

UL has Listed 20 Convotherm® combi ovens ventless

Convotherm® has led combi oven innovation since 1976 and we've succeeded again with a big win! UL has listed 20 electric models ventless.

COMMERCIAL COMBINATION OVEN WITH INTEGRAL SYSTEMS FOR LIMITING THE EMISSIONS OF GREASE LADEN AIR

THIS PRODUCT CONFORMS TO THE
VENTLESS OPERATION
RECOMMENDATIONS SET FORTH BY
NFPA96 USING EPA202 TEST METHOD

Benefits of ventless Convotherm® combi ovens:

✓ Investment savings

Because ventless Convotherm® combi ovens don't require hoods compliant to UL 710B or venting, the overall cost of installation is reduced. Hood or venting installation can be cost prohibitive for a project depending on the size and scope of the installation. Aside from the investment savings, you'll also realize energy savings without the need to power a hood.

✓ Space Saver

A traditional combi oven requires space not only for the combi oven, but also in many cases for the vertical space above it for hoods or venting. Ventless Convotherm® combi ovens, on the other hand, require limited overhead space. They can be placed on countertop stands and offer a wide range of flexibility when it comes to meeting the size constraints of your kitchen, especially with the Convotherm® mini series.

✓ Front-of-house operations

Convotherm® combi ovens are great for cooking and holding a wide variety of foods, making them a perfect front-of-house solution. Ventless equipment makes moving to the front now a viable option.

✓ Non-traditional locations

Expand your menu by adding Convotherm® combi ovens to your kitchen, even in buildings where traditional venting isn't a possibility.





Convotherm® combi ovens that are UL Listed ventless (electric only):



6.10 Combi oven models

Convotherm® 4 easyTouch 6.10 Electric Injection/Spritzer (Item C4ET6.10ES)

Convotherm® 4 easyTouch 6.10 Electric Boiler (Item C4ET6.10EB)

Convotherm® 4 easyDial 6.10 Electric Injection/Spritzer (Item C4ED6.10ES)

Convotherm® 4 easyDial 6.10 Electric Boiler (Item C4ED6.10EB)









10.10 Combi oven models

Convotherm® 4 easyTouch 10.10 Electric Injection/Spritzer (Item C4ET10.10ES)

Convotherm® 4 easyTouch 10.10 Electric Boiler (Item C4ET10.10EB)

Convotherm® 4 easyDial 10.10 Electric Injection/Spritzer (Item C4ED10.10ES) Convotherm® 4 easyDial 10.10 Electric Boiler (Item C4ED10.10EB)

10.20 Combi oven models

Convotherm® 4 easyTouch 10.20 Electric Injection/Spritzer (Item C4ET10.20ES)
Convotherm® 4 easyTouch 10.20 Electric Boiler (Item C4ET10.20EB)
Convotherm® 4 easyDial 10.20 Electric Injection/Spritzer (Item C4ED10.20ES)
Convotherm® 4 easyDial 10.20 Electric Boiler (Item C4ED10.20EB)







mini Combi oven models

Convotherm® mini easyTouch 6.10 Electric Injection/Spritzer (Item oes 6.10 mini ET) Convotherm® mini Standard 6.10 Electric Injection/Spritzer (Item oes 6.10 mini) Convotherm® mini easyTouch 10.10 Electric Injection/Spritzer (Item oes 10.10 mini ET) Convotherm® mini Standard 10.10 Electric Injection/Spritzer (Item oes 10.10 mini)

Please note that while these Convotherm® models are UL Listed ventless, your local inspector will make the final call regarding possible hood requirements, so check with the inspector during your kitchen planning process to understand local codes. Welbilt engineers are standing by to assist with inspector questions. Additionally the heat and moisture emission has to be considered as well, which is not part of the KNLZ test procedure.



