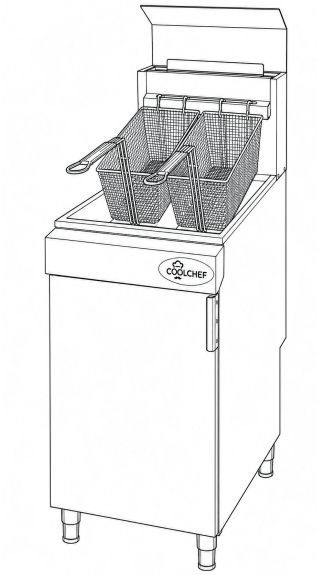
INSTALLATION & OPERATION MANUAL

3/4/5-Burner Gas Fryers

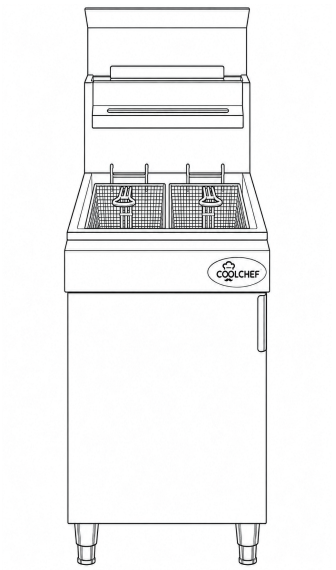
KFD-FY90LP / KFD-FY90NG

3-Burner Fryer



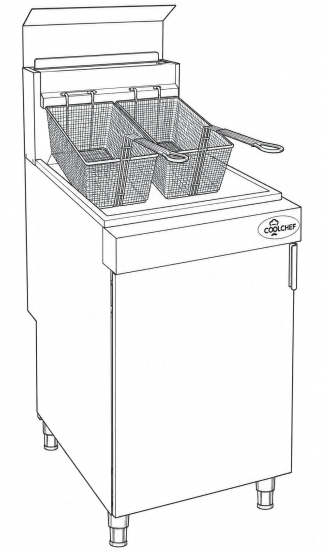
KFD-FY120LP / KFD-FY120NG

4-Burner Fryer



KFD-FY150LP / KFD-FY150NG

5-Burner Fryer



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.

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This manual applies to the models listed on the cover. Procedures apply to all models unless otherwise specified.

SAFETY PRECAUTIONS

Before installing or operating this fryer, read and understand all safety instructions in this manual. Installation and initial start-up must be performed by qualified personnel.

Safety Alert Definitions

DANGER — Indicates an immediate hazardous situation that, if not avoided, will result in death or serious injury.

WARNING — Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION — Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury or equipment/property damage.

NOTICE

Indicates important information that requires special attention but is not related to personal injury.

WARNING - IMPROPER INSTALLATION

Improper installation, adjustment, alteration, service, or maintenance can cause property damage, serious injury, or death. Read all installation, operating, and maintenance instructions before installing or servicing this equipment.

WARNING - FIRE HAZARD

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance. Keep the equipment area free and clear of combustible materials.

WARNING - GAS HAZARD

If a gas odor is detected, shut off the unit at the main gas shutoff valve and contact the local gas supplier. Post the gas-odor response instructions provided by the local gas supplier in a prominent location.

WARNING - BURN HAZARD

Hot oil and hot fryer components can cause severe burns. Use caution when operating, draining, filtering, cleaning, or servicing the fryer. Do not move the fryer until all frying oil or shortening has been drained.

NOTICE

This fryer is intended for commercial use only. Retain this manual for future reference.

1.SPECIFICATIONS

1.1 Models and Specifications

Model	Burners	External Size (mm)	Tank Capacity (Lbs)	Gas Type	Gas Inlet	Total Input (hr)
KFD-FY90	3	394 × 765 × 1350	35-40	LPG / NG	1/2" NPT	90,000
KFD-FY120	4	394 × 765 × 1350	40-50	LPG / NG	1/2" NPT	120,000
KFD-FY150	5	533 × 765 × 1035	75-100	LPG / NG	1/2" NPT	150,000

1.2 Gas Supply Information

Gas Supply Pressure at the Combination Valve:

- Natural Gas: 0.80 kPa (4" W.C.)
- Propane: 2.49 kPa (10" W.C.)

WARNING:

If incoming gas pressure exceeds 3.45 kPa (14" W.C. 1/2 PSI), an additional pressure regulator must be installed.

