



FOOD EQUIPMENT

# Electromechanical Control Fryers Mark 313 28-lb. oil capacity models

*Models CK40, CK45, CK401, CK42, CK421*

## Installation & Owner's Manual

Legs shown are accessories

**ENERGY GUIDE**  
Preheat: 6 min. to 350F  
Watts to hold 350F:770



CK40



CK401



CK421

### *for reliable frying operation*

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#### GENERAL

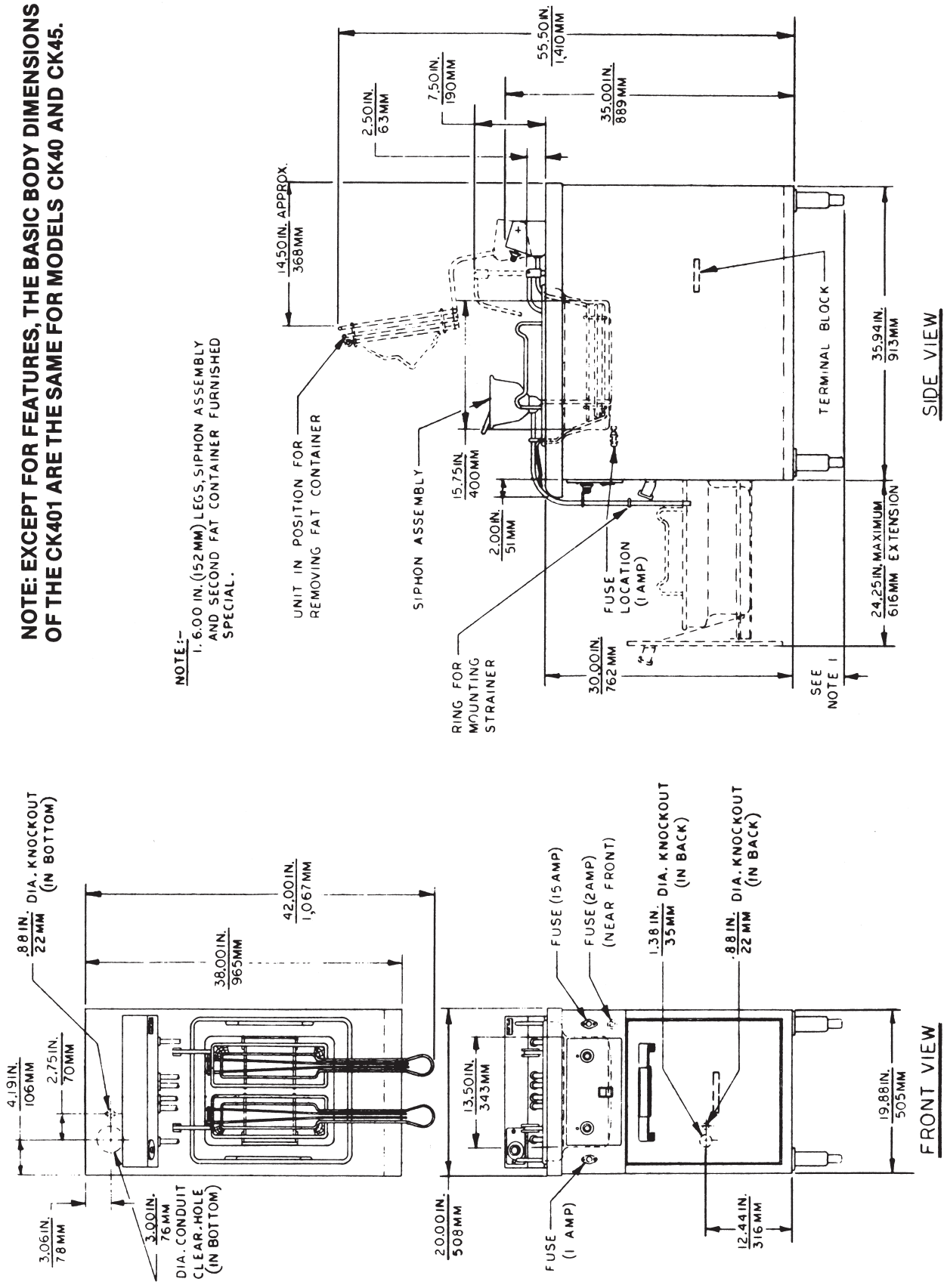
Congratulations on owning this fine quality product. Its many modern features will make your business day a little more pleasant. Though some of these conveniences are obvious, please read this entire booklet for important, helpful information. For example, we stress various procedures to reduce the risk of fire and to keep your fryer operating properly.

For your benefit, we have listed important points on decals we have factory installed on the front (operating procedures) and rear (installation procedures) of your fryer. Please read this important information.

For your protection, we make our fryers to comply with the standards of the National Sanitation Foundation and obtain listing of Underwriters Laboratories.

