

# VULCAN

## INSTALLATION & OPERATION MANUAL

### 1ERD/1ERC SERIES ELECTRIC FRYERS

1ER50D ML-136496  
1ER85D ML-136497

1ER50C ML-136498  
1ER85C ML-136499



**For additional information on Vulcan-Hart or to locate an authorized parts and service provider in your area, visit our website at [www.vulcanhart.com](http://www.vulcanhart.com)**

VULCAN-HART  
DIVISION OF ITW FOOD EQUIPMENT GROUP, LLC

3600 NORTH POINT BLVD.  
BALTIMORE, MD 21222

[WWW.VULCANHART.COM](http://WWW.VULCANHART.COM)

FORM 32903 (11-05)

# Installation, Operation and Care of MODEL 1ER SERIES ELECTRIC FRYERS

**PLEASE KEEP THIS MANUAL FOR FUTURE USE**

## GENERAL

Vulcan 1ER Series Electric Fryers are produced with quality workmanship and material. Proper installation, usage and maintenance of your fryer will result in many years of satisfactory performance.

It is suggested that you thoroughly read this entire manual and carefully follow all of the instructions provided.

Vulcan 1ER Series Electric Fryers are available in various sizes, with an array of features and options for a range of commercial fryer applications.

The 1ERD models have solid state controls, melt cycles and two timers. The 1ERC Fryers have microprocessor computer controls, melt cycles and multiple timers.

Model	KW	Width Inches / cm	Voltage	Fry Compound Lb / kg
1ER50D/1ER50C	17	15 <sup>1</sup> / <sub>2</sub> (394 mm)	208/240 3 Ph	45-50 (20-23 kg)
1ER85D/1ER85C	24	21 (533 mm)	208/240 3 Ph	85-100 (39-41 kg)

### **FIELD-INSTALLED ACCESSORIES**

- Casters
- Flanged Feet
- Single Baskets
- Twin Baskets
- Tri-Baskets
- Tank Cover
- Removable Splash Guard
- GRO15 Frymate

## INSTALLATION

Before installing the fryer, verify that the electrical service agrees with the specifications on the fryer data plate which is located on the inside of the door panel. If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your dealer or Vulcan-Hart Company immediately.

### **UNPACKING**

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

Immediately after unpacking the fryer, check for the following items:

- Manual and warranty (packaged in clear plastic bag)
- Drain Extension
- Tank Brush
- Clean Out Rod
- Legs
- Crumb Rack

In addition, check for possible shipping damage. If the fryer is damaged, save the packaging material and contact the carrier within 15 days of delivery.

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

## **LOCATION**

The equipment area must be kept free and clear of combustible substances. Minimum clearance from combustible construction is 6" (152 mm) from the sides and 6" (152 mm) from the back of the fryer. Minimum clearance from noncombustible construction is 0" from the sides and 0" from the back.

At least 16" (406 mm) clearance must be between the fryer and any open-top flame units. Adequate clearances for servicing and proper operation must be allowed. The fryer may be installed on combustible floors.

### **In the United States of America:**

1. State and local codes.
2. National Fuel Gas Code, ANSI/Z223.1 (latest edition). Copies may be obtained from The American Gas Association, Inc., 1515 Wilson Blvd., Arlington, VA 22209.
3. NFPA Standard #96.
4. National Electrical Code, ANSI/NFPA-70 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

### **In Canada:**

1. Local codes.
2. CSA C22.2 Canadian Electrical Code.

The above are available from the Canadian Standard Association, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6.

## **ASSEMBLY**

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

### **Legs**

Position fryer in an open space near the final installation area. Tilt fryer on its side, being careful to avoid scratching the finish. Thread legs into mounting holes provided on bottom of fryer by screwing in a clockwise rotation until tight.

Carefully raise fryer to its normal position and place it in the installing location.

## Casters (Accessory)

If it is necessary to disconnect the restraint, unplug electrical supply before disconnection. Reconnect the restraint before plugging the electrical supply in and returning the fryer to its installation position.

Instructions for installing casters to the fryer are included with the casters.

## LEVELING

Place a carpenter's level on top of the fryer and level the fryer front-to-back and side-to-side by turning the adjustable legs or casters.