2. INSTALLATION

Installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1, as applicable, including:

- The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa).
- The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).

WARNING:

This equipment shall be installed only by a licensed gas fitter.

CAUTION:

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

2.1 Unpacking and Inspection

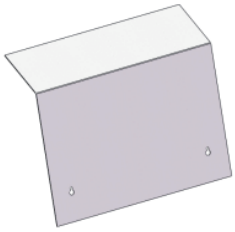
All containers should be inspected for visible damage before and during unloading. Do not discard the carton, pallet, or packing materials until the unit has been fully inspected and confirmed to be in proper condition.

- Any visible damage or shortage should be noted on the delivery receipt before signing. Ask the driver to acknowledge the damage on the receipt whenever possible.
- Uncrate the equipment carefully and inspect it thoroughly for shipping damage.
- If damage is found, contact CoolChef Support promptly and provide photos of the packaging, equipment damage, and shipping label or delivery receipt.
- Verify that all installation parts and standard accessories listed in this manual are included.

Standard Items Listed



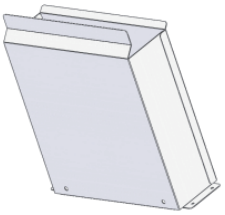
Adjustable Feet*4



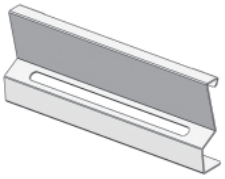
Smoke Baffle*1



Outer Flue Assembly*1



Inner Flue Assembly*1



Fryer Basket Hanger Plate *1



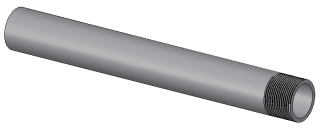
M5*12 Screws*8



Fryer Baskets*2



M6 × 20 Tri-Combination Screws *16

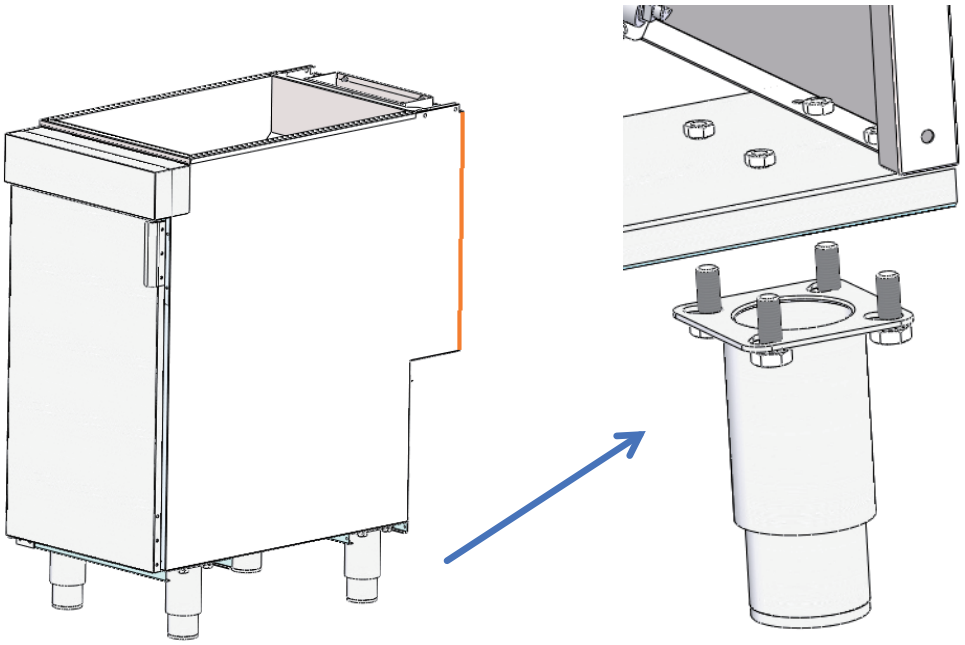


Drain Pipe Extension*1

2.2 Assembly

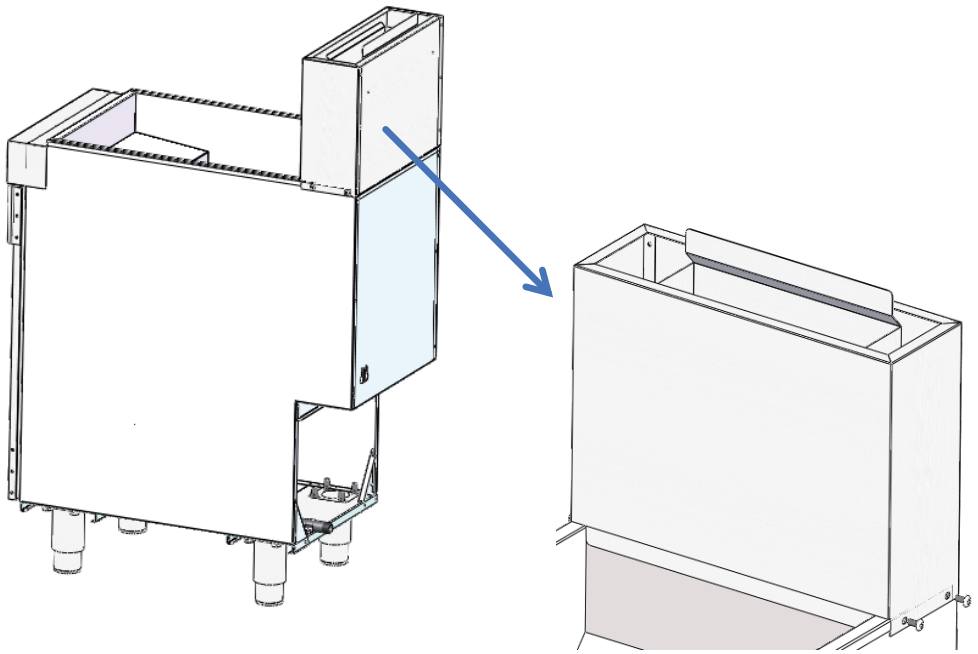
Install the Adjustable Feet

Secure the four adjustable feet to the base plate using the M6 × 20 tri-combination bolts and M6 flange nuts as shown.



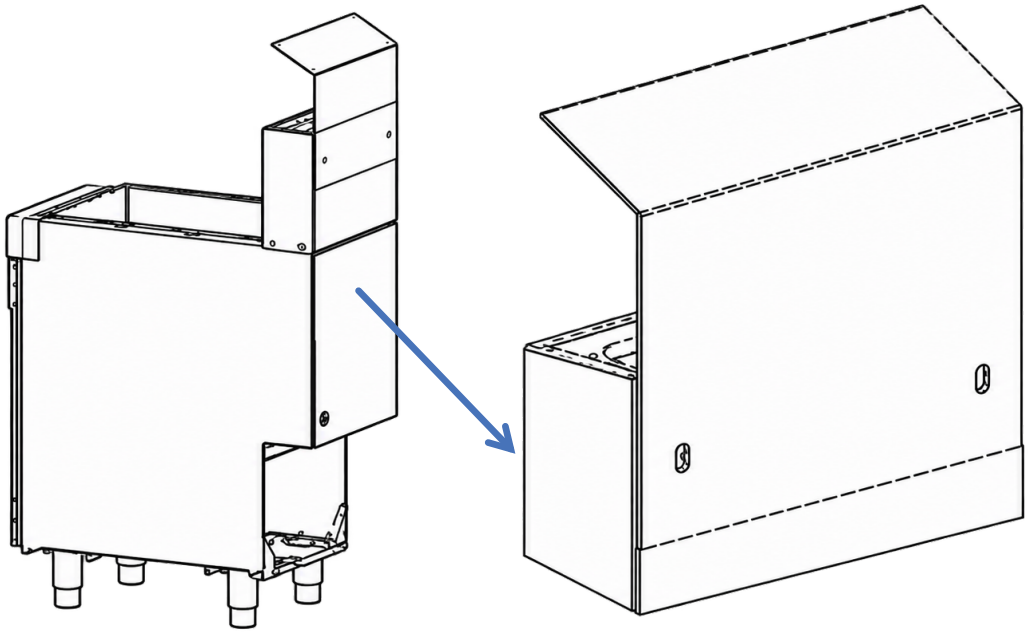
Install the Outer Flue Assembly

Connect the outer flue assembly to the fryer body with M5 × 12 screws.



