



Gas Donut Fryers

Models:

#177FBF1824LP

#177FBF2624LP

#177FBF1824NG

#177FBF2624NG

Warning:

Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operating, and maintenance instructions thoroughly before installing or servicing this equipment. If installing the fryer with propane (LP) gas, a commercially approved regulator **MUST** be installed on the fryer in addition to the tank regulator. Units installed without an external appliance regulator will cause damage to parts and will void the warranty.

For Your Safety:

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

Note:

Please read instructions thoroughly. Indoor use only.

Safety

This manual has been prepared for personnel qualified to install gas equipment, who should perform the initial field start-up and adjustments of the equipment covered by this manual.

Post in a prominent location the instructions to be followed in the event the smell of gas is detected.

This information can be obtained from the local gas supplier.



IMPORTANT: In the event a gas odor is detected, shut down units at the main shutoff valve and contact the local gas company or gas supplier for service.



FOR YOUR SAFETY: Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.



WARNINGS:

- **Gas Connections:** Gas connections for the fryer must be completed by a certified and insured food service technician.
- **Overheat Control:** Monitor the fryer to prevent overheating, especially during extended use.
- **Ventilation:** Ensure the fryer has sufficient ventilation to prevent overheating and to maintain efficient operation.
- **Child Safety:** Keep children away from the fryer to prevent accidents and misuse.
- **No Unauthorized Modifications:** Never modify the gas fryer's settings or components outside of the manufacturer's specifications.
- **Emergency Procedures:** Be prepared to turn off the fryer quickly in emergencies or malfunctions.
- **Regular Inspection:** Check the fryer regularly for signs of wear or damage, and address issues immediately.
- **Water Content:** Do not place food product with high water content into the fryer. This can lead to excess splattering and danger.
- **Cleaning:** Do not spray unit with water or immerse in any liquid, as this. It may cause the electrical components to short circuit or to produce an electrical shock



CONFORMS TO UL STD. 197
CONFORMS TO CSA C22.2 NO. 109
CONFORMS TO NSF/ANSI STD. 4

General

Our gas tube donut fryers are produced with quality workmanship and material. Proper installation, usage, and maintenance will result in years of satisfactory performance.

Before installing the fryer, thoroughly read this manual and carefully follow all instructions.

This manual is applicable to models listed on the first page. Procedures in this manual will apply to all models unless specified. Pictures and illustrations can be of any model unless the picture or illustration needs to be model specific.

Unpacking

This fryer was carefully inspected before leaving the factory. Upon acceptance of the shipment, the transportation company assumes full responsibility for safe delivery.

Check for possible shipping damage immediately after unpacking the fryer. If the fryer is damaged, save the packaging material and contact the carrier immediately.

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Installation

Please read this manual thoroughly prior to equipment setup, operation, and maintenance.



WARNING: Do not use the door or its handle to lift the fryer.



NOTICE: Before installing the fryer, verify that the type of gas (natural or propane) is in conformity to the specifications on the fryer data plate, which is located on the inside of the door panel. Make sure the fryer is configured for the proper elevation.



NOTE: All Avantco donut fryers shall be installed with at least a 16" space between the fryer and walls or adjacent equipment.

Clearances

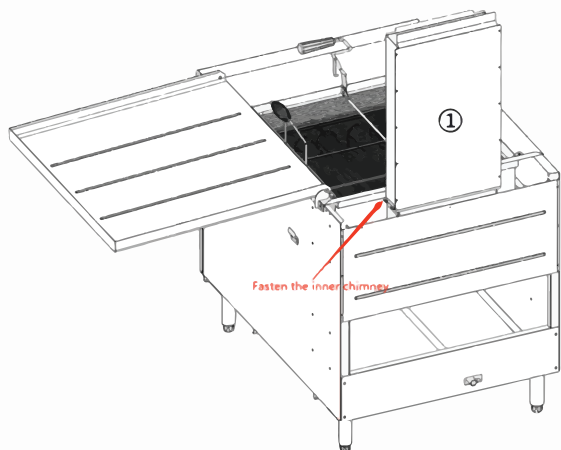
Minimum clearance from combustible construction:

Minimum clearance from noncombustible construction	
Sides of Fryer	6"
Back of Fryer	6"