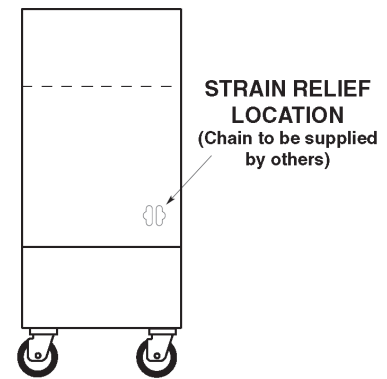


Fig. 1

## ELECTRICAL CONNECTIONS

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

**WARNING:** DISCONNECT THE ELECTRICAL POWER SUPPLY TO THE MACHINE AND FOLLOW LOCKOUT/TAGOUT PROCEDURES.

**WARNING:** APPLIANCES EQUIPPED WITH A 120V FLEXIBLE ELECTRIC SUPPLY CORD ARE PROVIDED WITH A THREE-PRONG GROUNDING PLUG. IT IS IMPERATIVE THAT THIS PLUG BE CONNECTED INTO A PROPERLY GROUNDING TYPE, CONTACT AN ELECTRICIAN. DO NOT REMOVE THE GROUNDING PRONG FROM THIS PLUG.

Place fryer as near to its final position as possible. Connect 3 phase line to X, Y and Z of terminal block. To reach terminal block, remove electric cover plate from fryer.

For each 15 $\frac{1}{2}$ " (394 mm) and 21" (533 mm) section, a 3 phase supply line capable of handling the required KW at the fryer's rated voltage (208, 480) is needed. Refer to the fryer data plate for this electrical information.

If a fan interlock is needed, it should be connected to 1 and 2 on the four pole barrier strip. 1 and 2 go to a set of dry contacts on the power switch.

# 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.

## BEFORE FIRST USE

- Clean the protective metal oils from all surface parts and the tank interior using a noncorrosive, grease-dissolving commercial cleaner. Follow the cleaner manufacturer's directions.
- Rinse thoroughly and drain (open the front door to access the drain valve).
- Wipe tank completely dry with a soft, clean cloth.
- Clean all fryer accessories.
- Rinse all accessories thoroughly after cleaning and wipe dry.

## FILLING FRY TANK WITH SHORTENING

Liquid shortening may be used in all 1ER Series Fryers. Solid shortening can only be used in fryers equipped with a melt cycle. Melting solid shortening without using a melt cycle will damage the fry tank, heating elements and scorch the shortening. See Melt Options in this manual under your particular model for more information.

1. Fill the fryer tank.
2. Shortening level should be between the MIN and MAX lines in fry tank (Fig. 2). Shortening will expand when heated; do not fill the fry tank past the MAX line.
3. Add fresh shortening as needed.

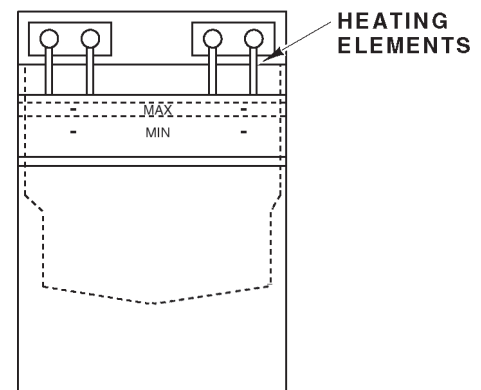


Fig. 2

After draining shortening, allow the tank to cool down before adding all new shortening to avoid scorching new shortening.

## DAILY SHORTENING ADDITION

Add approximately 15% new shortening daily. Keep level of shortening at fill level line in fry tank. Add fresh shortening as needed.