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- ▶ DELFIELD®
- ► FRYMASTER®
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- ► MANITOWOC®
- ► MERRYCHEF®

- ► Convotherm®
- ► FITKITCHENSM
- ► GARLAND®
- **▶** LINCOLN
- ► MERCO®
- ► MULTIPLEX®

CERTIFICATE OF COMPLIANCE

Certificate Number 20161026-E360598

Report Reference E360598-20140529

Issue Date 2016-OCTOBER-26

Issued to: CONVOTHERM ELEKTROGERATE GMBH

TALSTRASSE 35,

82436 EGLFING GERMANY.

This is to certify that representative samples of

COMMERCIAL COOKING APPLIANCES

USL, CNL – Convection / Steam Ovens Model "C4e" followed by "T" or "D"; followed by "6.10", "6.20", "10.10", "10.20", "12.20", "20.10" or "20.20" followed by "ES" or "EB", may be followed by

suffix "-N".

Following models are Complimentary Listed under KNLZ:

USL, CNL – Convection / Steam Ovens Model "C4e" followed by "T" or "D"; followed by "6.10", "6.20", "10.10", "10.20" followed by "ES" or "EB", may be followed by suffix "-N" With Integral System

for Limiting the Emissions of Grease-Laden Vapors.

Have been investigated by UL in accordance with the

Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 197, Standard for Commercial Electric Cooking

Appliance.

CAN/CSA-C22.2 No.109-M1981 (Reaffirmed 2009),

Standard for Commercial Cooking Appliance.

Additional Information: See the UL Online Certifications Directory at

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.

Bambles

Bruce Mahrenholz, Director North American Certification Program

UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number 20160616-E35238

Report Reference E35238-20071018

Issue Date 2016-JUNE-16

Issued to: CLEVELAND RANGE L L C

18301 St. Clair Ave CLEVELAND OH 44110

This is to certify that representative samples of

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

Model OES-3.10, OES-3.10 mini, OES-6.06, OES-6.08, OES-6.08 mini, OES-6.10 mini 2in1, OES-6.10 mini, and OES-10.10 mini, Combination Ovens with Integral System for Limiting the Emissions of Grease Laden Vapors. "-" in

model number is optional.

Have been investigated by UL in accordance with the

Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 197 and CSA C22.2 No. 109-M1981, Standards for

Commercial Cooking Appliances

Additional Information: See the UL Online Certifications Directory at

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.



UL LLC





2016-06-16



Mr. Kenneth Lundberg Manitowoc Foodservice 2227 Welbilt Blvd Trinity, FL 34655 United States

E-mail: Kenneth.Lundberg@Mtwfs.com

Reference: Project: 4787401750 P.O. Number: N/A

Product: EPA 202 TEST METHOD: USING THE CONVOTHERM MODEL C4Et 6.20ES COMBI

COOKING THE BELOW FOOD PRODUCT AS MEDIA.

Dear Mr. Sandusky,

Per your request, project 4787401750 was opened for the evaluation of grease-laden vapors produced from the Model C4Et-6.20ES.

The scope of this project was to determine the total grease emissions from cooking quartered roasting chickens weighing 2-1/2 to 3-1/2 lb. skin-on and bone-in, and cooking bacon as the specified food load as noted in Appendix A. Testing is conducted in accordance with EPA Method 202 test guidelines to determine ultimate results. Results are used to determine compliance with Section 59 of UL710B, the Standard for Recirculating Systems, formerly Section 14 of UL 197, Eighth Edition, Supplement SB, and paragraph 4.1.1.2 of NFPA96, the Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations. The test was conducted at our facility in Northbrook, IL on May 10th, 2016. This letter will report the results of the EPA202 test.

For the record, the test was conducted using the Convotherm Model C4Et 6.20ES, rated 240 V, 50 A, and considered representative of the models C4eX 6.10EB, C4eX 6.10ES, C4eX 6.20EB, C4eX 10.10EB, C4eX 10.10ES, OES 6.10 mini, OES 10.10 mini. The test media, food load and oven programming as shown in Appendix A were specified by Halton Co. The results are considered to comply with UL710B, Section 59, formerly Section 14 of UL 197, Eighth Edition, Supplement SB, and NFPA96, paragraph 4.1.1.2 when tested with the specified food load and maximum cook times since the total amount of grease-laden effluents collected was 1.01 mg/m³, which is less than 5 mg/m³ limit. No evaluation was conducted in regards to fire protection.



UL LLC did not select the samples, determine whether the samples were representative of production samples or witness the production of the test samples, nor were we provided with information relative to the formulation or identification of component materials used in the test samples. The test results apply only to the actual samples tested.