**NOTE: EXCEPT FOR FEATURES, THE BASIC BODY DIMENSIONS OF THE CK401 ARE THE SAME FOR MODELS CK40 AND CK45.**

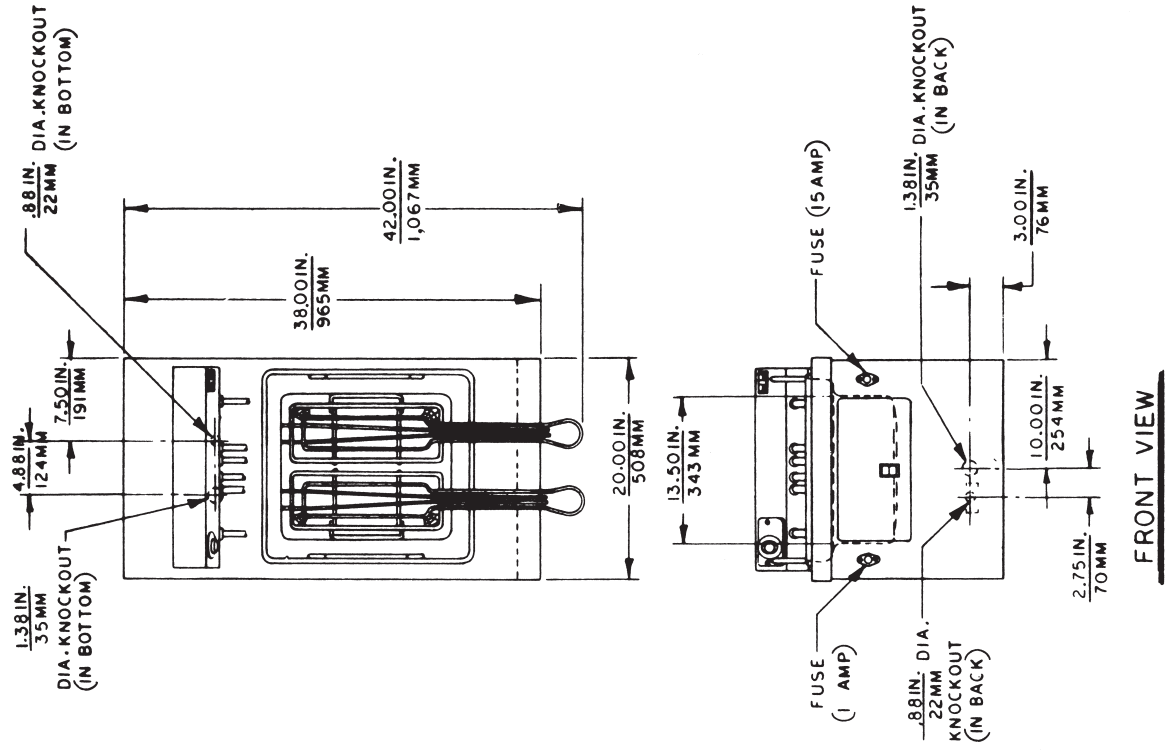
**NOTE:-**  
 1. 6.00 IN. (152 MM) LEGS, SIPHON ASSEMBLY AND SECOND FAT CONTAINER FURNISHED SPECIAL.



**FIG. 1: FLOOR PLAN — CK401 FREE STANDING W/AUTOMATIC BASKET LIFTS.**

**NOTE: EXCEPT FOR FEATURES, THE BASIC BODY DIMENSIONS OF THE CK421 ARE THE SAME FOR MODEL CK42.**

**NOTE: -**  
 1- SIPHON ASSEMBLY  
 FURNISHED SPECIAL.



**FIG. 2: FLOOR PLAN — CK421 MODULAR W/AUTOMATIC BASKET LIFTS.**

# INSTALLATION INSTRUCTIONS

## ■ TOOLS, TEST EQUIPMENT AND MATERIALS

1. Standard snap-on, tong-type volt-ammeter.
2. A set of electrical leads.
3. Thermocouple (or accurate metal) thermometer of type designed for commercial fryer use.
4. Screwdrivers (Phillips head and slotted head - or combination Phillips-head screwdriver/nutdriver).
5. Assortment of common hand tools and accessories of type used to service electromechanical equipment.
6. Carpenter's level.

## ■ CHOOSING A LOCATION

Ventilation & shutoff: Fryers with automatic Power Turn-off circuit should be installed under a ventilating hood which is equipped with an automatic fire extinguishing system that interrupts power to the fryer when the fire extinguisher operates. Standard internal Power Turnoff system enables you to install and operate your fryer with such automatic, approved NFPA ventilating systems, as shown in Figures 12 and 13.

## ■ PREPARATION

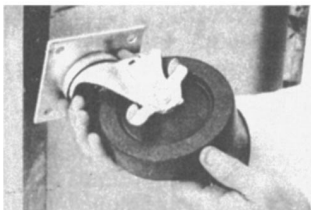
After carefully removing the shipping container, lay fryer on its side or back on cardboard in preparation for attaching legs, casters or modular stands. Do not rest fryer on its front because of possible damage to controls and door handle. Use care to avoid scratching or damaging fryer surface.

## ■ ATTACHING ACCESSORY LEGS TO FREE STANDING MODELS

1. To get a 36" working height, fasten 6-in. legs (CX112) to bottom at hole locations at the four corners per instructions furnished with the legs.
2. Position and level fryer: adjust for proper height and level by rotating adjustable feet on bottom of legs. Turning feet to left increases height. Hold fryer legs with one hand while turning feet. Check level with carpenter's level.

## ■ ATTACHING ACCESSORY CASTERS TO FREE-STANDING MODELS

1. Use CX084 accessory caster kit which consists of:
  - 2 - 6" high swivel casters with brakes
  - 2 - 6" high rigid casters with brakes
  - 4 - leg brace plates
  - 12 - 1/4-20 x 3/4" hex-head bolts
  - 12 - lock washers
  - 1 - Installation instructions
2. Locate casters as shown in Fig. 3. Attach per instructions furnished with casters.



**Fig. 3: Bolt casters to fryer.**

## ■ PLACING MODULAR MODELS ON ACCESSORY STAND:

1. Assemble stand by inserting legs into frame and secure with bolts.
2. Set fryer on stand. Square units with stand.

3. Adjust mounting stand for proper height and level of fryer. Use level to ensure proper leveling. Stand is adjustable from 18 1/2" to 19".