## HIGH LIMIT CONTROL

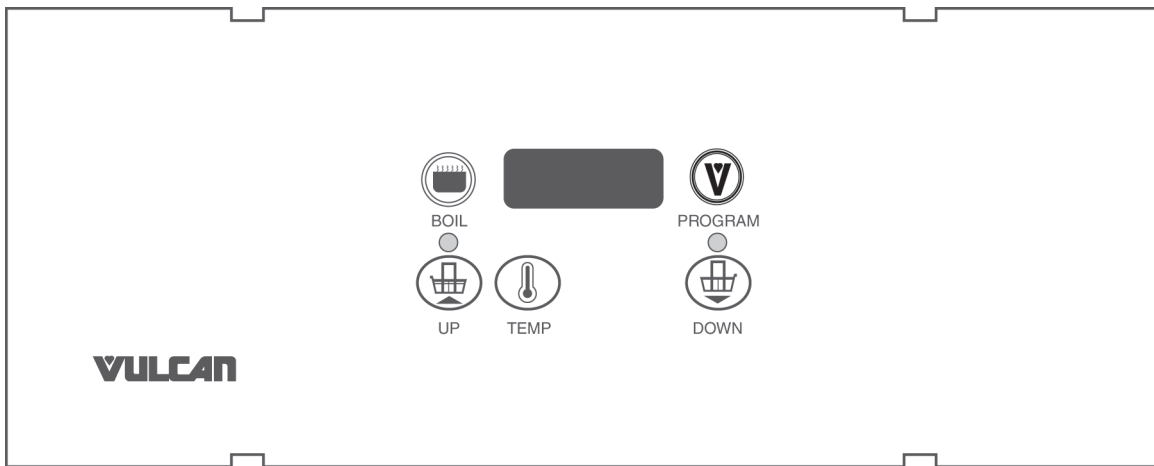
If the shortening becomes overheated, one of the temperature shutoff devices will shut the fryer off. DO NOT turn fryer on until the shortening temperature is below 300°F (149°C).

If the high limit device has shut the fryer system off, push the red reset button on the back of the element head(s) before turning the fryer back on.







If this situation persists, shut fryer down and contact a Vulcan-Hart authorized service agency.

# 1ERD SERIES

## CONTROLS —




## Control Guide

-  — Power switch; for turning the fryer on or off. (Power switch is located behind the door panel.)
-  — For cleaning purposes when the fryer is filled with water. Temperature is maintained at approximately 192°F (89°C).\*\*
-  — For entering and exiting the program mode. For scrolling through program parameters.
-  — Starts and stops the timer; Silences the alarm after the timer times out; For entering temperature and time values in the program mode.
-  — Starts and stops the timer; Silences the alarm after the timer times out; For entering temperature and time values in the program mode.
-  — For viewing actual shortening temperature and set temperature.

**\*\*NOTE:** The boil button is used during cleaning for the boil out. Depressing this button will set the thermostat to a simmer point of 198°F. Note that there is a special feature in the controller that will sense water verses oil and automatically send the controller into the boil out mode when water is placed into the vat.

## PROGRAMMING


Temperature, time and other parameters must be set before operating. Once these parameters are set, the fryer can be operated at the touch of a button.























Press  to enter the program mode and scroll through the parameters. If the Parameter Lock feature is disabled, program mode is immediate. If the Parameter Lock feature is on, LoC is displayed in the window and program entry cannot be accessed. To access the program mode while LoC is on, press



within 6 seconds of pressing . To turn the Parameter Lock feature off, see Program Guide below.

### Programming Guide

Once in the program mode, the parameters are displayed in the order listed below. To exit the program and save changes, press and hold  for approximately 2 seconds.

PARAMETER	SELECT	DISPLAY	SCROLL
<b>Left Timer</b>	Press  or  to enter time.	LED is lit above the left basket icon. The time value is displayed in window.	Press  and scroll to next item.
<b>Right Timer</b>	Press  or  to enter time.	LED is lit above the right basket icon. The time value is displayed in window.	Press  and scroll to next item.
<b>Set Temperature</b>	Press  or  to enter temperature.	The temperature value is displayed in window.	Press  and scroll to next item.
<b>Offset Calibration</b>	For service only	<b>00F</b> or <b>-00F</b>	Press  and scroll to next item.
<b>Melt Options:</b> Liquid shortening Solid shortening No melt	Press  or  to select melt option.	<b>CY L</b> (Liquid shortening) or <b>CY S</b> (Solid shortening) or <b>CY O</b> (No melt)	Press  and scroll to next item.
<b>Energy Source</b>	Press  or  to select source of heat.	<b>gAS</b> or <b>ELEC</b>	Press  and scroll to next item.
<b>Parameter Lock</b>	Press  or  to lock or unlock program entry.	<b>LoC</b> (Unlock Parameter) or <b>ULoC</b> (Lock Parameter )	Press  and scroll to next item.
<b>Fahrenheit or Celsius</b>	Press  or  to select Fahrenheit or Celsius.	<b>F</b> or <b>C</b>	Press  and scroll to next item.

