

VENTLESS INSTALLATION RECOMMENDATIONS

TurboChef ventless ovens are equipped with internal systems that destroy grease-laden vapor before it escapes the oven, so the ovens are certified as non-grease-emitting appliances. When following our recommendations, TurboChef ovens can be installed without a Type I or Type II hood in accordance with the International Mechanical Code (IMC), Universal Mechanical Code (UMC), National Fire Protection Association (NFPA) 1, NFPA 96, NFPA 101 (Life Safety Code), Environmental Protection Agency (EPA) 202, and Underwriter's Laboratory (UL) KNLZ.

The following guide provides relevant information on the ventless installation, operation, and maintenance of TurboChef ovens. It is important that these guidelines are followed and that the oven and surrounding areas be maintained regularly for optimal performance.

CERTIFICATIONS

Safety – cULus, TUV (CE)

Sanitation – NSF*, UL EPH*

Ventless – UL (KNLZ)



* NSF certification applies to the Tornado, C3, and HhB 2 ovens only. UL Environmental and Public Health (EPH) certification applies to all ovens except the C3.

ELECTRICAL REQUIREMENTS

TurboChef ovens must be installed on a circuit equal to the ratings listed below, per National Electrical Code (NEC) sec 210.23, permissible loads.

OVEN	VOLTAGE	CURRENT	PHASE
Bullet	208/240 VAC	30 amp	1 Ph
C3	208/240 VAC	50 amp	1 Ph
Double Batch	208/240 VAC 208/240 VAC	50 amp 30 amp	1 Ph 3 Ph
ECO	208/240 VAC	20 amp	1 Ph
ECO ST	208/240 VAC	30 amp	1 Ph
Encore/Encore 2	208/240 VAC	30 amp	1 Ph
Fire	208/240 VAC	30 amp	1 Ph
HhB 2	208/240 VAC	30 amp	1 Ph
HhC 1618	208/240 VAC 208/240 VAC	30 amp 50 amp	3 Ph 1 Ph
HhC 2020	208/240 VAC	50 amp	3 Ph
HhC 2620	208/240 VAC	50 amp	3 Ph
i1 (Panini, Sota/Sota Single Mag, El Bandido, Waterless Steamer)	208/240 VAC	30 amp	1 Ph
i1 Sota Single Mag	208/240 VAC	20 amp	1 Ph
i3	208/240 VAC 208/240 VAC	40 amp 30 amp	1 Ph 3 Ph
i5	208/240 VAC 208/240 VAC	50 amp 30 amp	1 Ph 3 Ph
PLEXOR	208/240 VAC	50 amp	3 Ph
Single Batch	208/240 VAC	30 amp	1 Ph
Tornado	208/240 VAC	30 amp	1 Ph

MENU REQUIREMENTS

TurboChef ovens are UL-approved for ventless operation (UL KNLZ listing) for all food items EXCEPT foods classified as "fatty raw proteins." Such foods include raw bone-in, skin-on chicken, raw hamburger meat, raw bacon, raw sausage, raw steaks, etc.

The TurboChef certification includes precooked food items such as pizza toppings, sandwich meats, frozen appetizers, and cheeses. Additionally, raw, lean meats such as boneless, skinless chicken breasts and fish fall within the certification.

CLEANING REQUIREMENTS

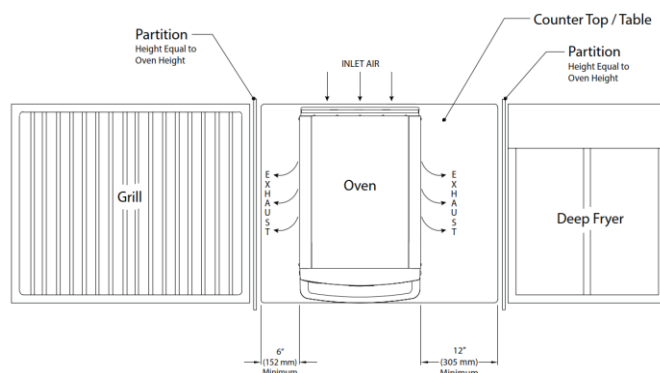
To ensure continued compliance with all health, building, and fire codes, users are required to:

- Use only TurboChef-approved cleaning chemicals.
- Follow the monthly and quarterly cleaning instructions provided in the manual, as well as the required posted cleaning instructions near the oven.
- Ventless installation requires that the areas around the oven (walls, ceilings, kitchen equipment, etc.) be cleaned as needed, but no less than once every other month.