## ■ INSERTING BANKING STRIPS

**IMPORTANT NOTE:** Depending on the installation, it may be desirable to install the banking strips *after* the fryer has been placed in its final position and the electrical connections made.

1. When to use: When fryers are used in banks of two or more and you want a more attractive appearance and easier cleanup.
2. What is supplied:
  - A. Optional stands for more than 1 fryer include appropriate number of CX056 banking strips at no extra charge.
  - B. Tube of "Metal Seal" silicone rubber.
3. What is required:
  - A. Clean rags.
  - B. Stiff cardboard - small straight-edged cards (such as business cards).
4. Follow these steps:

- A. Clean adjacent side surfaces of fryers with solvent-dampened rag.
- B. Bolt modular fryers to stand:

Fasten modular fryers to modular stands with four 1/4-20 x 1/2" bolts. Mount all fryers loosely, then square units with stand and eliminate gaps between fryers before tightening bolts.
- C. Clean fryer tops, banking strips with solvent-dampened rag.

- D. Apply silicone rubber: following directions on tube, apply 1/4" diameter bead of silicone rubber along entire length of each side of banking strips. See Fig. 4.



**FIG. 4: Applying silicone**

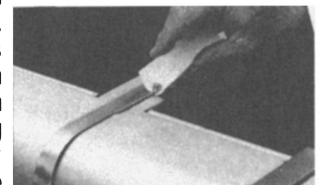
**NOTE:** Silicone rubber starts to set after 10 minutes. Install one banking strip at a time and work rapidly after applying adhesive.

- E. As shown in Fig. 5, insert banking strips between fryers with heating units in raised position. Tap into position carefully with rubber mallet to prevent denting strip.



**Fig. 5: Inserting Banking Strip.**

- F. Use stiff-edged, thin cardboard (see Fig. 6) to remove excess silicone rubber which squeezes out from edge. Run card along surface in "snow plow" fashion. Wipe edge and repeat until only a film remains.



**Fig. 6: Remove excess silicone**

- G. Remove film with solvent-dampened rag.



# MAKING ELECTRICAL CONNECTIONS

## ELECTRICAL DATA

TOTAL KW CONN.	3 PHASE LOADING			NOMINAL AMPERES PER LINE WIRE								
	KW PER PHASE			3-PHASE								
				120/208 VOLTS			120/240 VOLTS			480 VOLTS		
	L1-L2	L2-L3	L1-L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
12.0	3.2	4.5	4.3	31.3	32.2	36.6	27.1	27.9	31.7	13.6	14.0	15.9

Rated Voltages: 120/208, 120/240 and 480VAC, 3-Phase, 480 VAC, -1 Phase, 60 Hz.

FIG. 7

### FRYER WIRING AND POWER SUPPLY VOLTAGES

- 208- and 240-volt fryers are factory wired for connection to a four-wire power supply which also provides 120-volt supply that is necessary for the control circuit. Circuit flexibility allows installation to a three-wire power supply when a separate 120 volt supply is provided.
- 480-volt fryers are wired for connection to a three-wire, 480-volt power supply. In addition, a separate 120-volt power supply is required.
- Regardless of fryer voltage or power supply, all fryers can be connected to a hood fire-extinguishing system.

#### IMPORTANT NOTICE

Be sure to read this section carefully because great flexibility has been built into the fryer circuitry so that it is adaptable to a variety of power supplies.

### IMPORTANT PRECAUTIONS

**WARNING:** ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER ELECTRICAL CODES.

**WARNING:** DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH INDICATING THAT YOU ARE WORKING ON THE CIRCUIT.

- MATCH VOLTAGE:** before connecting power to fryer, be certain that line voltage at point of installation matches nameplate voltage rating of fryer. Failure to do so can cause damage to fryer components and affect performance. Such malfunctions are not covered by warranty.
- FUSING:** this fryer is not fused (except for control circuit) and must be connected to a circuit having the proper fuses or circuit breaker, sized in accordance with requirements of the National Electrical Code and your local electrical code.
- POWER DISCONNECT:** Installer must provide a means for disconnecting each fryer from electrical power supply. Disconnect must be in accordance with the National Electrical Code and your local electrical code. Disconnect must be readily accessible to the user.
- CORDSET:** if a power cordset is used to connect fryer, use oil-resistant insulating type SO or HSO only, rated for 75C and with an electrical rating (current and voltage) which matches that of fryer (see Wiring Diagrams supplied with this manual. Attach cordset to fryer with a suitable strain relief device to prevent damage to cordset and its connection to fryer's electrical circuit.
- GROUNDING:** fryers must be grounded. A grounding lug is provided near the conduit hole on the back wall of the control section.

- FIRE-EXTINGUISHING SYSTEM:** the fryer with internal Power Turnoff should be installed under an approved vent hood system which complies with NFPA #96 Standard (latest edition). Such a system will automatically shut off all sources of electrical power to heating element circuit in case of fire.

### SUPPLY CONNECTIONS

- Break large knockouts on fryer back or bottom for incoming conduit or power cords. These larger knockouts have adjacent, smaller knockouts for separate 120-volt circuit, if required. Refer to applicable floor plans for exact location.
- Open electrical compartment interior to connect power leads to terminal block, located below compartment's center, proceeding as follows:
  - Raise heating elements.
  - Remove shortening container by lifting it out to expose enclosed electrical compartment.
  - Remove baffle by removing several screws.