## Melt Options (1ERD Series)

The controller has three options for bring shortening up to temperature:

CY L (Liquid shortening) - For slowly bringing liquid shortening up to temperature.

CY S (Solid shortening) - For slowly melting solid shortening.

CY O (No melt) - For immediately bringing liquid shortening up to fry temperature.

When using solid shortening in the fryer, the CY S (solid shortening) option must be used. Solid shortening must be gently warmed to a liquid state before heating to frying temperatures. Melting solid shortening without using this option will damage the fry tank and scorch the shortening.





1. Remove crumb screens from fryer tank.
2. Lift elements out of each tank area.
3. Chop the solid block of shortening into pieces that can be packed into the bottom of fryer tank.
4. Pack bottom of the tank with shortening chunks.
5. Lower elements back into tank.
6. Pack the remaining chunks of shortening completely around and over top of the elements, then place the screen on top of the shortening.



Upon startup, if the CY L or CY S melt option is selected and the shortening temperature is below 135°F (57°C), CY is displayed in the window and the fryer cycles to bring the shortening up to temperature. If the shortening temperature is over 150°F (65°C), HEAT is displayed in the window and the fryer quickly heats up to set temperature.

The temperature is displayed in the window when the fryer has reached the set temperature. After the first initial startup, the fryer always defaults to the last entered melt option.

To display the actual temperature at any time, press  and hold for 3 seconds. Press  again to return display to set temperature.

## USING THE FRYER (After Startup)

1. Load the fry basket(s); do not overfill.
2. Carefully lower basket(s) into shortening.
3. Press  to start the left timer. Press  to start the right timer.
4. When the timer times out, a beeper sounds. Press  to silence the left timer beeper. Press  to silence the right timer beeper.

NOTE: To cancel the timer after countdown has started, press and hold  or  for at least 3 seconds.

