



There's Always Something Cooking.

Installation and Operation Manual
For Gas Fryers
NO OPTIONS/STAND ALONE
Covering Models
SG & SGF
14, 14R, 14T, 18, 18F,
24P, 24F, 34P, 34F & SGC



ENGLISH

FRANCAIS

ESPAÑOL

THIS MANUAL MUST BE RETAINED FOR FUTURE REFERENCE

FOR YOUR SAFETY

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

WARNING

Improper installation, 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.

TO THE PURCHASER

Post in a prominent location the instructions to be followed in the event that an operator smells gas. Obtain this information from your local gas supplier.

WARNING

There is an open flame inside the fryer. The unit may get hot enough to set near by materials on fire. Keep the area around the fryer free from combustibles.

WARNING

DO NOT supply the fryer with a gas that is not indicated on the data plate. If you need to convert the fryer to another type of fuel, contact your dealer.

WARNING

DO NOT use an open flame to check for gas leaks!

WARNING

Wait 5 minutes before attempting to relight the pilot to allow for any gas in the fryer to dissipate.

WARNING

Never melt blocks of shortening on top of the burner tubes. This will cause a fire, and void your warranty.

WARNING

Water and shortening **DO NOT** mix. Keep liquids away from hot shortening. Dropping frozen liquid food into the hot shortening will cause violent boiling.

WARNING

Ensure that the fryer can get enough air to keep the flame burning correctly. If the flame is starved for air, it can give off a dangerous carbon Monoxide gas. Carbon monoxide is a clear odorless gas that can cause suffocation.

WARNING

A cooker equipped with casters and a flexible gas line, must be connected to the gas supply with a quick disconnect device. This quick disconnect must comply with ANSI Z24.41. To limit the movement of the cooker without depending on the connector or quick disconnect, a restraining cable must also be installed.

NOTICE

Counter top must be constructed of a non-combustible material for SG14C counter top fryer installations.

CHECKING YOUR NEW FRYER

Your new fryer has been carefully packed into one crate. Every effort has been made to ensure that your fryer is delivered to you in perfect condition. As you unpack your new fryer, inspect each of the pieces for damage. If something is damaged, DO NOT sign the bill of lading. Contact the shipper immediately, the shipper is only responsible for 15 days after delivery. Check the packing list enclosed with your fryer to ensure that you have received all of the parts to the fryer. If you are missing any parts, contact the dealer from whom the fryer was purchased.

CAUTION

To prevent equipment damage, don't tilt the fryer onto any two of it's casters or pull the unit by the flue vents.

Locate your Pitco Frialator warranty and fill in the serial number of the fryer and the date received. You will find the serial number on the plate inside the door. Put your warranty card in a safe place for future reference. DO NOT return the card to Pitco Frialator.

Leg/Caster Installation and Adjustment

Installing the legs and leveling the fryer is done with a 7/16" wrench, socket, and a large pair of water pump pliers. The legs/ casters must be installed to provide the necessary height to meet sanitation requirements and assure adequate air supply to the burner. Attach the legs by performing the following procedure.

- a. Lay the fryer on its side being careful not to damage the flue by pulling on it. Protect the outside of the fryer with cardboard or a drop cloth when laying it down.
- b. Attach each leg/caster with the hex head cap screws supplied with the fryer. Each leg/caster requires four 1/4-20 x 5/8" cap screws.
- c. Mount the screws from the inside of the fryer with the nut on the outside. The nuts have lock washers attached to them, therefore it is not necessary to use lock washers.
- d. When all four legs/casters are mounted, stand the unit up being careful not to put too much weight on any one leg/caster. Adjust the height and level the fryer by adjusting the leveling devices on the leg/caster with the water pump pliers.
- e. On units with casters, move the fryer to the desired location and lock the wheels using the locking devices on the front of the casters.

WARNING

The fryer must be properly restrained to prevent movement or tipping. This restraint must prevent the fryer from movements that would splash hot liquids on personnel, which could cause severe burns or injuries.

Always wear oil proof gloves when moving or handling equipment or hot liquids.

Installation Clearances

The fryer needs clearance around it for proper operation. Adequate clearances allow for servicing and proper burner operation. The clearances shown below are for cooker installation in combustible and noncombustible construction.

	Combustible Construction	Non-Combustible Construction	
Back	6"	0"	
Sides	6"	0"	
Floor - Combustible	9"	9"	(Needed for Combustion)

Counter top must be constructed of a non-combustible material for SG14C counter top fryer installations.