### HOOKING UP FREE-STANDING MODELS

- See applicable figure for supply connections. See phase loading chart on applicable wiring diagram for model to be wired.
- Remove mounting screws from front control panel. Remove panel.
- Install conduit or armored cable to 3/4-inch or 1/8-inch knockout access on lower right-hand side of enclosure to 3/4-inch or 1/8-inch knockout at base of control panel as shown in floor plan. If hood circuit and/or separate 120V supply is used, install conduit or armored cable to 7/8-inch knockout.
- Connect input power line to terminal block located on contactor panel. (1- or 3-phase connection is possible by following method of connection shown on the appropriate wiring diagram.) If more than 1 fryer is installed, balance phases externally.
- Test fryer operation: contactors operate when switch is on and thermostat is set at 200F or higher. Both pilot lights will light.
- Replace right front panel: fasten with screws.

### HOOKING UP MODULAR MODELS ON STANDS WITHOUT CASTERS

- See applicable figure for supply connections. See phase loading chart on applicable wiring diagram for particular model to be wired.
- Install conduit or armored cable to 3/4-inch or 1/8-inch knockout access on lower right-hand side of enclosure to 3/4-inch or 1/8-inch knockout at base or rear of contactor panel as shown in floor plan. If hood circuit and/or separate 120V supply is used, install conduit or armored cable to 7/8-inch knockout.
- Complete hookup as described in steps (4) thru (6) of preceding "HOOKING UP FREE-STANDING MODELS."

■ HOW FRYERS WITH HOOD CIRCUIT INTER-CONNECTIONS CAN BE CONNECTED TO VARIOUS POWER SUPPLIES.

1. 4-WIRE POWER SUPPLY - 120/208V and 120/240V

a. **No Interconnection to Hood Circuit.** The fryer leaves the factory wired as shown in Fig. 8. No changes to the wiring are necessary.

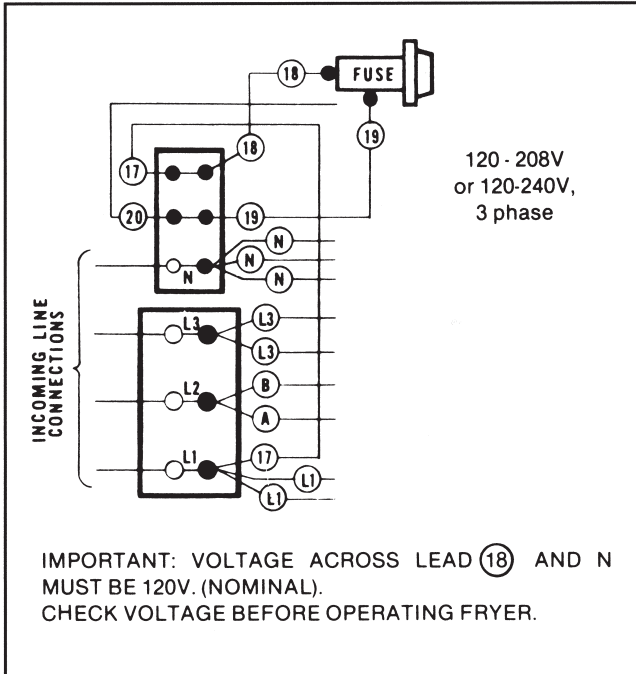


FIG. 8

b. **With Interconnection to Hood Circuit** (Hood system switch provides continuity.) See Fig. 9.

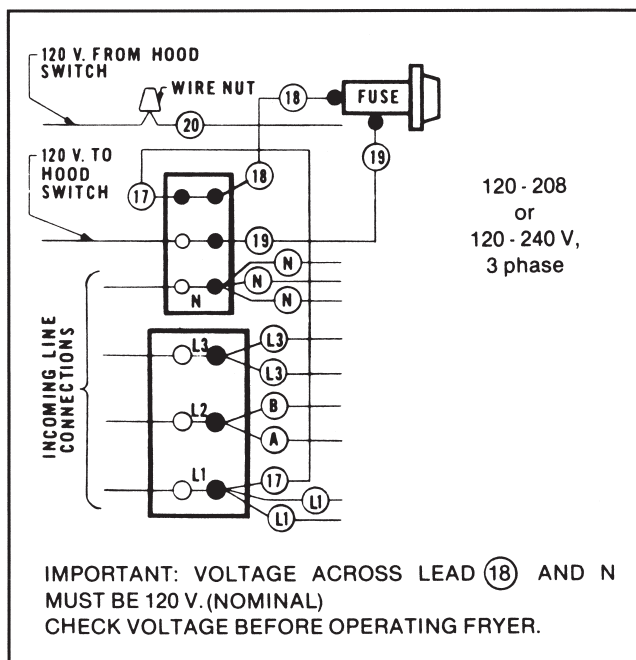


FIG. 9

2. 3-WIRE POWER SUPPLY 208, 240, 480 V, EXTERNAL 120V CONTROL SUPPLY.

a. 120 VAC source or 120 VAC Hood Circuit for Control Circuit. See Fig. 10.

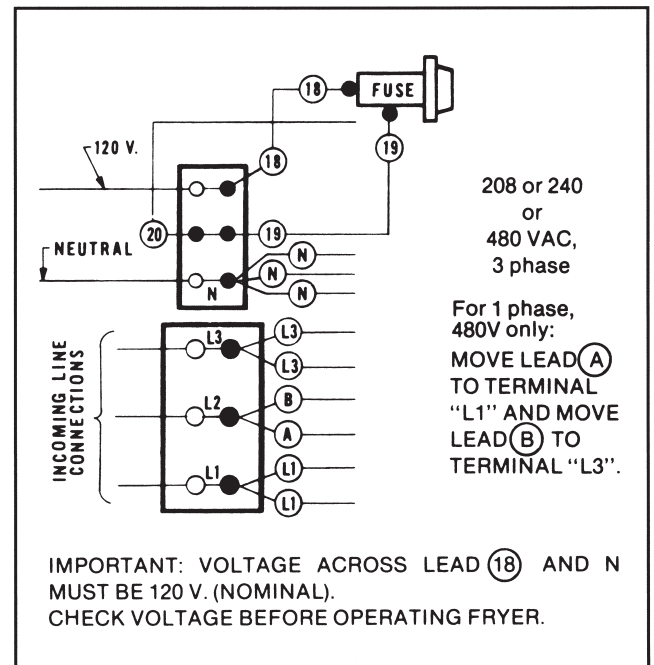


FIG. 10

**Important: On 208 or 240V, Lead #17 (not appearing in above schematic) must be removed. On 480V, fryer is shipped without Lead #17.**

b. 120VAC source for control circuit with Hood System switch to provide continuity. See Fig. 11.