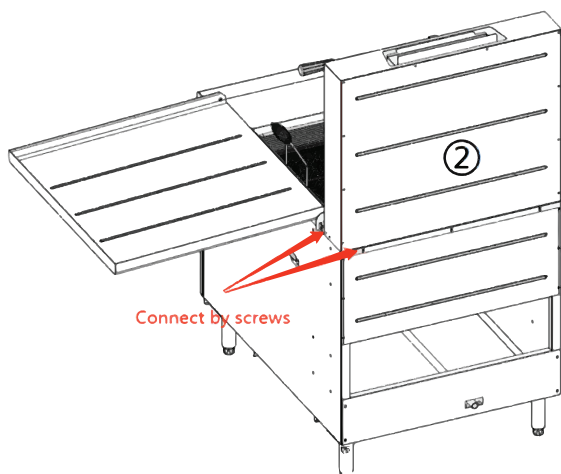
Minimum clearance from noncombustible construction	
Sides of Fryer	0"
Front of Fryer	0"
Between the fryer and any open-top flame units	16" (41 cm)

Location

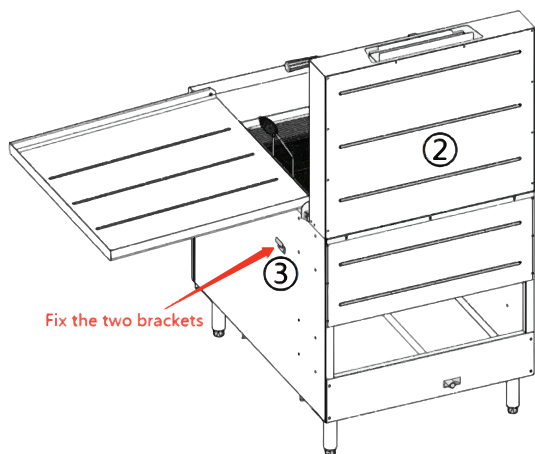
- Install fryer in an area with sufficient air supply for gas combustion at fryer burners.
- Do not obstruct the flow of combustion and ventilation air.
- Provide adequate clearance for air openings into the combustion chamber.
- Do not permit fans to blow directly onto fryer.
- Avoid wall-type fans, which create cross-currents within a room. Avoid open windows next to sides or back.



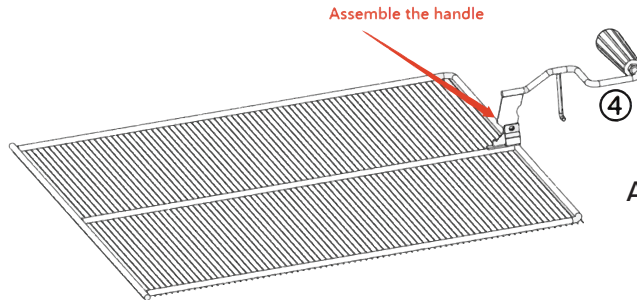
Take out the inner chimney. ① Please fasten the inner chimney to the inner chimney support using four screws.



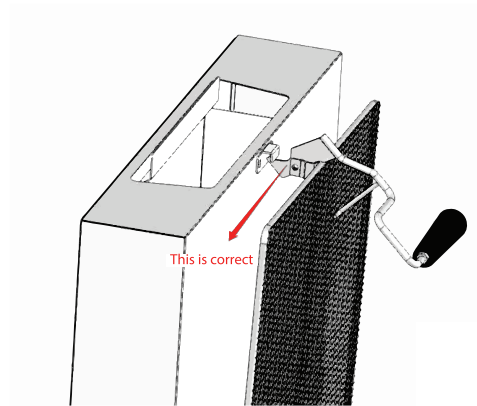
Take out the outside chimney. ② Please connect the outside chimney using screws.



Fix the two supporting brackets. ③ The lid extending direction can be at either right or left side.



Assemble the handle using the screws provided. ④



Attach handle.

Codes and Standards

The fryer must be installed in accordance with:

In the United States:

State and local codes, and:

- National Fuel Gas Code, ANSI-Z223.1/NFPA #54 (latest edition). Copies may be obtained from The American Gas Association Accredited Standards Committee Z223, @ 400 N. Capital St. NW, Washington, DC 20001 or the Secretary Standards Council, NFPA, 1 Batterymarch Park Quincy, MA 021697471.
- NFPA Standard #96 Vapor Removal from Cooking Equipment, latest edition, available from the National Fire Protection Association, Batterymarch Park, Quincy, MA.
- National Electrical Code, ANSI/NFPA-70 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA. 02169-7471.
- In the commonwealth of Massachusetts all gas appliances vented through a ventilation hood or exhaust system with a damper or with a power means of exhaust shall comply with 248 CMR.