## SHUTDOWN

1. Press the power switch OFF.

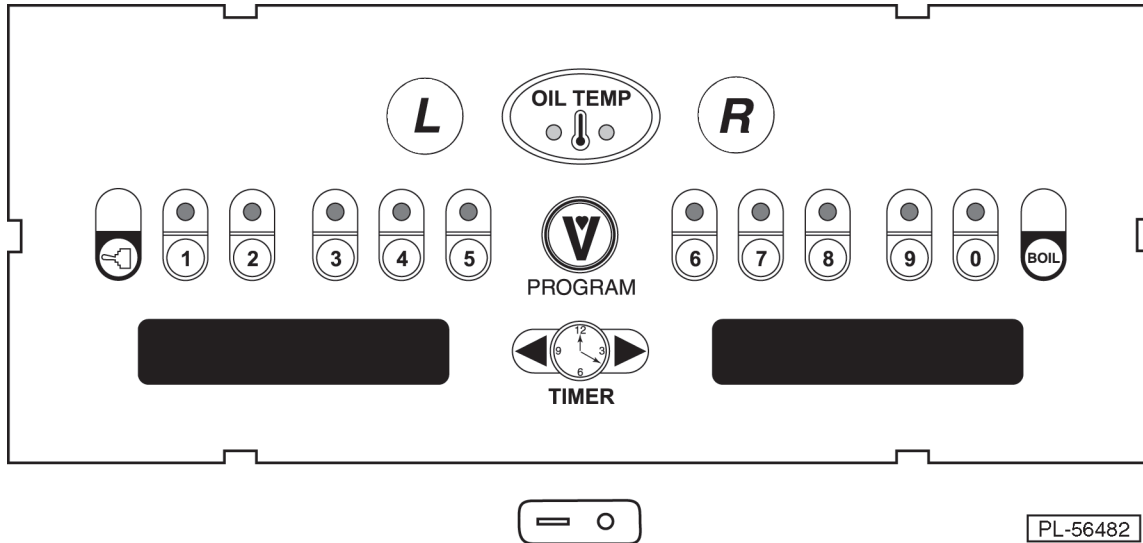
## EXTENDED SHUTDOWN

1. Press the power button OFF.
2. Drain the fryer.
3. Turn the main electrical supply line OFF.




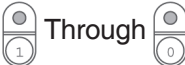






# 1ERC SERIES

## CONTROLS —



## Control Guide




-  — Power switch; for turning the fryer on or off. (Power switch is located behind the door panel.)
-  — For setting fry temperature. For viewing shortening temperature and set temperature.
-  — For entering and exiting the program mode.
-  Through — For selecting program parameters. For setting timers 1 through 0. For entering temperature and time values.
-  — For toggling through the selections under program parameters.
-  — For setting time on timers 1 through 5 in the program mode.
-  — For setting time on timers 6 through 0 in the program mode.
-  — For cleaning purposes when the fryer is filled with water. Temperature is maintained at approximately 192°F (89°C). \*\*


















**\*\*NOTE:** The boil button is used during cleaning for the boil out. Depressing this button will set the thermostat to a simmer point of 198°F. Note that there is a special feature in the controller that will sense water verses oil and automatically send the controller into the boil out mode when water is placed into the vat.

## PROGRAMMING























Temperature, time and other parameters must be set before operating. Follow the Program Guide to configure the fryer to your particular operation.

### Programming Guide

Press  to enter into the program mode, then follow the steps under each parameter to enter the desired information. To exit the parameter and save changes, press . To exit the program completely, press  again.

PARAMETER	STEPS	LEFT DISPLAY	RIGHT DISPLAY
<b>Fahrenheit or Celsius</b>	Press  Press  Press  to select Fahrenheit or Celsius. Press  when complete.	SELECT DEGREES F or C DEGREES F or C PROGRAM	OPTIONS F or C F or C
<b>No Password Required</b>	Press  Press  Press  to select NO PASS. Press  when complete.	SELECT SET PASS NO PASS PROGRAM	OPTIONS NEW PASS NEW PASS
<b>Password Required</b>	Press  Press  Press  to select PASS REQ. Press  and enter numeric code. Press  when complete.	SELECT SET PASS PASS REQ CODE XXXX PROGRAM	OPTIONS NEW PASS NEW PASS NEW PASS
<b>Beeper Volume</b>	Press  Press  Press  to select volume. Press  when complete.	SELECT OPTIONS VOLUME # 1, 2 or 3 PROGRAM	OPTIONS BEEPER BEEPER

## Programming Guide (Cont.)

PARAMETER	STEPS	LEFT DISPLAY	RIGHT DISPLAY
<b>Language</b>	Press 	SELECT	OPTIONS
	Press 	ENGLISH (Factory Default)	LANGUAGE
	Press  to select a language.	ENGLISH/ESPAÑOL FRANCAIS/DEUTSCH HOLLAND	
	Press  when complete.	PROGRAM	
<b>Melt Options</b>	Press 	SELECT	OPTIONS
	Press 	NO MELT/LIQUID/SOLID	
	Press  to select melt options. (See Melt Options)	NO MELT/LIQUID/SOLID	
	Press  when complete.	PROGRAM	
<b>Recovery Time</b>	Press 	SELECT	OPTIONS
	Press 	RECOVERY*	
	Press  when complete.	PROGRAM	
<b>Filter</b>	Press 	SELECT OPTIONS	OPTIONS
	Press 	FILTER	PROG 0000
	Press  to scroll through options.	FILTER	ACT 0000
	Press  when complete.	PROGRAM	
<b>Dispose</b>	Press 	SELECT	OPTIONS
	Press 	DISPOSE	PROG 00
	Press  to scroll through options.	DISPOSE	ACT00
	Press  when complete.	PROGRAM	
<b>Set Back To 275°F</b>	Press 	SELECT	OPTIONS
	Press 	IDLE SET BACK	PROG 00
	Press  when complete.	PROGRAM	PROG 00

\***Recovery** - During a cold start, the controller measures the time the fryer takes to heat from 200°F to 250°F (93°C to 121°C) and compares it with factory default values.