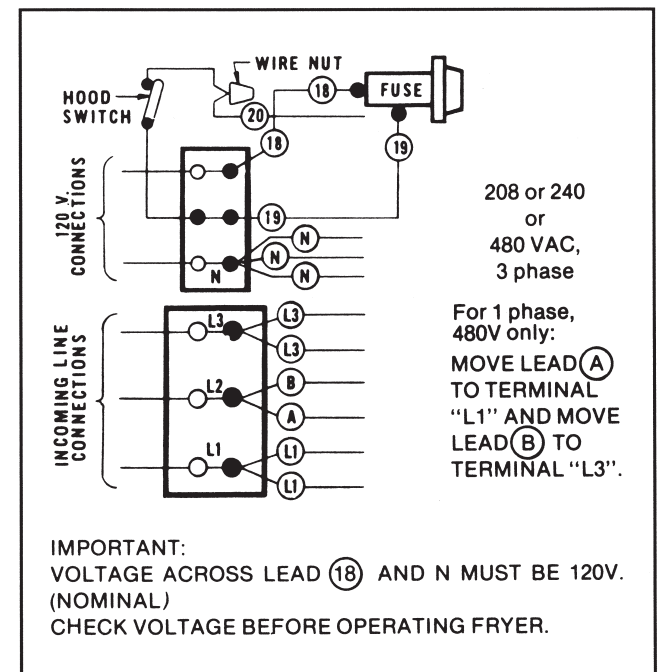


FIG. 11

**Important: On 208 or 240V, Lead #17 (not appearing in above schematic) must be removed. On 480V, fryer is shipped without Lead #17.**

# OWNER'S INFORMATION

## IMPORTANT PRECAUTIONS

1. **POWER DISCONNECT:** teach employees how to operate electrical power disconnect so that they can do so immediately in case of emergency.
2. **SHUT OFF FRYER:** when not in use for *extended* periods. Turn off power disconnect switch, circuit breaker, or remove line cord plug from receptacle.
3. **HANDLING HOT SHORTENING:** Use extreme care. Use insulated gloves to avoid burning hands and forearms. Do not leave fryer unattended while draining shortening into a separate container. Fill container to no more than  $\frac{2}{3}$  its capacity; ensure that shortening covers heating elements and thermostat sensing bulbs. Allow shortening to cool within container before removing to empty. Wipe any spilled shortening from floor or other areas immediately.
4. **SERVICE:** notify your authorized servicer of loose bulb clamps, probes, faulty fuses, etc., which could cause malfunctions.

## IMPORTANT ENERGY CONSERVATION GUIDELINES\*

1. Purchase properly sized equipment for your operation: (don't oversize or undersize).
2. Don't oversize ventilating system. Use the size that will provide optimum air flow.
3. Turn off unused equipment.
4. Reduce thermostat settings in slack periods since electric equipment heats up, recovers fast.
5. Preheat only to required cooking temperature for specific food — not higher.
6. Adjust menu patterns and cooking schedules for optimum equipment use.
7. Keep fryers in good operating condition to permit maximum performance.

\* Based on National Restaurant Association's "Check-List for Energy Control and Conservation".

## FEATURES

### ACCESSORIES

#### BASKETS

- CX033** Large (1) Standard Mesh
- CX034** Twin (2) Standard Mesh
- CX035** Twin (2) Fine Mesh
- CX208** Left (1) Twin Standard Mesh
- CX209** Right (1) Twin Standard Mesh
- CX312** Twin (2) Fish Slotted

#### FAT CONTAINER

**CX478**

#### COVERS

**CX170** (All Models)

#### SIPHONS AND BAGS

- CX036** Strainer Bags (Set of Six)
- CX471** Miraclean siphon w/one strainer bag
- CX494** Miraclean siphon with one strainer bag (when cutting board used).

#### LEGS, CASTERS, STANDS, MOBILE CONVERSION KITS

- CX112** Set of four (4) 6" adjustable s/s tubular legs.
- CX227** Set of four (4) 6" high casters, front fixed with lock; rear swivel.

**CX136** Stand for one or more CK42, CK421  
**Modular Stand—Varying Lengths**

NOTE: Maximum length of one piece -9'6".  
Example: 14'6" Stand would consist of 2, 7'3" pieces.

**CX084** 3B Accessory Package for free-standing models.

#### ADAPTER BASES

**CX138** 2" For free-standing models (20" X 36" ).

#### SPREADER PLATES (all models)

**CX126** 6"

**CX135** 12"

**CX159** Non-standard. Available in .12 in. (0.3 cm) increments between 4" and 24" width. Desired width must be specified.

#### FRONT CLOSURE (Free-standing models)

**CX127** 6"

**CX128** 12"

**CX193** Non-standard. Available in .12 in. (0.3 cm) increments between 4" and 24" width. Desired width must be specified.



## A host of convenience features you will appreciate

Heating elements clean  
pyrolytically.

Power ON light.

Front rocker switch turns  
fryer ON and OFF.