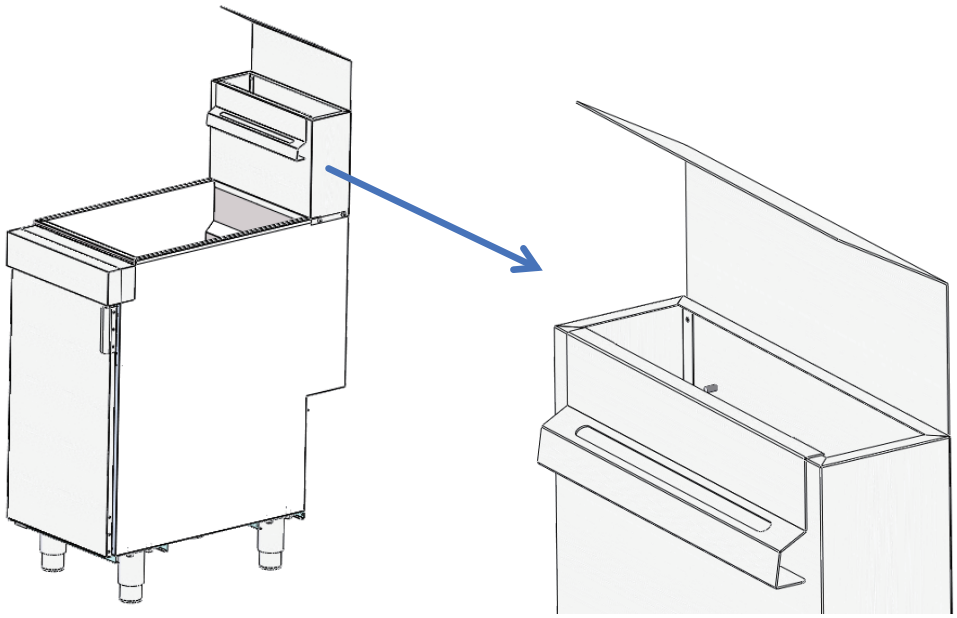
Install the Smoke Baffle

Fix the smoke baffle to the outer flue using M5 × 12 screws.



Install the Fryer Basket Hanger Plate

Mount the fryer basket hanger plate directly onto the outer flue assembly as shown.



2.3 Clearances and Ventilation

Clearances

Allow space for servicing and operation for technician. Installation must conform to all applicable codes.

- Minimum clearance from combustible construction:

  6" from the sides of the fryer
  6" from the back of the fryer
  The fryer may be installed on combustible floors

- Minimum clearance from noncombustible construction:

  0" from the sides of the fryer
  0" from the back of the fryer

- Between the fryer and any open-top flame units:

  At least 16"

Air Supply and Ventilation

- Install the fryer in an area with sufficient air supply for proper gas combustion.
- Do not obstruct any combustion or ventilation air openings.
- Provide adequate clearance around the fryer and combustion chamber air openings.
- Do not direct fans toward the fryer.
- Avoid wall-mounted fans, open windows, or other conditions that create strong cross-drafts around the fryer.

CAUTION:

Ensure that the ventilation system does not cause a downdraft at the fryer flue opening. A downdraft can interfere with proper exhaust flow, resulting in poor burner performance, overheating, or permanent equipment damage.

Hood and Flue Requirements

- Install the fryer under a commercial ventilation hood connected to an appropriate exhaust system.
- The hood must extend at least 6" beyond both sides of the fryer.
- Provide sufficient clearance above the fryer to allow combustion products to be removed efficiently.
- Maintain at least clearance of 18" between the fryer flue vent and the filters of the hood system.
- Do not obstruct the fryer flue or place any object on top of the flue area.
- Never connect a blower directly to the flue opening.
- Do not make a direct flue connection to the fryer.
- Maintain proper air balance in the room to ensure stable burner operation and proper exhaust.

2.4 Gas Connection

Before installation, verify that the gas type shown on the fryer data plate matches the gas supply. The data plate is located on the inside of the door panel.

Gas Supply and Piping Requirements

- The gas inlet is located on the lower rear of the fryer.
- Install a gas shutoff valve in the gas line ahead of the fryer.
- For a single fryer, the gas supply line must be at least equivalent to 1/2" iron pipe. For multiple fryers installed as a battery, use at least 1-1/4" iron pipe.
- If an optional quick-disconnect flexible hose is used, the manual specifies 3/4" iron pipe for a single unit and 1-1/4" for batteries.
- Keep all gas piping clean and free of dirt, debris, and obstructions.