## Melt Options (1ERC Series)

The controller has three options for bring shortening up to temperature. Upon startup, the fryer will display the selected melt option in the window when heating:

<b>HEATING</b>	NO MELT - For immediately bringing shortening up to fry temperature.
<b>MELT L</b>	LIQUID - For slowly bringing liquid shortening up to temperature.
<b>MELT S</b>	SOLID - For slowly melting solid shortening.

When using solid shortening in the fryer, the SOLID melt option must be used. Solid shortening must be gently warmed to a liquid state before heating to frying temperatures. Melting solid shortening without using this option will damage the heating elements and scorch the shortening.


1. Remove crumb screens from fryer tank.
2. Lift elements out of each tank area.
3. Chop the solid block of shortening into pieces that can be packed into the bottom of fryer tank.
4. Pack bottom of the tank with shortening chunks.
5. Lower elements back into tank.
6. Pack the remaining chunks of shortening completely around and over top of the elements, then place the screen on top of the shortening.

If the LIQUID or SOLID melt option is selected and the shortening temperature is below 135°F (57°C), MELT L or MELT S is displayed in the window and the fryer cycles to bring the shortening up to temperature. If the shortening temperature is over 135°F (57°C), HEATING is displayed in the window and the fryer quickly heats up to set temperature.

The temperature is displayed in the window when the fryer has reached the set temperature. After the first initial startup, the fryer always defaults to the last entered melt option.

## Filter Programming

The Filter parameter can be programmed to alert the operator to filter the shortening by counting the number of cook counts. When the actual cook count is the same as the programmed cook count, FILTER flashes in the window. It also can be programmed to time the filtering process.

- PROG 0000 - Enter the number of cook counts you want the controller to count before giving a filter alert (each time a timer times out is equal to one cook count). To disable the filter reminder, enter 9999.
- ACT 0000 - Leave at 0000 unless editing. This is the number of cook counts.
- TIME 00:00 - Enter the amount of time for timing the filtering process. Leave at zero if you do not wish to use the timer.
- Pressing either arrow on  starts the filter timer after the drain valve is opened.
- After the timer times out, FILTER DONE is displayed in the window and a beeper sounds for 5 seconds. The filter prompt and cook count are reset to zero. After the beeper stops, CLOSE DRAIN is displayed in the window (see Daily Filtering on page 31 for more information).
- Turn off is displayed in the window. The operator must cycle power switch to continue.

**NOTE:** The filter prompt can only be reset by completing a filtering cycle or disabling the parameter.

## Dispose

The controller can also be programmed to alert the operator to dispose of the shortening by counting the number of times the shortening is filtered. When the filter count is the same as the programmed filter count, DISPOSE is displayed in the window.

- PROG 00 - Enter the number of filter counts you want the controller to count before giving a dispose alert. To disable the dispose reminder, enter 99.
- ACT 00 - Leave at 00 unless editing. This is the number of times the shortening has been filtered.
- Turn power switch off and open the drain valve.
- Discard the shortening into suitable discharge container.
- Close the drain valve and fill the vat with shortening.
- Turn power switch on.
- Enter the programming mode, select the dispose parameter and reset the actual filter count to zero. This will also reset the actual cook count to zero.






**NOTE:** The dispose prompt can only be reset by resetting the actual filter count or disabling the parameter.

**NOTE:** The filter prompt takes precedence over dispose.

See Daily Filtering section in this manual for more information.

## TEMPERATURE AND TIME PROGRAMMING





### Temperature








1. Press  to enter program mode. PROGRAM is displayed in the window.
2. Press  to enter temperature mode. 000°F and TEMP are displayed in the window.
3. Press  through  to enter desired fry temperature. The fry temperature is displayed in the window.
4. Press  to exit the temperature mode. Press again to exit program mode completely.

### Time












There are ten timers with advanced timing features on the ERC fryer for setting fry times on multiple products.