Dual basket lifts give  
more consistent frying.

QUADGUARD protection  
consists of dual contactors  
and thermostats.

Standard Power Turnoff.

FIG. 12

### BACK CLOSURE (free-standing models)

**CX217** Non-standard available in .12 in. (0.3 cm) increments between 4" and 24" (10.2 and 61 cm) width. Desired width must be specified.

### END CLOSURES (free-standing models)

**CX194** 6" (left or right).  
**CX195** 12" (left or right).  
**CX196** Non-standard (left or right). Available in 1/8" increments between 4" and 24" width. Desired width must be specified.

### SPACERS (CK42, CK421)

**CX091** 6" wide, 17 1/2" high.  
**CX092** 12" wide, 17 1/2" high.  
**CX093** 18" wide, 17 1/2" high.  
**CX094** Non-standard width, 17 1/2" high. Available in 1/8" increments between 4" and 24" width. Desired width must be specified.

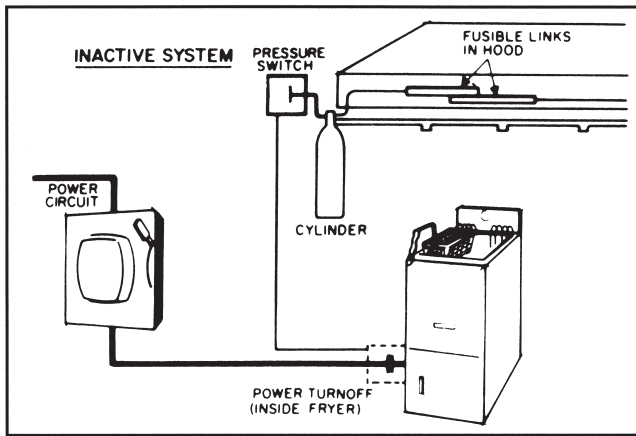
### BACK SHELVES

**CX121** 20" for all models. (All Stainless)  
**CX165** Non-standard width s/s 20 1/8-80", max. length 72".

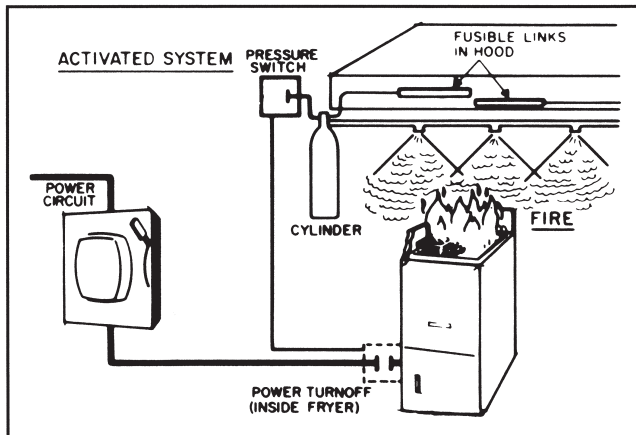
### BANKING STRIP

**CX056** Top only (all models).  
**CX477** For fryers **without** basket lifts: Step-down transformer from a 480-volt, 240-volt or 208-volt supply source to 120-volt power for the control circuit of fryers **without** lifts where a four-wire supply source or separate 120-volt power are not available.  
**CX487** For fryers **with** basket lifts: Step-down transformers from a 480-volt, 240-volt, or 208-volt supply source to 120-volt power for the control circuits of fryers **with** lifts where a four-wire supply source or separate 120-volt power are not available.





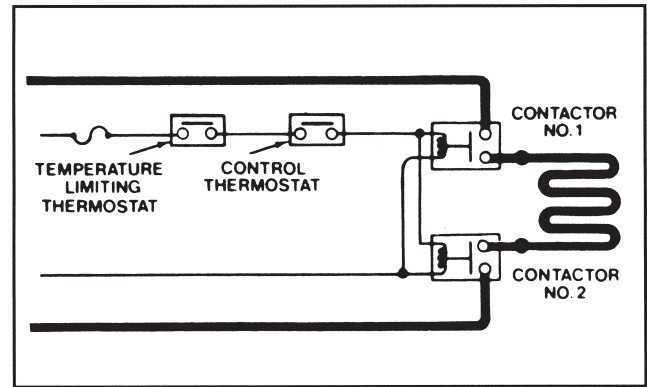
**FIG. 13 - Inactive Power Turnoff circuit diagram shows how temperature-sensing system (fusible links) are connected with a cylinder containing the fire-extinguishing agent. This cylinder is linked to a pressure, or snap-action, switch. This switch is connected to the Power Turnoff system in fryer by two leads.**



**FIG. 14 - Active Power Turnoff system drawing shows action if fire occurs. Release of fire-extinguishing agent interrupts electrical signal from hood's fire extinguishing system to Power Turnoff circuit in fryer. This interrupt deactivates fryer control circuit which interrupts all electrical power to heating elements.**

#### ■ OVERALL FEATURES - ALL MODELS

1. Enclosed tubular stainless steel heating units: put heat directly into oil. Swing up to burn clean in raised position.
2. Anti-splash protection is provided by exclusive design that prevents heating units from dropping into hot oil.
3. Stain-resistant finish: easy-to-clean, standard stainless steel front and top and permalucent gray sides and back.
4. Easy oil removal: use accessory MIRACLEAN siphon.
5. Miraclean Siphon (with strainer bag) keeps clean. Easy to use and easy to clean, siphon eliminates drain valves and sumps. Permits operator to drain and strain oil and put fryer back in service quickly without removing oil container.