NOTICE

Use only pipe joint compound suitable for both natural gas and propane. Apply a very small amount to the male threads only. Do not apply compound to the first two threads, as excess compound may enter the gas stream and clog the burner orifices or control valve.

WARNING:

Before lighting, check all gas-supply joints for leaks using a soap-and-water solution. Never use an open flame to test for gas leaks. After the piping has been checked for leaks, fully purge the gas pipes to remove air.

Pressure Regulator

- All commercial cooking equipment must have a pressure regulator on the incoming service line for safe and efficient operation. The regulator provided with this equipment must be installed in the incoming gas line.
- Regulator specifications: ¾" NPT inlet and outlet, factory adjusted for 5" WC Natural Gas st andard and may be converted by qualified personnel to be used for Propane at 10" WC.

Prior to connecting the regulator, check the incoming line pressure. The regulator can only withstand a maximum pressure of ½ PSI (14” WC). If the line pressure is beyond this limit, a step down the regulator before the regulator provided will be required. The arrow on the bot tom shows gas flow direction and should point downstream to the equipment.

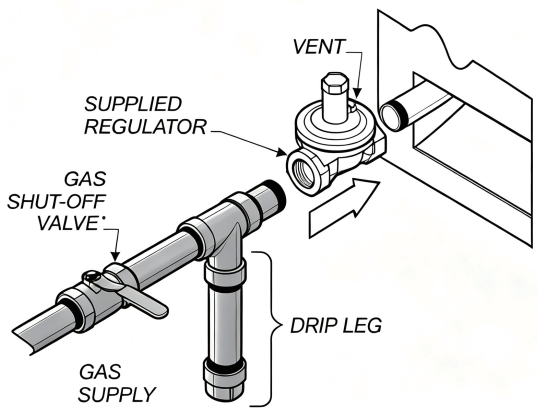


Fig 3.Gas Connection Diagram

2.5 Securing and Leveling the Fryer

WARNING:
The fryer must be properly restrained to prevent movement or tipping that could splash hot liquid and cause severe burns or injuries.

Restrain the fryer using an appropriate method, such as:

- Securing it as part of the installation arrangement.
- Connecting it to a battery of appliances.
- Installing it in a suitable alcove.
- Using other adequate restraining means.

Level the fryer only after all gas connections have been completed

- Place a level on top of the fryer.
- Adjust the legs as needed until the fryer is level front-to-back and side-to-side in its final installed position.
- If casters are used, lock the wheels after the fryer has been leveled.

NOTICE
When this appliance is installed with casters, it must be installed with the casters supplied, a connector complying with either ANSI Z21.69 CSA 6.16 and a quick-disconnect device complying with ANSI Z21.41 CSA 6.9. It must also be installed with restraining means to guard against transmission of strain to the connector, as specified in the appliance manufacturer instructions.

3. OPERATION

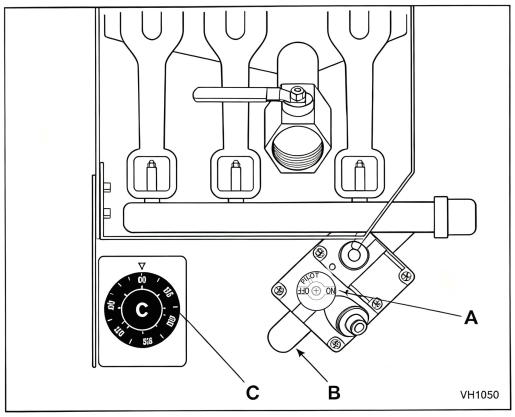
WARNING:
Hot oil and fryer parts can cause burns. Use care when operating, cleaning, and servicing the fryer. Do not move the fryer without draining all frying compound from the tank

3.1 Before First Use

1. Wipe protective oil from all surface parts and the fry tank interior with hot soapy water.
2. Do not use chlorine or sulfate/sulfide cleaners.
3. Wash all accessories shipped with the unit.
4. Rinse the fryer and accessories thoroughly and drain the fry tank. Open the front door to access the drain valve.
5. Wipe the fry tank completely dry with a soft, clean cloth.

3.2 Lighting the Fryer

WARNING:
Before turning on the burners, the fry tank must be filled with liquid shortening. Never operate the fryer empty; the frypot may be damaged and a fire may result.



