

Installation Manual



TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK,
DO NOT REMOVE MACHINE COVERS

NO USER-SERVICEABLE PARTS INSIDE

REPAIR AND INSTALLATIONS SHOULD BE DONE BY
AUTHORIZED SERVICE PERSONNEL ONLY

This installation manual covers the following models:

Model Name	Description	Power Requirements
LF1306166-1	EcoFry –For UL Ventless Operation of the Lightfry Oven	120v, 60Hz, 12A, Single Phase









This document is under revision control and it may be subjected to modifications.
Please contact LightFry USA for the latest version.

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2 Explanations of the Icons

 <i>Danger!</i>	 <i>Warning!</i>	 <i>Attention!</i>
<p>Immediate dangerous situation that can cause severe injury or death.</p>	<p>Possibility of dangerous situation can cause severe injury or death.</p>	<p>Possible dangerous situations that can cause minor injury or damage.</p>
 <i>Hot Surfaces</i>	 <i>High Voltage</i>	
<p>Be aware of hot surfaces and risk of burning</p>	<p>Danger of electrical shock or danger of life. High power components</p>	
 <i>Information</i>		
<p>Attention or information, please be aware of the information provided</p>		

3 Safety Information



CAUTION



Please, for your own safety, carefully read this manual before operating the EcoFry unit.

Appliance shall not be cleaned with water jets.

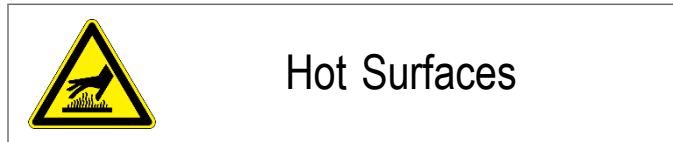
If the power supply cord is damaged, it must be replaced by the manufacturer, its service agent or similar qualified person to avoid a hazardous situation.

Staff using the oven must be thoroughly briefed and trained before using the EcoFry unit. Make sure that you keep this manual in a place where everyone can easily find it.

Incorrect installation, maintenance, servicing, or cleaning of the EcoFry may result in damage, or injury.

The oven should be serviced by an authorized service partner at least once a year to ensure that the oven remains in perfect working order.

Do not install closer than 2"/ 50mm from the rear side.



This accessory operates internally with hot air temperatures around 315 °C [600 °F], therefore there is a risk of burning yourself if not properly operated. Please read this manual before operating the oven, avoiding this step could cause you serious damages.



The machine is operated at high current; therefore, the machine should be inspected, maintenance or repaired only by trained technicians. Always disconnect the unit from main power before removing the machine side panels.



Performing the any of the following steps will invalidate the manufacturer's warranty and product liability.

- ✓ Installations and repairs that are not carried out by authorized specialist.
- ✓ Performing any technical changes to the unit that are not approved by the manufacturer.

4 EcoFry - General Information



The EcoFry system is an accessory to the LightFry oven that permits the oven to be operated in compliance with UL's specification for ventless cooking. The UL certification allows the oven to be operated with no external vent hood over it, or a hood that is sized solely for heat extraction. A hood that is equipped for greasy vapors is not required.

The EcoFry is a catalytic system that converts the greasy vapors coming from cooking food into carbon dioxide and water vapor. It has an integral heater element to provide the energy for the conversion reaction that maintains the catalyst at the proper temperature independently of the oven's set cooking temperature.

EcoFry - Specifications				
	<i>Metric</i>		<i>Imperial</i>	
<i>Width</i>	696	<i>mm</i>	27.4	<i>inch</i>
<i>Height</i>	160	<i>mm</i>	6.3	<i>inch</i>
<i>Depth</i>	292	<i>mm</i>	11.5	<i>inch</i>
<i>Weight</i>	17.2	<i>kg</i>	38	<i>pounds</i>
<i>Operating Temp</i>	427	<i>°C</i>	800	<i>°F</i>

The EcoFry unit is delivered in a carton box. Please read the Installation/Operation manual before attempting to install the unit on the oven or operate it during cooking.

5 Recommended Installation Clearances

Be sure to comply with the clearances recommended in the Lightfry installation manual for areas not covered in this manual.

Keep a minimum clearance of 12 inches [305 mm] on the left side from any heat source. If possible do not place any heat sources on the left side of the oven.

Keep a minimum clearance of 2 inches [50 mm] for both the back and right side of the unit.