**FIG. 15: QUAD GARD**

6. Standard Internal Power Turnoff Circuit: automatically shuts off power to fryer if fryer circuit is properly connected to an automatic fire extinguishing system in accordance with NFPA Standard No. 96 (latest edition).
7. QUAD GARD protective system: consists of dual contactors, dual thermostats (one control and one temperature-limiting). See Fig. 13.

The temperature-limiting thermostat in your QUAD GARD system, in the same circuit as the main thermostat, plays an important role in your fryer by interrupting electric power to the heating units if the thermostat sensing bulb (clamped to the heating units) senses an above-normal temperature. Following are examples of when a temperature-limiting thermostat functions:

- A. If main thermostat or probe fails and shortening heats beyond pre-set temperature of temperature-limiting thermostat or probe (limiting thermostat functions).
- B. If high preheat temperatures occur during initial operation (limiting thermostat occasionally functions).
- C. When heating units are burned clean (limiting thermostat occasionally functions).

This temperature-limiting thermostat is manually resettable. Once it trips, it must be reset by hand or fryer will not operate. To reset, raise heating elements and push lever located on underside of heating element support head.

#### ■ ADDITIONAL FEATURES OF ELECTRO—MECHANICAL CONTROL

1. Thermostat signal light glows on when temperature control is turned to a heating position and turns off when oil reaches preset temperatures. Cycles on and off to indicate that set temperature is being maintained automatically.
2. Automatic temperature control: maintains oil at selected temperatures between 200F and 400F. Thermostat sensing element is clamped to heating unit.
3. ON-OFF signal light: glows when switch is turned ON to indicate fryer operation.

# HOW TO OPERATE YOUR FRYER

## ■ CLEANING

1. Cleaning fryer initially: clean fryer prior to your first cooking operation. Raise heating units. Remove shortening container and wash with detergent and hot water. Rinse with vinegar solution, then with water. Repeat until all shortening and detergent residue is removed. Dry. Replace container in fryer.
2. Lower heating units.

## ■ ADDITIONAL FOR ELECTROMECHANICAL CONTROL

1. Controls and signal light response:

### Control Action

- Toggle Switch ON
- ON-OFF switch permits turning fryer off without disturbing temperature setting.
- Automatic Temperature Control maintains oil at selected temperature between 200F to 400F. Thermostat sensing element is mounted on heating unit
- Temperature-limiting thermostat cuts off all power to heating units if oil overheats.
- Models with automatic basket lifts.

### Signal Light Response

- Power ON-OFF signal light glows when fryer is operating.
- Power ON-OFF signal light goes off.
- Thermostat signal light glows when temperature control is turned to a heating position and turns off when shortening reaches preset temperatures after approximately 6 minutes of preheat time. Cycles on and off to indicate that set temperature is being maintained automatically.
- Thermostat signal light goes off. Power ON-OFF signal light goes off.
- No associated signal lights.

2. Adding the shortening:

Add 28 lbs. of a shortening recommended for commercial fryers to container. Hydrogenated fats are generally considered ideal for deep frying because of their high smoke-point and resistance to breakdown. If liquid shortenings are used, make sure that heating units are covered before setting cooking temperature. Note shortening mark in container.

A. If solid shortening: set thermostat at 200F until enough melts to cover heating elements. Keep packed around heating elements until melted.

B. If liquid shortening: set temperature dial to desired temperature for food to be fried.

3. Preheat fryer:

A. Press POWER ON switch to ON. Push START button. POWER ON light at extreme right of heating element head will glow.

B. Set thermostat to desired temperature.

4. Prepare food:

A. Raw, wet foods: drain and wipe dry before frying.

B. Keep uniform size of all food for same basket.

5. Load baskets: when using baskets keep food at maximum of  $\frac{1}{2}$  to  $\frac{2}{3}$  of basket capacity.

6. Lowering baskets:

A. Without automatic basket lifts (CK40, CK45, CK42): lower basket carefully to prevent shortening splattering.

B. With automatic basket lifts (CK401, CK 421):

1. Place baskets on lift hanger. Since these models have two separate automatic basket lifts operating independently, each basket can accommodate a different food load. Set each timer dial to desired frying time and press timer buttons. Lift mechanisms will lower baskets.

2. After preset time has elapsed, lift mechanisms will raise baskets out of shortening.

### NOTE:

(a) If frying time is satisfactory, timer does not have to be reset. Pressing timer button will reset timer to same time period.

(b) If frying time is too long, merely lift out the basket or set time dial to zero and lift mechanism will lift out basket.

3. If timer has been set for 2 minutes and has been running (for example,  $1\frac{1}{2}$  minutes) and timer button is again pressed, timer will run for an additional two minutes, or  $3\frac{1}{2}$  minutes total.

7. Special Processing:

A. Donuts and fritters: turn only once during frying.

B. Potatoes and onion rings: shake basket several times in a manner that prevents grease splattering.

C. Carefully drop batter-covered foods individually into shortening well or the basket (if basket is used) after the basket is covered by shortening.

D. Foods such as corn-on-the-cob must be submerged during frying to ensure uniform processing. Cover bottom of basket with corn, then stack a second (empty) basket on the corn to keep the product submerged.

- E. Cook as required: use cooking guide in Fig. 16.
  - F. Remove baskets (when used): immediately after frying.
  - G. Hang baskets (when used) to drain: on rear basket supports.
  - H. Remove food.
  - I. Season food as necessary after removing it from fryer.
  - J. Avoid getting salt in cooking shortening since it will hasten breakdown.
8. Add shortening as necessary for proper level. Revitalize with approximately 15% daily.

**CAUTION: Keep level of shortening above heater units and thermostat sensing bulbs at all times while fryer is being used. "Shortening Level" mark in container shows correct depth. Add fresh shortening as needed.**

9. Cooking guide:

Many factors such as type of food, initial temperature and size affect cooking time. The table at right is presented as a guide (when using baskets).