In Canada:

- Local codes.
- CAN/CSA-B149.1 Natural Gas and Propane Installation Code (latest edition), available from the Canadian Standards Association, 155 Queen Street, Suite 1300, Ottawa, Ontario Canada K1P 6L1.
- CSA C22.1 Canadian Electric Code (latest edition), available from the Canadian Standards Association, 155 Queen Street, Suite 1300, Ottawa, Ontario Canada K1P 6L1.

Assembly

The fryer must be restrained to prevent tipping and the splashing of hot liquid. The means of restraint may be the manner of installation, such as connection to a battery of appliances, installing the fryer in an alcove, or by separate means such as adequate ties.

Flue Connection

- Make the flue connection as follows:
- Comply with Vapor Removal from Cooking Equipment, ANSI-NFPA Standard #96 (latest edition), available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.
- Locate the fryer under a hood with adequate connection to an exhaust duct. The hood must extend 6" (15 cm) beyond fryer on both sides.
- Clearance above the fryer should be adequate for combustion byproducts to be removed efficiently.
- An 18" (46 cm) minimum clearance should be maintained between the flue vent and the filters of the hood venting system.
- Never make flue connections directly to the fryer.
- Do not obstruct the flow of the gases from the appliance. Proper air balance should be maintained in the room.
- Ensure that your ventilation system does not cause a down draft at the fryer's flue opening. Down draft will not allow the fryer to exhaust properly and will cause overheating which may cause permanent damage. Damage caused by down draft will not be covered under equipment warranty. Never allow anything to obstruct the flue or ventilation exiting from the fryer flue. Do not put anything on top of flue area.

Gas Connection



WARNING: Prior to lighting, check all joints in the gas supply line for leaks. Use soap and water solution.

DO NOT USE AN OPEN FLAME.

- After piping has been checked for leaks, fully purge gas pipes to remove air.
- 1/2" Gas connection, 1/2" to 3/4" adapter included in the unit.

GAS PRESSURES (ALL MODELS):

- The gas pressure should be set at 4" W.C.(Water Column) (0.8 kPa) for natural gas and 10" W.C. (2.75 kPa) for propane gas. If incoming pressure exceeds ½ PSI (3.45 kPa), an additional pressure regulator must be installed.

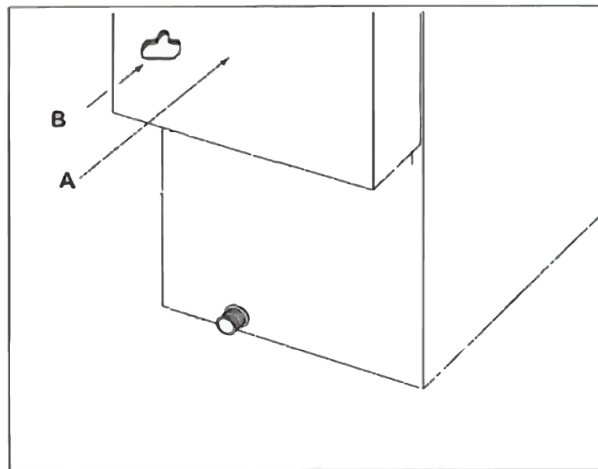
TESTING THE GAS SUPPLY PIPING SYSTEM:

- When test pressures exceed ½ PSI (3.45 kPa), the fryer and its individual shutoff valve must be disconnected from the gas supply piping system.
- When test pressures are ½ PSI (3.45 kPa) or less, the fryer must be isolated from the gas supply piping system by closing its individual shutoff valve.

Fryers with Casters

Separate instructions for installing casters are included with the casters:

- The installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69, CAN/CGA-6.16, and a quick disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI z21.41 CSA 6.9 or Quick-Disconnect Devices for Use with Gas Fuel.
- When installing a quick disconnect you must also install a means for limiting the movement of the fryer. This device will prevent the gas line or quick disconnect from being strained. The restraining device should be attached to the cutout on the back panel. See illustration for location.



A. Rear of Fryer

B. Strain Relief Chain Connection (chain not included)

- The fryer must be installed with a connector (not included) complying with the above codes.
- The fryer must be installed with restraining means to guard against transmission of strain to the connector.
- The fryer must be installed with the casters provided.
- If the restraint is ever to be disconnected, first turn the gas supply off. If disconnection of the restraint is necessary, reconnect this restraint after the fryer has been returned to its originally installed position.

