup>/min.

After being allowed to cool, the sampling equipment was disassembled; the filter was removed, and placed into a sample container labeled No. 1. The liquid in impingers Nos. 1, 2, and 3 were volumetrically measured and transferred to sample container No. 3. The silica gel and impinger No. 4 was transferred to sample container No. 5. The nozzle, probe and impingers were rinsed three times with water and the rinse was added to container No. 3. These parts were also rinsed three times with acetone and transferred to container No. 4. All additional inter surfaces of the sampling terrain glassware were rinsed with methylene chloride three times; the rinse was transferred to container No. 6. A blank of acetone approximately equivalent to the amount used for rinses was aliquoted into container No. 2, the same was done for the distilled de-ionized water and methylene chloride except that these were aliquoted into their own individual containers labeled No. 7 and 8 respectively. All containers were properly labeled and sealed, then the liquid levels in all the containers were marked.

The analysis phase was done in accordance with EPA Method 202, using the out of stack filter.



## RESULTS:

There was no visible smoke emitted from the exhaust of the hood during the normal cooking operation of the Model C2000. There was no noticeable amount of smoke accumulated in the test room after 8 hours of continuous cooking.

The total amount of grease-laden effluents collected by the sampling equipment for the Model C2000 was found to be 2.01 mg/m<sup>3</sup>, which is less than 5 mg/m<sup>3</sup> limit.



11/14/2017

Mr. Scott Smith  
Appliance Innovation Inc.  
10500 Metric Dr, Suite 128  
Dallas, TX 75243

Subject: Questions Concerning EPA202 Testing

Dear Scott,

This will follow up on conversation about the EPA202 Testing and applicable cooking procedures.

Clause 59.1.4 of UL710B states that the grease laden effluent at the exhaust outlet of the system shall not exceed an average of 5.0mg/m<sup>3</sup> of exhausted air sampled at a maximum product capacity over a continuous 8 hour test cooking period.

The EPA202 Test was conducted on representative samples of your ovens. During this 8 hour test, the stack sampling nozzle was moved within the duct to obtain values over the face of the duct in 8 traverse points as dictated by clause 59.3.2. Each of these points was maintained for one hour during cooking.

Cooking for 8 hours at full oven capacity (as fast as possible) is done to represent and determine what the ovens grease production average output would be. Eight hours was done with each nozzle location representing one full hour to provide the best overall average per hour of effluent. It is not meant to indicate that the oven can only be used to cook for 8 hours in a commercial kitchen.

Should you have any questions or comments concerning the above, please feel free to contact the undersigned.

Sincerely,

A handwritten signature in cursive script that reads "Fred Zaplatosch".

Fred Zaplatosch  
Sr. Staff Engineer  
Department: 3015GNBK  
Tel: 847-664-2853  
E-mail: [fred.zaplatosch@ul.com](mailto:fred.zaplatosch@ul.com)

# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20180503-E352231  
**Report Reference** E352231-20130716  
**Issue Date** 2018-May-03

**Issued to:** OVENTION INC  
SUITE 128  
10500 METRIC DR  
DALLAS TX 75243

**This is to certify that  
representative samples of**

COMMERCIAL COOKING, RETHERMALIZATION AND  
POWERED HOT-FOOD-HOLDING AND-TRANSPORT  
EQUIPMENT

See Addendum Page

Have been investigated by UL in accordance with the  
Standard(s) indicated on this Certificate.

**Standard(s) for Safety:** NSF 4, Commercial Cooking, Rethermalization, and  
Powered Hot Food Holding and Transport Equipment

**Additional Information:** See the UL Online Certifications Directory at  
[www.ul.com/database](http://www.ul.com/database) for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's  
Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please  
contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20180503-E352231  
**Report Reference** E352231-20130716  
**Issue Date** 2018-May-03

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

**PRODUCT COVERED:** Commercial Cooking, Rethermalization, and Powered Hot Food Holding and Transport Equipment

**SPECIFIC PRODUCT DESCRIPTION (Type and Model):**

\*Convection Ovens, Conveyor Types, Models C1200NC, C1200NC3PH, C1200NCCSA, C2000NC, C2000NC3PH, C2000NCCSA, and C2600V.

\*Convection Ovens, "Shuttle" Conveyor Type, Models S1200NC, S1200NC3PH, S1200NCCSA, S2000NC, S2000NC3PH, and S2000NCCSA.

\*Convection Ovens, Conveyor Type, with Integral System for Limiting the Emission of Grease-Laden Air, Models C1200, C12003PH, C1200CSA, C2000, C20003PH, C2000CSA, and C2600.

\*Convection Ovens, "Shuttle" Conveyor Type, with Integral System for Limiting the Emission of Grease-Laden Air, Models S1200, S12003PH, S1200CSA, S1600, S2000, S20003PH, and S2000CSA.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/about/locations/>



C2000 Conveyor oven

Ovention

Operating Time	12 Hours / day
Energy Cost	\$0.11 per kWhr
% of Day Cooking	25% Percent

Mode	Time (min)	Power (Watts)	Cost/Day
Warm up	13	8100	\$ 0.19
Cooking	180	8330	\$ 2.75
Idle	527	4830	\$ 4.67

Total/Day	\$ 7.61
Total/Month	\$ 231.58
Total/Year	\$ 2,779.02

Average Energy Cooking and Idle (J)	Warmup Energy (J)	Total Energy (J/Day)	Total average	Thermal load (kBTU/hr)	Average cooling requirement (ton of AC)
242,688,600	6,318,000	249,006,600	5,764	19.69	1.64