Timers  through  :

1. Press  and enter the program mode. PROGRAM is displayed in the window.
2. Press . The LED's on timers  through  are lit and SELECT PRODUCT is displayed in the window.
3. To select a timer, press one of the lit timer numbers; CK# 00:00 and TIME are displayed in the window.

4. Enter the desired time using keys  through  . The time is displayed in the window. After entering the time, press  ; SELECT PRODUCT is displayed in the window and the LED's on timers  through  are lit.
5. Repeat steps 3 and 4 to program the remaining timers, or press   to exit the program completely.

Timers  through  :










1. Press  and enter the program mode. PROGRAM is displayed in the window.
2. Press  . The LED's on timers  through  are lit and SELECT PRODUCT is displayed in the window.
3. To select a timer, press one of the lit timer numbers; CK# 00:00 and TIME are displayed in the window.
4. Enter the desired time using keys  through  . The time is displayed in the window. After entering the time, press  ; SELECT PRODUCT is displayed in the window and the LED's on timers  through  are lit.
5. Repeat steps 3 and 4 to program the remaining timers or press   to exit the program completely.















## Advanced Time Features

Each timer has additional timing functions that can be programmed to fit your particular operation.





- DUTY TIME - Notifies the operator during a fry cycle to perform a particular task (shake a basket, flip a product, etc.). When the remaining cook time is the same as the Duty time, a beeper sounds and DUTY # displays in the window. Press the flashing timer number to silence the beeper. The beeper cancels after 5 seconds if not silenced.
- HOLD TIME - Starts after the initial timer beeper is silenced; HD# XX:XX is displayed in the window. After timing out, a beeper sounds. Press the flashing timer number to silence the beeper. The beeper cancels after 5 seconds if not silenced.
- COMPENSATED TIME - Automatically adjusts the time for variations in load sizes.
- STRAIGHT TIME - Does not adjust time for variations; used for regular timing operations.

## Setting Advanced Time Features

1. Press  and enter the program mode.
2. Press   for timers  through  , or press   for timers  through  . The LEDs are lit on the timers available for programming, and SELECT PRODUCT is displayed in the window.

3. Select a timer; the programmed time is displayed in the window.
  - A. Duty Time:
    - 1) Press either arrow on  ; DT# 00:00 is displayed in the window.
    - 2) Enter the desired time using keys  through  . The time is displayed in the window.
    - 3) Continue to the next step or press  to choose another timer.
  - B. Hold Time:
    - 1) Press either arrow on  ; HD# 00:00 is displayed in the window.
    - 2) Enter the desired time using keys  through  .
    - 3) Continue to the next step or press  to choose another timer.
  - C. Compensated or Straight Time:
    - 1) Press either arrow on  ; COMP or STRAIGHT is displayed in the window.
    - 2) Press  to select COMP or STRAIGHT.
    - 3) Press  to choose another timer or press    to exit program mode completely.

### USING THE FRYER (After Startup)

1. Load the fry basket(s), do not overfill.
2. Carefully lower basket(s) into shortening.
3. Press the desired number to select the product to be timed. Timers  through  are programmed for products. Once the product is selected, select  or  button to start timing of the product on the left or right side of the fryer.
4. When the timer(s) time out, a beeper sounds, REMOVE # is displayed in the window and the timer number flashes. Press the flashing timer number to silence the beeper.

NOTE: To cancel the timer after countdown has started, press and hold the flashing timer number for at least 3 seconds.