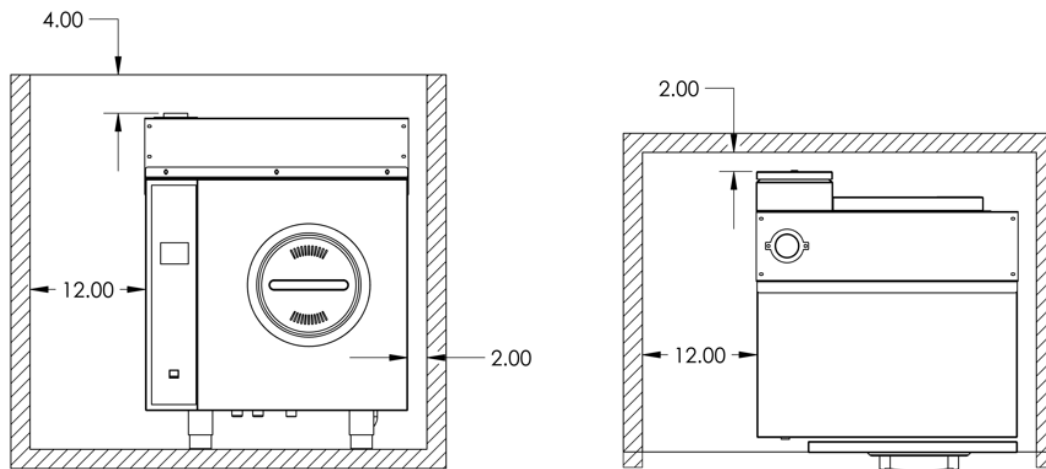
IMPORTANT! The back side clearance should never be less than 2 inches [50 mm]. Narrower clearances will restrict natural airflow around the unit and could compromise the electrical cabinet components.

It is recommended to increase the left/right clearance for an easy serviceability when possible. Please note that should the EcoFry require service it will require a minimum clearance of 12 inches to open the control panel access door.

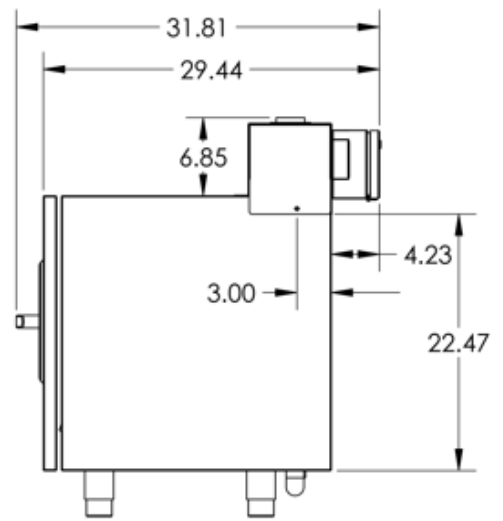
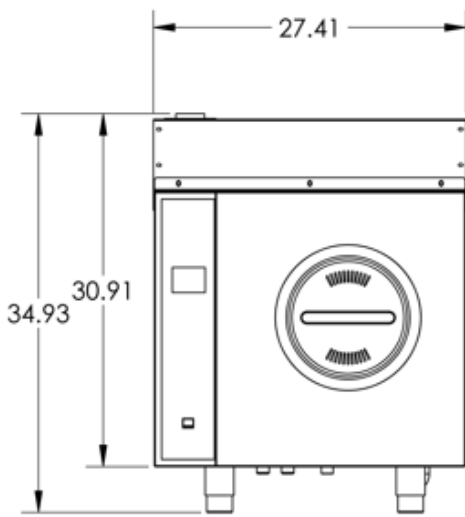
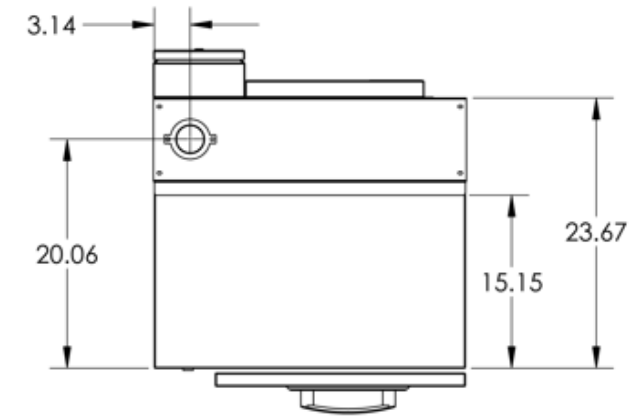
Do not install or place any object on top of the unit.

Do not connect a ventilation system directly to the exhaust pipe, allow a minimum distance of 4 inches [100 mm] between the ventilation system and the unit.

IMPORTANT! Be aware of the hot air and steam vapors leaving the exhaust pipe during the cooking process.



6 EcoFry and Lightfry Assembly - Outer Dimensions



Units: Inches

7 EcoFry – Connections to Lightfry Oven

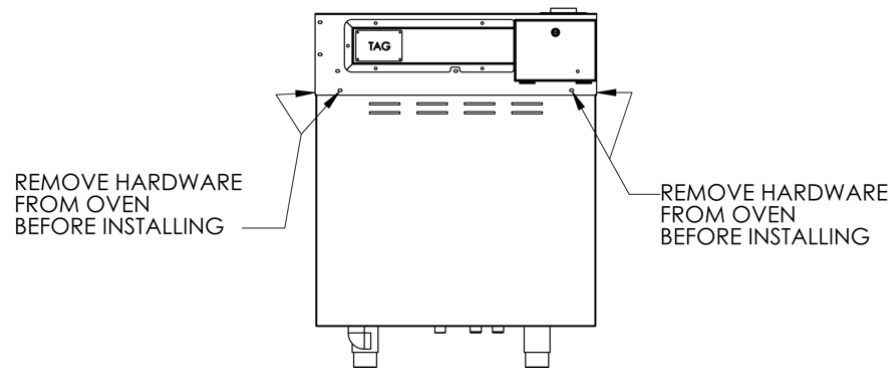
The following steps will guide you through the installation of the EcoFry onto your LightFry oven.