A Gas Valve Knob
B Gas Supply
C Thermostat Knob

Fig 2.Control identification.

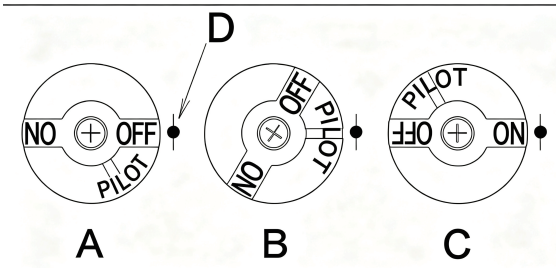


Fig 3.Gas valve positions: OFF, PILOT, and ON.

1. Open the front door.
2. Turn the thermostat knob (C) **OFF**.
3. Push the gas control valve knob (A) and turn it to **OFF** (see figure below, view A). Wait 5 minutes for unburned gas to vent.
4. Push and turn gas control valve knob to the "**L**" in Pilot (see figure, view B).
5. While holding the knob in, light the pilot with a lit taper. Continue to depress the knob until the pilot remains lit. If the pilot does not remain lit when the knob is released, repeat step 3 through 5.
6. Depress and turn the gas control knob (A) to **ON** (See figure, view C).
7. If the gas supply is interrupted, repeat step 2 through 6.

Filling the Frypot

1. Close the drain valve completely before filling the fry tank.
2. Before first use, clean and dry the fry tank thoroughly as described in **Section 3.1, Before First Use**.
3. Fill the frytank with liquid frying oil to a level between the **MIN** and **MAX** fill lines. Do not fill below the **MIN** line or above the **MAX** line.
4. Maintain the oil level between the **MIN** and **MAX** fill lines during operation. Add fresh frying oil as needed.

CAUTION:
Never attempt to melt a solid block of shortening on top of the heat tubes. Never start the burners when the frypot is empty.

3.4 Turning On and Temperature Control

1. Set the temperature knob to the desired temperature.
2. After the set temperature is reached, the thermostat shuts off gas flow to the burners.
3. The pilot remains lit.
4. The burners cycle on and off to maintain the set temperature.

3.5 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 OFF.

3.6 Extended Shutdown

1. Thoroughly drain the fryer. Refer to Section 5.1, Draining the Tank.
2. Clean the fryer according to Section 5, Cleaning and Maintenance.
3. Turn the thermostat knob to OFF.
4. Push in the pilot knob and turn it to OFF.
5. Turn off the main gas shutoff valve.

3.7 Over-Temperature Shutdown

- If the frying oil 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.
- If an overheating condition persists, contact service personnel

4. COOKING HINTS

4.1 Basic Frying Instructions

- Set the desired temperature and allow the frying oil to reach the set temperature.
- Fry foods of similar size together to promote even cooking.
- Drain or pat dry wet foods before lowering them into hot oil to reduce splattering.
- Add fresh frying oil as needed.

4.2 Extending Frying Oil Life

- Do not salt or season food over the fryer.
- Use high-quality frying oil.
- Filter the oil at least once daily.
- Replace the oil if it develops an off odor or flavor.
- Keep the fryer and surrounding area clean.
- Maintain the correct frying temperature.
- Remove excess moisture and loose food particles before frying.

5. CLEANING AND MAINTENANCE

Coolchef Equipment is constructed with the best quality materials and is designed to provide durable service when properly maintained. To expect the best performance, your equipment must be maintained in good condition and cleaned daily Naturally, the frequency and extent of cleaning depends on the amount and degree of usage.

5.1 Draining the Tank

WARNING:

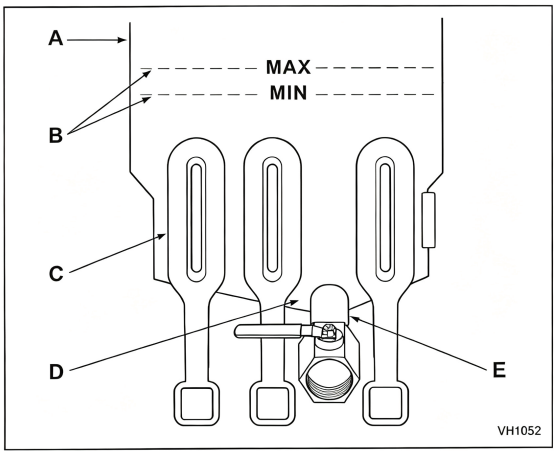
When handling hot oil, wear insulated and oil-proof gloves.