Gas Connection

Your fryer will give you peak performance when the gas supply line is of sufficient size to provide the correct gas flow. The gas line must be installed to meet the local building codes or National Fuel Gas Code ANSI Z223.1 Latest Edition. In Canada, install the fryer in accordance with CAN/CGA-B149.1 or .2 and local codes. Gas line sizing requirements can be determined by your local gas company by referring to National Fuel Gas Code, Appendix C, Table C-4 (natural gas) and Table C-16 (propane). The gas line needs to be large enough to supply the necessary amount of fuel to all appliances without losing pressure to any appliance.

WARNING

NEVER supply the fryer with a gas that is not indicated on the data plate. Using the incorrect gas type will cause improper operation. If you need to convert the fryer to another type of fuel, contact your dealer.

Fuel Types - Each fryer is equipped to work with one type of fuel. The type of fuel with which the appliance is intended to operate is stamped on the data plate attached to the inside of the door.

NOTICE

NEVER use an adaptor to make a smaller gas supply line fit the cooker connection. This may not allow proper gas flow for optimum burner operation, resulting in poor cooker performance.

Quick Disconnect Gas Connection

Gas fryers equipped with casters must be installed with connectors that comply with the Standard for Connectors for Movable Gas Appliances, ANSI Z223.1 Latest Edition, and Addenda Z21.69A Latest Edition. This connection should include a quick disconnect device that complies with the Standard for Quick Disconnect Devices for Use With Gas Fuel, ANSI Z223.1 Latest Edition. 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 the quick disconnect from being strained. The restraining device should be attached to the cooker on the back panel.

Fuel Supply Line Leak and Pressure Testing

The fuel supply system must be tested before the fryer is used. If the fuel line is going to be tested at a pressure greater than ($>$) 1/2 PSIG (3.45 kPa), make sure that the fryer is disconnected from the fuel line. If the fuel line is to be tested at a pressure equal to or less than (\leq) 1/2 PSIG (3.45 kPa), the fryer can be connected but the unit's gas valve must be shut. Test all gas line connections for leaks with a solution of soap and water when pressure is applied.

ELECTRICAL CONNECTION

The electrical service used by the fryer must comply with local codes. If there are no local codes that apply, refer to the National Electrical Code (NEC), ANSI/NFPA 70 to install the service. In Canada refer to CSA Standard C22.1 and local codes. Wiring diagrams are provided inside the fryer control box.

Ventilation and Fire Safety Systems

Your new fryer must have proper ventilation to function safely and properly. Exhaust gas temperatures can reach as high as 1000°F. Therefore, it is very important to install a fire safety system. Your ventilation system should be designed to allow for easy cleaning. Frequent cleaning of the ventilation system and the fryer will reduce the chances of fire. Table 1-2 provides a list of reference documents that provide guidance on ventilation and fire safety systems. This table is not necessarily complete. Additional information can be obtained from the CSA-International, 8501 East Pleasant Valley Road, Cleveland, OH44131.

Excessive ventilation causes drafts, which will interfere with the proper operation of the pilot and the burner. Leave at least 18 inches of open space between the fryer's flue vent opening and the intake of the exhaust hood.

CAUTION

Ensure that your ventilation system does not cause a down draft at the fryer's flue opening. Down drafts will not allow the fryer to exhaust properly and will cause overheating which may cause permanent damage. Damage caused by down drafts will not be covered under equipment warranty. NEVER allow anything to obstruct the flow of combustibles or ventilation exiting from the fryer flue. DO NOT put anything on top of the flue area.

NOTICE

NEVER connect the blower directly to the flue openings. The direct flow of air will cause poor temperature recovery, poor ignition, inefficient operation of the fryer, and could extinguish the pilot.

Gas Line Requirements

A properly installed gas supply system will deliver 7.0 ± 2.0 " w.c. natural gas (12.0 ± 2.0 " w.c. LP) to all appliances connected to the line, operating at full demand.

NOTICE

Do NOT exceed 13.5" W.C. pressure as damage may occur to the gas valve.

LIGHTING INSTRUCTIONS

- a. Fill kettle before lighting.
- b. Turn combination gas valve knob to “PILOT” position.
- c. Depress valve knob and light pilot. With pilot burning, hold knob depressed for 60 seconds.
- d. Release knob, pilot should remain lit.
- e. **DO NOT TURN COMBINATION GAS VALVE KNOB TO THE “ON” POSITION UNTIL VESSEL IS FULL OF WATER OR SHORTENING. TURNING THE KNOB TO “ON” WITH VESSEL EMPTY WILL DAMAGE THE VESSEL OR COMPONENTS AND VOID WARRANTY.**
- f. Relighting - wait 5 minutes before attempting to relight the pilot to allow for any gas in the fryer to dissipate.