7.1 Mechanical Connections

Before setting the unit on top of the Lightfry oven place the gasketing material around the oven's exhaust chimney as seen below:



Remove the indicated screws from the Lightfry oven and retain them for re-installation



Set the EcoFry on top of the Lightfry making sure that the inlet tube of the EcoFry slides over the exhaust chimney of the oven.

Align the EcoFry so that the holes for the removed screws are visible and then re-install the removed screws to secure the EcoFry to the oven.

If a gap exists between the top of the oven and the flanged foot on the front of the EcoFry, loosen the screws on the flange foot and press downward on the flange to close the gap. Re-tighten the screws.

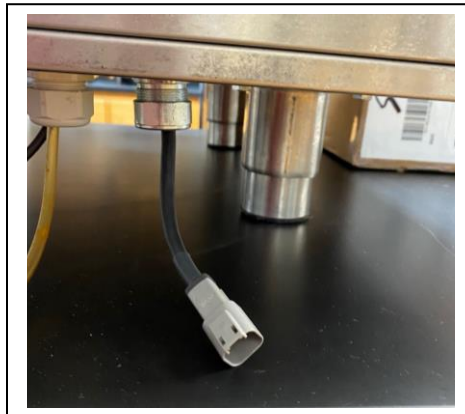
7.2 Power Connections

Power configuration	120-volt, single phase, 3-wire
Total kW	1.5 kW
Maximum Current	12 A
Recommended external fuse	20 A

The model LG1036166-1 is provided with a power cable. Please connect to an appropriate receptacle that can support the rated amperage. Do not use an extension cord with the LightFry unit to make the power connection.

7.3 Machine Interlock

The EcoFry has an electrical interlock with the Lightfry unit that signals the oven that the EcoFry is up to operating temperature and that cooking can begin. There is a cable with the mating connector located on the bottom of the Lightfry oven that this plugs into. Please see the image below for reference on the location and how to plug in this interlock.



7.4 EcoFry Exhaust Chimney

The EcoFry unit exhausts are mainly hot air, a very small amount of greasy vapors, and water, as steam, coming from the moisture in the frozen product. Please be aware of water condensation in the any ventilation system under which the oven is operated.

If the EcoFry unit is positioned under an existing external air extraction hood there is no need for any other connection.



IMPORTANT

The external ventilation extraction system should never be connected directly to the oven chimney, doing so will alter the cooking process and the cooking quality will be compromised.

8 Operation of the EcoFry

The EcoFry unit comes factory programmed for its normal operation with the Lightfry oven. When the Lightfry oven is powered up the heater in the EcoFry that supplies the energy for the catalytic reaction is also energized. The oven will not signal its readiness for cooking to begin until it receives a signal from the EcoFry that the catalyst is at its operating setpoint. Once the unit is ready the oven can be used in any manner consistent with the Lightfry's capabilities and operating instructions.

The operating temperature setpoint for the controller is 800°F as seen in the lower number on the display. The upper number is the current temperature and it will fluctuate between 750°F and ~ 825°F during normal operation when there is no food in the oven. During cooking the current temperature can read much higher as the catalyst converts the greasy vapors coming from the food. It is not uncommon to see temperatures approaching 1,000°F with especially greasy foods. Temperatures this high will not damage the catalyst as it has a maximum temperature rating of 1,350°F.



The EcoFry has been engineered to work in conjunction with the cleaning process for the oven. No special precautions are needed provided that those instructions are followed, and only LightFry approved degreasing cleaners are used in the oven.

The exterior of the EcoFry can be wiped down as needed with any approved cleaner used on the exterior of the Lightfry oven.

9 Spare Parts

Should a component reach the end of its lifecycle and stop working correctly here are the factory available spare parts:

Item	Part Number(s)
Catalyst Module	1038944
Heater Element	1036189
Thermocouple	1039530
Temperature Controller	1036481 or 1039572 or 1038698
SPDT Relay	1000611

Please provide the serial number of your EcoFry unit when ordering spare parts. This is to ensure that should there be a component revision for circumstances outside our control, that the correct part is provided, or the new part is supplied with needed accessories for it to be installed.

10 Troubleshooting

The EcoFry has been engineered to provide years of trouble-free operation. However, should a malfunction occur that is not obviously due to a component listed above please contact LightFry USA at the number shown below for assistance in troubleshooting the issue.

LightFry USA - Service: 208-473-8430