INSTALLATION NEAR OPEN HEAT SOURCE

When placing a TurboChef oven near an open heat source (see illustration below), strictly adhere to the following:

- If the oven is being placed near a grill or stove, a divider must exist between the oven and the open heat source, with a minimum of 6" (152 mm) between the oven and the divider.
- If the oven is being placed near a fryer, a divider must exist between the oven and the fryer, with a minimum of 12" (305 mm) between the oven and the divider.
- The height of the divider must be greater than or equal to the height of the oven.



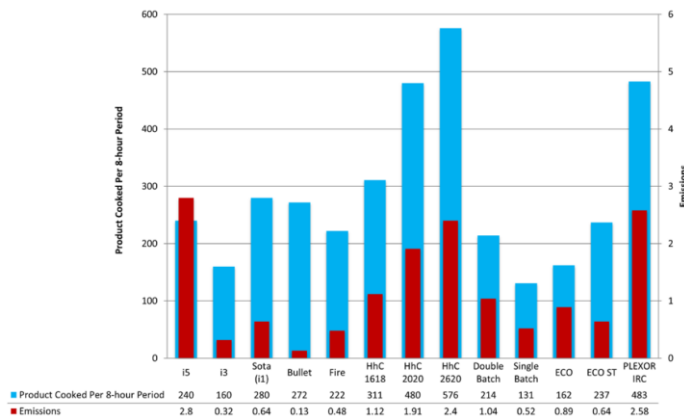
OVEN CLEARANCES

OVEN	TOP		SIDES	
Bullet	5"	127 mm	2"	51 mm
C3	4"	102 mm	2"	51 mm
Double Batch	2"	51 mm	2"	51 mm
ECO	5"	127 mm	1"	25 mm
ECO ST	5"	127 mm	1"	25 mm
Encore/Encore 2	5"	127 mm	2"	51 mm
Fire	2"	51 mm	2"	51 mm
HhB 2	2"	51 mm	2"	51 mm
HhC 1618	10"	254 mm	0"	0 mm
HhC 2020	10"	254 mm	0"	0 mm
HhC 2620	10"	254 mm	0"	0 mm
i1 (Panini, Sota / Sota Single Mag, El Bandido, Waterless Steamer)	5"	127 mm	1"	25 mm
i3	19"	483 mm	2"	51 mm
i5	19"	483 mm	2"	51 mm
PLEXOR	0"	0 mm	0"	0 mm
Single Batch	2"	51 mm	2"	51 mm
Tornado	4"	102 mm	2"	51 mm

HOW OVENS ARE TESTED

TurboChef ovens are evaluated in accordance with UL standards. The evaluation involves placing the test oven in an environmental chamber designed to capture all emissions released during idle, cooking, and door-open conditions. During the eight-hour test, a typical worst-case food item is cooked continuously, and 100% of the condensable and non-condensable emissions from the product are collected and analyzed in accordance with the EPA 202 Test Method. At the conclusion of the test, the total concentration of particulate matter (emissions) must be less than 5.0 mg/m³ for the oven to be certified for ventless operation. Cooking devices that exceed the 5.0 mg/m³ threshold are considered to produce grease and must be installed under Type I ventilation, according to the IMC.

TurboChef ovens are well below the 5.0 mg/m³ threshold as shown below.



VENTILATION

TurboChef ovens must be installed in a well-ventilated space. The space should have an exhaust rate of 0.70 cfm/ft² of kitchen space and an additional 100 ft² (9.3 m²) of virtual space per ventless cooking appliance (TurboChef or any other). If the air inlet is for general exhaust, locate it above the center point of each oven.

The heat load from TurboChef ovens is mostly sensible. The only latent heat present is due to evaporation during the cooking process. When installing a TurboChef oven, the space must have the following tons of AC per oven installed.

OVEN	TONS OF AC
Bullet	0.5
C3	0.63
Double Batch	1.15
ECO	0.89
ECO ST	0.28
Encore/Encore 2	0.45
Fire	0.55
HhB 2	0.84
HhC 1618	1.00
HhC 2020	1.47
HhC 2620	1.82
i1 (Panini, Sota/Sota Single Mag, El Bandido, Waterless Steamer)	0.3
i3	0.9
i5	1.3
PLEXOR	1.09
Single Batch	0.75
Tornado	0.58

CONTACT INFORMATION

For questions regarding a ventless installation, email ventless.help@turbochef.com. For questions or concerns regarding an existing installation, contact Customer Service at 1.800.908.8726, option 1.