Initial Cleaning

When the fryer is shipped, many of its parts are covered with a thin coat of oil for protection. Before the fryer is ready for cooking it must be cleaned. This will remove the oil coating and any foreign matter that may have accumulated during storage and shipment. Perform the cleaning as described below.

- a. Fill the vessel with water.
- b. Turn the fryer gas valve knob to the “ON” position. Allow the fryer to bring the water to a low boil and add one packet of Pitco fryer cleaner or a mild, low sudsing detergent and allow water to continue to boil for a minute, making sure water does not boil over.
- c. Turn the gas valve knob to the “PILOT” position and allow fryer to soak with the hot water for 15 minutes.

NOTICE

Do not leave the fryer unattended during cleaning. Never let the water level go below the "Min Level" mark on the back of the tank.

- d. Using the fryer cleaning brush, scrub the inside of the fryer to remove protective coating.
- e. When cleaning is complete, turn the gas valve knob to the “OFF” position and drain the water into a container suitable for hot water and dispose of it.
- f. When the tank has cooled, rinse it thoroughly with cool water. Continue to rinse the tank until the cleaner has been rinsed, thoroughly from the tank.
- g. Using a clean dry cloth, wipe out all of the water. Be very thorough removing the water, because any residual water will cause hot oil to splatter out of the fryer. Close the drain valve and remove container.

CAUTION

Mild steel tanks must be wiped down/coated with oil to keep the tank from rusting.

- h. Now that the tank is clean, you are ready to fill and operate the fryer. Refer to instructions on adding shortening to the fryer.

DAILY CLEANING

should be performed to maintain peak operation and appearance.

- a. Wipe up any shortening that spills onto the exterior of the fryer. This should be done with a clean soft cloth while the oil is still warm.
- b. Use warm water with a mild detergent to clean surfaces. Be careful not to get water in the shortening and to remove any detergent from the fry tank.
- c. Use a nonabrasive scouring powder or pad to clean stains if necessary.
- d. Perform the weekly boil out cleaning of your fryer described below.

WEEKLY FRYER CLEANING

This cleaning should include a complete draining of the fryer and a boil out.

- a. You will need a container large enough to hold 1 1/2 times the oil in one tank. This container should also be able to withstand 400^oF oil temperatures.
- b. Shut fryer gas system OFF completely before performing procedures to ensure unit does not come on during any part of the cleaning operation.
- c. Drain the oil from the fryer and discard or save for reuse. Remove tube rack/mesh tube screens and remove any large debris from the bottom of the fry tank. Once clean, return tube rack/mesh screens to the fry tank. Close the drain valve and fill the fry tank with water and noncaustic detergent.
- d. Relight gas system pilot, following the lighting instructions.

- e. Turn the fryer gas valve knob to the "ON" position. Allow the fryer to bring the water to a low boil and add one packet of Pitco fryer cleaner or a mild, low sudsing detergent and allow water to continue to boil for a minute, making sure water does not boil over.
- f. Turn the gas valve knob to the "PILOT" position and allow fryer to soak with the hot water for 15 minutes.
- g. Using the fryer cleaning brush, scrub the inside of the fryer to remove protective coating.
- h. When cleaning is complete, turn the gas valve knob to the "OFF" position and drain the water into a container suitable for hot water and dispose of it.
- i. When the tank has cooled, rinse it thoroughly with cool water. Continue to rinse the tank until the cleaner has been rinsed, thoroughly from the tank.
- j. Using a clean dry cloth, wipe out all of the water. Be very thorough removing the water, because any residual water will cause hot oil to splatter out of the fryer. Close the drain valve and remove container.
- k. Now that the tank is clean, you are ready to fill and operate the fryer. Refer to instructions on adding shortening to the fryer.

WARNING

Gas units installed with casters must have a restraining device. This device must be connected at all times that the fryer is connected to the gas supply. If it is disconnected for any reason, it must be reconnected.

Thermostat Calibration Check

NOTICE

Thermostat calibration requires that the temperature of the fryer be raised above boiling. Therefore, you will need to drain the water from the fryer and fill it with oil. Before removing the water, perform the initial cleaning of the fryer. Cleaning the fryer now will prevent you from having to drain the oil and refill with water later.

To perform the calibration check detailed below you will need a digital thermometer.