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This letter will serve to report that all tests on the subject product have been completed. All information generated will be retained for future use. This concludes all work associated with Project 4786302400 and we are therefore closing this project. Our Accounting Department has been instructed to bill you for all charges incurred.

Thank you for the opportunity to provide your company with these services. Please do not hesitate to contact us if you should have any questions or comments.

Very truly yours,

Bill Morler

Sr. Project Engineer
Department: 3015GNBK

willum 6. mortin

Tel: 847-664-1852

E-mail: William.Morler@ul.com

Reviewed by:

Fred Zaplatosch Sr. Staff Engineer

Department: 3015GNBK

E-mail: fred.zaplatosch@ul.com

Fred Zaplitosch



CAPTURE TEST: UL 710B Sec. 58
UL 710 Sec. 31

METHOD

The model C4eT 6.20ES cooking appliance was placed under a hood operating at 500 CFM. Food product as specified below was then used for testing, see Emission Testing for specific details. The cooking area is to be observed for the presence of visible smoke and grease-laden air, and the hood assembly shall completely capture all of the emission as determined by observation.

COOKING PRODUCT

 $\underline{\text{Ovens}}$ - Quartered chickens weighing $\underline{3.142}$ lbs. The oven was filled to the maximum capacity of $\underline{5}$ chickens per pan with $\underline{6}$ pans per load, and was cooked at the manufactures specifications of $\underline{375}$ °F for $\underline{26}$ minutes. This is considered one cycle.

- A total of 17 cycles were cooked during the 8 hr. test.

COOKING METHOD

Oven

Mode	Temp	Event #	Time,	% Top
			min	Fan
Convection	_375_°F	1	26	100

RESULTS

There [was] [was not] the presence of visible smoke and grease-laden air from the appliance during testing.

The sample [did] [did not] capture all of the emissions from the cooking appliance.



EMISSION TEST: UL 710B Sec. 59

METHOD

TEST FOR EVOLUTION OF SMOKE OR GREASE-LADEN AIR (375 °F):

The model C4eT 6.20ES cooking appliance was placed under a hood operating at 500 CFM, and was tested using a method derived from EPA Method 202. Underwriters Laboratories also provided meat cakes, (Ground Beef, nominal 73 ± 5 percent lean, 4 ± 0.25 inches diameter, and weighing 0.25 ± 0.02 lb. for the test.

A 12 in. by 6 in. rectangular, 108 in. tall sheet metal stack was constructed on top of the hood. A sampling port was located approximately 80 in. downstream from the hood exhaust, at which point it was determined there was laminar flow. 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 determined to be done at 8 traverse points.

The oven was operated normally by cooking the following foods:

Oven - Quartered Chickens, cooked as specified in the Capture test.

The cooking cycle was repeated for 8 hours of continuous cooking.

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*/min.

RESULTS

The results [are] {are not} considered acceptable because there {was} [was no] visible smoke emitted from the exhaust of the hood during the normal cooking operation. There {was} [was no] noticeable amounts 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 was found to be <a>1.01 mg/m³, which is [less] <a>(more) than 5 mg/m³.

The total grease emissions (per clause 78.2 of 710B) in pounds per hour per linear food of hood was 0.000488_ lb/hr/ft.

NOTE: TOTAL HUMIDITY/STACK TEMPERATURE AVG. DURING 8HRS COOKING:

HUMIDITY% = 56.2 STACK TEMP = 24.9°C



KNLZ Listing for Convotherm 4 and mini

General information

- This document is meant to supplement the operating and installation manuals for your unit and should only be used together with these manuals. For more information on technical data, intended use, components, function, and safety, please refer to the manuals.
- UL file E360598 Commercial Cooking Appliances with Integral Systems for Limiting the Emission of Grease-laden Air
- The following Convotherm models are KNLZ Listed for ventless operation, local codes prevail as stated in NFPA 96:

OES 6.10 mini	OES 10.10 mini				
C4 6.10 ES	C4 6.20 ES	C4 10.10 ES	C4 10.20 ES		
C4 6.10 EB	C4 6.20 EB	C4 10.10 EB	C4 10.20 EB		

Intended use

Commercial combination oven with integral systems for limiting the emission of grease laden air. This product conforms to the ventless operation recommendations set forth by NFPA96 using EPA202 test method.