FRIED FOOD COOKING GUIDE			
FOOD	TEMP. SETTING °F	TIME (IN MIN)	CAP. /LOAD
French-Fried Potatoes 3/8" strips one-temperature method	375	6-9	6.1 lbs.
Two-temperature method blanch	325	4-6	5.25 lbs.
brown	375	2-3	9.02 lbs.
Potato Chips, thin slices	350	3-4	1.94 lbs.
Fish Fillets, 5" x 1/2"	365	3-4	8.8 lbs.
Shrimps	375	2-3	5.58 lbs.
Oysters and Clams	395	2-3	3.7 lbs.
Chicken, 2-lb size quartered (8-oz. serving)	325	12-13	7 portions*
halved (1-lb. serving)	325	12-16	7 portions*
Croquettes	365	3-4	8.8 lbs.
Fritters, fruit, vegetable or meat 2 1/2" dia.	375	4-5	30*
Doughnuts, 2 1/4" dia.	375	2-3	30*
French Toast, 4" x 4" slices	325	2-3	12*
Turnovers, fruit, vegetable or meat 4" x 2 1/2"	375	3-4	18*

**Fig. 16**

\* Capacities given are limited by energy available to maintain continuous frying temperature, except those marked with an asterisk(\*) in which case capacity is limited by surface area of the item in preparation.

## OTHER OPERATOR INFORMATION (ALL MODELS)

1. Burning off heating elements.
  - A. Lift heating units to partially raised position and allow them to drain thoroughly. Then lift heating units to fully raised position.
  - B. Turn ON fryer, and set thermostat at 400F for 2 minutes to allow heating units to burn clean.

**NOTE:** Observe WARNING LABEL on top of unit. This operation may require a reset of temperature-limiting thermostat.

  - C. Turn OFF fryer, allow elements to cool, and brush carbon from coils with a soft wire brush, and lower heating units to operating position.
2. Filtering with optional power filters:  
A number of power filters are available from other manufacturers. If you use one, follow the manufacturer's directions on how to use.
3. FILTER SHORTENING DAILY WITH OPTIONAL MIRACLEAN SIPHON.
  - A. Turn power switch OFF.
  - B. Remove baskets slowly.
    - C. Raise heating units, allow them to drain thoroughly before lifting them completely to allow them to lock. Use potholder or cloth on handle, if hot, to prevent burning.
    - D. Attach MIRACLEAN siphon to shortening container.
    - E. Attach strainer bag tightly around collar of drain pipe.
    - F. Place clean receptacle, capable of holding 28 lbs. shortening, under filter bag. Support container in partly opened storage drawer.
    - G. Fill primer cup on siphon with hot shortening.
    - H. Open valve by lifting handle to full height.
    - I. Release valve handle after automatic siphoning has started. Do not allow primer cup to empty. If air enters cup, siphoning stops.
    - J. Remove siphon and strainer bag after all shortening is strained. Use gloves or holder - or allow to cool - because siphon is at shortening temperature.
    - K. Clean fryer well with detergent and hot water. Rinse with water/vinegar solution. Rinse further with water.

4. Cleaning when cool only:  
Clean the shortening container, crumb tray and fry baskets just as you would any other cooking utensil.
- A. Swing lifter arm up out of the way or pull it up off vertical lifter rod (CK401, CK421).
  - B. Grasp heating unit handle and lift up. Raise heating unit to the "up" position where it will stay. Allow shortening to drain off into container.
  - C. Remove crumb tray and wash in sink.
  - D. Lift out shortening container by grasping carrying handles. Empty shortening.
  - E. Wash shortening container with soap and hot water.
  - F. Clean outer surfaces of fryers with a damp cloth and polish with a soft dry cloth. To remove any discolorations, always use a non-abrasive cleaner. Wipe spill-over trough around top of shortening container as needed.
  - G. During daily cleaning, and before placing container back into fryer, be sure that all shortening is wiped from compartment under container. This is important to prevent grease from accumulating beneath fryer.
  - H. Place clean container back into fryer well and pour clean shortening back into it.

## TROUBLESHOOTING CHART

IRREGULARITY	POSSIBLE CAUSES	SUGGESTED ACTION(S)
Clamps loose on temperature-limiting thermostat-sensing bulb.	Accidental bumping with baskets	<ul style="list-style-type: none"> <li>• Do not operate.</li> <li>• Call servicer.</li> </ul>
Draining stops when using optional Miraclean siphon.	Air enters primer cup.	<ul style="list-style-type: none"> <li>• Fill siphon primer cup with hot shortening.</li> <li>• Open valve until draining begins.</li> <li>• Release valve handle.</li> </ul>
Excess shortening foaming.	<ul style="list-style-type: none"> <li>• Moist foods not properly drained.</li> <li>• Shortening breakdown caused by overheating.</li> <li>• Oil is not non-foaming type.</li> </ul>	<ul style="list-style-type: none"> <li>• Drain foods.</li> <li>• Throw shortening away.</li> </ul>
Fryer recovery too slow.	<ul style="list-style-type: none"> <li>• Too much food.</li> <li>• Control calibration.</li> <li>• Heater unit failure.</li> <li>• Low voltage.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce food load.</li> <li>• Call servicer.</li> <li>• Call servicer.</li> <li>• Call servicer.</li> </ul>
Excessive smoking of shortening.	Shortening breakdown.	Replace with fresh shortening.
Burning of food when fryer set at proper frying temperature.	Probe out of calibration.	<ul style="list-style-type: none"> <li>• Call servicer.</li> </ul>

FIG. 17