CAUTION:

Before opening the drain valve, always turn off the fryer. This prevents the heating system from operating when the tank is empty and helps prevent fire.

NOTICE

Cold shortening may not drain completely. Before draining, make sure the shortening is sufficiently warm and fully liquid, especially in the cold zone. Use a container capable of holding 400°F oil and wear insulaed, oil-proof gloves.



A Fryer Tank
B MIN and MAX Fill Level Lines
C Heat Pipes
D Cold Zone
E Drain Pipe

Fry tank, MIN/MAX fill lines, heat pipes, cold zone, and drain pipe.

1. Turn the thermostat to **OFF**.
2. To keep the pilot lit, turn the gas valve to **PILOT**.
3. Direct the drain spout into the container used to collect the shortening.
4. Open the drain valve. When the container is full or the fryer tank is empty, close the drain valve. Repeat as necessary until the fryer is empty.
5. If desired, perform the clean-out procedure described under **Section 5, Cleaning and Maintenance**.
6. Once empty, add new shortening and set the thermostat to the desired temperature.

5.2 Daily Filtering

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

- Filter the frying oil at least once daily. Follow the instructions provided with the filtering equipment.
- For proper filtering and drainage, maintain the oil temperature between 250°F and 350°F during filte ring.

CAUTION:
Allow hot surfaces to cool before cleaning.

- Clean all exterior surfaces of the fryer at least once daily.
- Wipe surfaces with a damp cloth mistened with warm water and a mild soap or detergent.
- Remove accumulated grease and food residue before buildup or discoloration occurs.
- Rinse as needed and wipe dry with a clean, soft cloth.

5.4 Boil-Out Procedure

Perform the boil-out procedure weekly or as needed.

1. Drain the fry tank as described in **Section 5.1, Draining the Tank.**
2. After the shortening has been drained, use the tank brush to remove any food particles and sediment from the fry tank.
3. Close the drain valve and fill the fry tank with clean, warm water to a level between the MIN and MAX marks.
4. Add a commercial fryer boil-out cleaner according to the cleaner manufacturer's instructions.
5. Set the thermostat to the temperature recommended by the cleaner manufacturer. Bring the solution to a gentle simmer and allow it to simmer for approximately 15 to 20 minutes. Do not allow the solution to boil vigorously.
6. Turn the thermostat OFF and drain the cleaning solution by following the procedure in **Section 5.1, Draining the Tank**.
7. Close the drain valve and refill the fry tank with clean water. Add 1 cup (0.24 L) of vinegar to help neutraize any alkaline cleaner residue. Keep the solution level between the MIN and MAX marks.
8. Bring the solution to a gentle simmer, then turn the thermostat OFF. Allow the solution to stand for a few minutes.
9. Drain the fry tank. Rinse thoroughly with clean, hot water until all traces of cleaner are removed. Dry the fry tank completely.
10. Close the drain valve. Make sure the fry tank is completely dry before refilling it with liquid shortening.

5.5 Stainless Steel Cleaning

- Do not use chlorine or sulfate/sulfide cleaners.
- For discoloration, clean with mild detergent or soap and water.
- For stubborn discoloration, use a self-soaping, non-metallic scouring pad.
- Do not use a metallic scouring pad or harsh cleaners.
- After cleaning, rinse thoroughly and dry with a soft cloth.
- Always rub in the direction of the stainless steel grain.

5.6 Flue Vent Inspection

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

6. TROUBLESHOOTING AND SERVICE

6.1 Troubleshooting

Problem	Probable Cause
No Heat	Thermostat dial not turned on. Pilot not lit. Gas supply not turned on. Loose wire - call an authorized service agency. Thermopile (temperature probe) faulty - call Service.
Insufficient or Too Much Heat	Thermostat dial not set to desired temperature. Thermopile (temperature probe) encrusted. Hi-limit tripped and needs replacing - call an authorized service agency. Thermopile (temperature probe) faulty - call Service.
Tank Will Not Drain	Shortening too cold.
Flame Problems	Call an authorized service agency.

6.2 Service Information

If service is needed, have the fryer model and serial number available. This information can be found on the fryer data plate.

Model Number	
Serial Number	
Authorized Service Technician	
Phone	