- a. Place the tip of the thermometer in the shortening approximately 1" above the temperature sensors.
- b. Set the thermostat at 325°F and wait for the temperature reading on the thermometer to rise. As the temperature rises toward 325°F watch the thermometer closely.
- c. If the shortening temperature reaches 350°F and the burners DO NOT turn off, turn the thermostat down. Keep lowering the thermostat setting until the burners go out.

CAUTION

If the burners do not turn off at the lowest thermostat setting, the thermostat could be defective. Contact your representative immediately.

- d. Let the fryer cycle 4 to 6 times before checking the temperature. Compare the thermometer temperature against the thermostat setting. If the values are more than 5°F apart, calibrate the thermostat using the appropriate calibration procedure in this manual.

THERMOSTAT CALIBRATION

Millivolt thermostats

- a. Set the thermostat dial to 325° F.
- b. Remove the thermostat dial by pulling the knob straight out. DO NOT rotate the dial.
- c. Hold the outside of the shaft so it does not move. Use the tip of a small, flat tip screw driver to scrape away the sealing compound from the adjustment screw.
- d. Turn the adjustment screw clockwise to lower the temperature setting and counterclockwise to raise the temperature. One quarter turn changes the temperature approximately 25° F.
- e. Turn the adjustment until the burners turn on at 325° F. Replace the knob and allow the fryer to cycle 4 to 6 times. Check the temperature of the thermometer against the thermostat dial. If it is greater than 5° F difference, repeat the calibration procedure.
- f. When the calibration is correct, remove the thermometer and replace the tube screen.

Filling the fryer with liquid shortening

- a. Make sure the drain valve is completely closed.
- b. Fill the fryer with oil to the "Oil Level" line marked on the back of the tank.

Filling the Fryer With Solid Shortening

- a. Make sure the drain valve is completely closed.
- b. Remove the screen covering the tubes.
- c. Cut the shortening into cubes no larger than 1". ALWAYS pack the shortening below, between, and on top of the burner tubes. DO NOT leave any large air gaps. Use care when packing the solid shortening in the tank. DO NOT bend or break the temperature sensor probes. If these are damaged the fryer will not function properly.
- d. Once the fryer is packed with shortening, the shortening must be melted.
- e. To melt shortening, manually pulse the burners ON and OFF using the thermostat until the shortening is liquidized enough to cover the heat tubes. This will protect the tank and components from damage and extend the life of the oil.

Fryer Shut-Down

There are two shutdown modes of fryer operation, STANDBY and COMPLETE. The standby mode removes the ability for the fryer's main burners to cycle. Complete shutdown turns off the gas supply to the fryer. Shut down the fryer by:

STANDBY Turn the thermostat to OFF. Turn the gas valve clockwise to the PILOT position. The cooker is now in Standby and can remain this way for only brief periods of time. NEVER leave the cooker in standby overnight.

COMPLETE To completely shut down the cooker, push and turn the gas valve counterclockwise to the OFF position. The fryer is now completely shut down and can be cleaned and filtered.

TOPIC	UNDERWRITERS LABORATORY DOCUMENT	NATIONAL FUEL GAS CODE DOCUMENT
EXHAUST HOODS	ANSI/UL 710	ANSI/NFPA 96
POWER VENTILATORS	ANSI/UL 705	ANSI/NFPA 96
FILTER UNIT	ANSI/UL 586 ANSI/UL 900	ANSI/NFPA 96
<u>TYPES OF FIRE EXTINGUISHERS AND DETECTION EQUIPMENT</u>		
CO ²	ANSI/UL 154	ANSI/NFPA 12
DRY CHEMICAL	ANSI/UL 299	ANSI/NFPA 17
WATER	ANSI/UL 626	ANSI/NFPA 13
FOAM	ANSI/UL 8	ANSI/NFPA 11
SPRINKLERS	ANSI/UL 199	ANSI/NFPA 13
SMOKE DETECTORS	ANSI/UL 268	ANSI/NFPA 72
FIRE DETECTION THERMOSTATS	ANSI/UL 521	ANSI/NFPA 72

IF MAINTENANCE IS REQUIRED, CONTACT YOUR LOCAL FACTORY SERVICE, LOCAL FACTORY REPRESENTATIVE, OR THE FACTORY TO OBTAIN SERVICE.

In the event of problems with or questions about you order, please contact the Pitco Frialator factory, from 8:00 a.m. - 5:00 p.m., Eastern Standard Time, Monday through Friday, toll-free at:

(800)258-3708 US and Canada only or
(603)225-6684 World Wide

In the event of problems with or questions about you equipment, please contact the Pitco Frialator Authorized Service and Parts representative (ASAP) covering you area, through the National Service Network at:

(800)298-1862 US only, 24 hours