Leveling the Fryer

- Check the level of the fryer by placing a level on top of the fryer after gas connections have been made.
- Ensure that the fryer is level front-to-back and side-to-side in the final installed position.
- Lock the wheels after unit is level.

Operation



WARNING: Hot oil and parts can cause burns. Use care when operating, cleaning, and servicing the fryer.



WARNING: Spilling hot frying compound can cause severe burns. Do not move fryer without draining all frying compound from the tank.



WARNING: Fryer is not to be used during a power outage.

Over-Temperature Shutdown

If the shortening becomes overheated, a high-temperature shutoff device will turn the gas valve off and extinguish the pilot.

If the fryer shuts down due to overheating, DO NOT relight the pilot until the shortening temperature is below 300 °F (149 °C).

If an overheating situation persists, contact your local authorized service office.

Before First Use

Cleaning

New units are wiped down at the factory to remove any visible signs of dirt, oil, grease, etc. remaining from the manufacturing process.

Before any food preparation, thoroughly wash the protective oil from all surface parts and the tank interior with hot, soapy water to remove any film residue and dust or debris.

NOTICE: Do not use chlorine or sulfate/sulfide cleaners.

- Wash any accessories shipped with unit.
- Rinse fryer and accessories thoroughly and drain the fryer.
- Wipe tank completely dry with a soft, clean cloth.

Filling Tank with Shortening



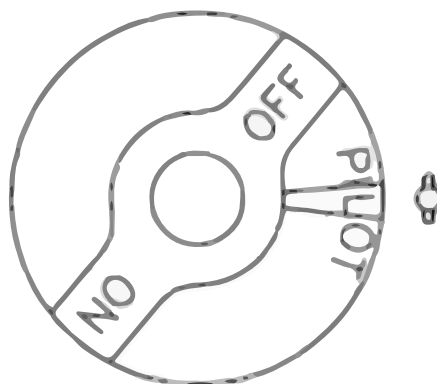
WARNING: Solid shortening must NOT be used with this fryer. Melting solid shortening will damage the tank and void your warranty.

NEVER melt blocks of solid shortening on top of the heat tubes. This would cause a fire and could result in personal injury.

- Close the drain valve.
- Fill the fryer tank with liquid shortening.
- Shortening level should be between the min and max lines in the fryer tank.
- Shortening will expand when heated. Do not fill the fryer tank over the MAX line.
- Add fresh shortening as needed to maintain oil level.

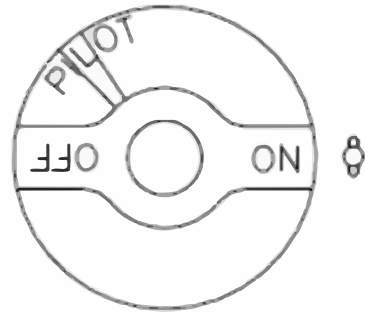
Lighting the Pilot

1. Open the door.
2. Make sure that thermostat is set to OFF. The thermostat is located behind the door.
3. Push the gas control valve knob and turn to OFF. Wait 5 minutes for unburned gas to vent.
4. Push and turn gas control valve knob to the “L” in PILOT (see figure below).
5. While still holding the knob in, light the pilot with a lit flame. Continue to depress the knob until pilot remains lit when knob is released. If the pilot does not remain lit, repeat step 3 through 5.



6. Depress and turn gas control knob to ON (See figure below).

7. If gas supply is interrupted, repeat steps 2 through 6.



Turning On the Fryer

1. Set the temperature knob to desired temperature.
2. After the set temperature has been reached, the thermostat shuts off the gas flow to burners.
3. The pilot remains lit. The burners will cycle on and off, maintaining the set temperature.

Turning Off the Fryer

1. Turn the thermostat OFF.
2. To keep the pilot lit, turn the gas valve to "L" in Pilot.
3. To shut off all gas to the system, including the pilot, turn the gas valve knob to the OFF position.

Extended Shutdown

1. Turn the thermostat knob to OFF.
2. Push in the pilot knob and turn to OFF.
3. Thoroughly drain the fryer. Refer to DRAINING THE FRYER.
4. Clean the fryer according to CLEANING.
5. Turn off the main gas shutoff valve.

Basic Frying Instructions

- Set the desired temperature and allow shortening to heat up to that temperature.
- Fry items that are the same size to ensure equal doneness.
- Drain or wipe dry raw or wet foods to minimize splatter when lowering into hot shortening.
- Add fresh shortening as needed.

Fry Basket Guidelines:

- When frying doughnuts and fritters, turn product only once during frying.
- When frying is completed, take out the supporting wiring rack and place it on the lid.

Extended Shortening Life

Shortening life can be extended by the following guidelines:

- Do not salt foods over the fryer.
- Use good-quality shortening.
- Filter shortening daily (at a minimum).
- Replace shortening if it becomes poorly flavored.
- Keep equipment and surrounding clean.
- Set thermostat correctly.
- Remove excess moisture and particles from food products before placing on fryer.

Draining the Oil



WARNING: Hot oil and hot parts can cause burns. Use care when operating, cleaning, and servicing the fryer.

1. Turn the thermostat knob to the OFF position.
2. Insert the drain extension into the drain valve and hand-tighten
3. Direct the drain extension into the mobile filtering device that you want to use.
4. Slowly open the drain valve to allow oil to flow from the fry tank to the filter pan. Then open the drain valve all the way.
5. When fry tank is empty, brush to remove any additional debris.
6. Close the drain valve.
7. Fill tank with new shortening. Fill to a minimum of the MIN level but no higher than halfway between MIN and MAX. Oil will expand as it is heated.
8. After the fry tank is filled with new oil, turn the thermostat knob to the desired set temperature. The burners will come on and will heat the oil.

Cleaning



WARNING: Hot oil and hot parts can cause burns. Use care when operating, cleaning, and servicing the fryer.

Daily

Clean your fryer regularly with cleaning brush along with a damp cloth, and polish with a soft, dry cloth. If regular cleaning is neglected, grease will be burned on and discolorations may form.

Fingerprints are sometimes a problem on highly polished surfaces of stainless steel. They can be minimized by applying a cleaner that will leave a thin oily or waxy film.

- Clean all exterior surfaces of your fryer at least once daily.
- Use a damp cloth with warm water and a mild soap or detergent.

DO NOT USE CHLORINE OR SULFATE/SULFIDE CLEANERS.

- Rinse thoroughly, and then polish with a soft dry cloth.
- Keep the fryer exterior clean and free of accumulated grease to prevent stubborn stains from forming. If regular cleaning is neglected, grease will be burned on and discolorations may form.
- Remove discolorations by washing with any detergent or soap and water.
- Use a self-soaping, non-metallic scouring pad for particularly stubborn discolorations.
- Always rub with the grain of the stainless steel.
- Do not use a metallic scoring pad or harsh cleaners.

Boil Out Procedure

Weekly or as required:

1. Drain the tank as described under DRAINING THE TANK.
2. Once the shortening has been drained, flush out scraps and sediment using the cleaning brush.
3. Close the drain valve and fill tank water. Use a low foaming cleaner/degreaser to clean the fry tank. Follow the instructions on the side of the package.

DO NOT USE CHLORINE OR SULFATE/SULFIDE CLEANERS.

4. Solution level must be between the MIN and MAX levels on the fryer tank.
5. Set the temperature knob to 200°F or for the recommended solution being used. Allow solution to simmer for about 15 to 20 minutes.
6. Drain the cleaning solution from the tank.
7. Close the drain valve and refill the tank with water. Add 1 cup (1/4 L) of vinegar to neutralize alkaline left by the cleaner. Solution level must be between the MIN and MAX level on the fryer tank.
8. Bring the solution to a simmer only, turn the thermostat off. Allow to stand for a few minutes.
9. Drain the tank according to DRAINING THE TANK. Rinse thoroughly with clear, hot water. All traces of cleaner must be removed. Dry the tank thoroughly.
10. Close the drain valve and add shortening. Follow the FILLING TANK WITH SHORTENING procedure in this manual. The fryer is now ready for use.

Maintenance



WARNING: Hot oil and hot parts can cause burns. Use care when operating, cleaning, and servicing the fryer.



WARNING: Spilling hot fryer compound can cause severe burns. Do not move fryer without draining all frying compound from the tank.

Troubleshooting

When the fryer is cool, inspect annually. Check the flue and clear any obstructions.

Troubleshooting Chart	
Problem:	Probable Cause:
No Heat	Thermostat dial not turned on. Pilot not lit. Gas supply not turned on. Wire connections loose (call service). Wire connections need cleaning (call service). Thermopile (call service).
Insufficient or too much heat	Thermostat dial not set to desired temperature. High limit tripped (call service). Temperature probe (call service).
Tank will not drain	Shortening too cold. Drain pipe clogged with debris.