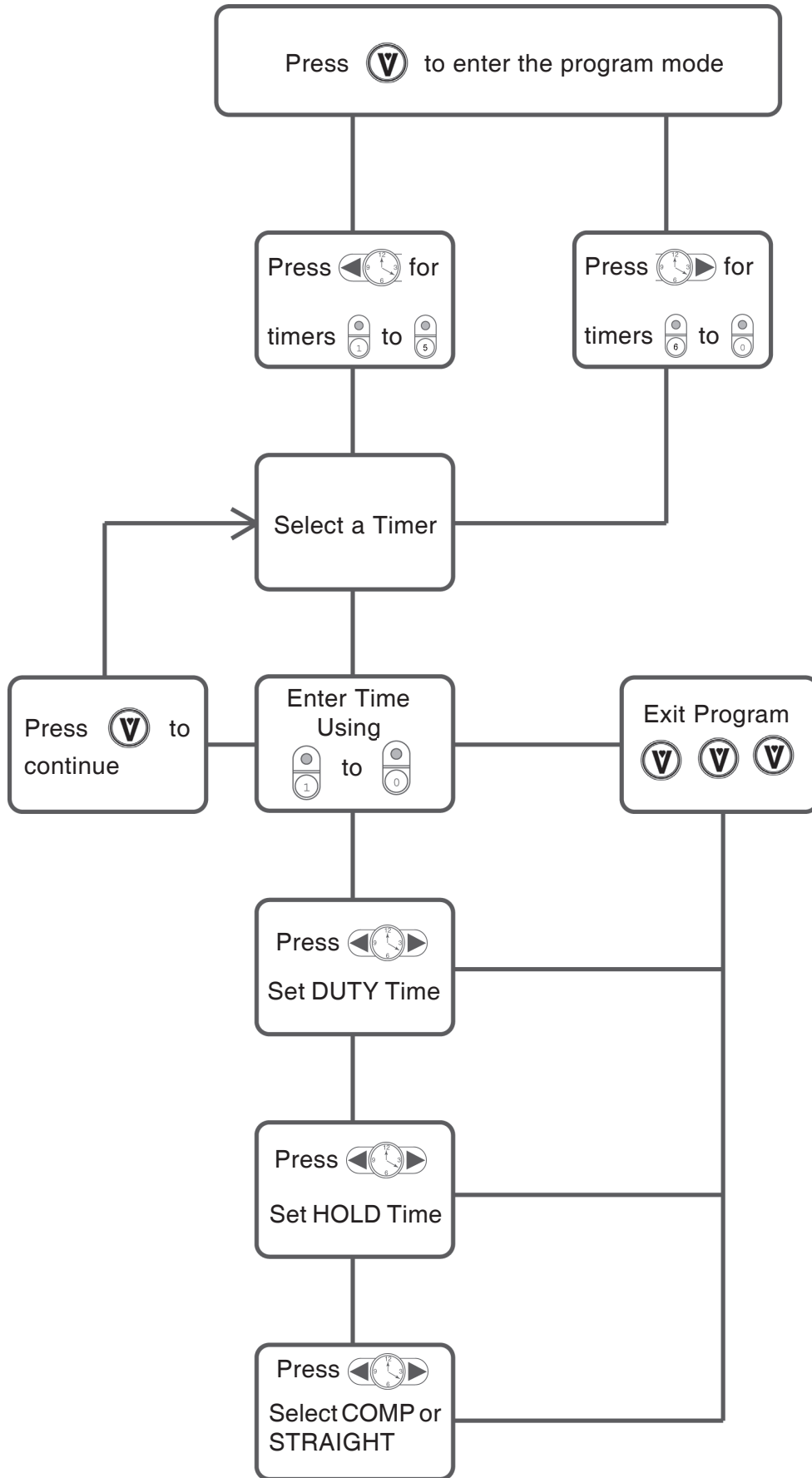
### SHUTDOWN

1. Press the power switch OFF.

### EXTENDED SHUTDOWN

1. Press the power switch off.
2. Drain the fryer.
3. Unplug the fryer.

# Time Programming Quick Chart





# FRYING GUIDELINES (ALL MODELS)

## FRYING

- Heat shortening to set temperature.
- Pieces of product to be fried should be about the same size to ensure the same doneness.
- Drain or wipe dry raw or wet foods to minimize splatter when lowering into the hot oil.
- Do not overfill baskets.

## Recommended maximum capacities

Models	Lb / kg of Product (1 Basket)	Total Lb / kg of Product (2 Baskets)	Total Lb / kg of Product (3 Baskets)
1ER50D, 1ER50C	2 <sup>1</sup> / <sub>2</sub> / 1	5 / 2.3	N/A
1ER85D, 1ER85C	3 <sup>1</sup> / <sub>2</sub> / 1.6	7 / 3.1	10 <sup>1</sup> / <sub>2</sub> / 4.8

- Carefully lower basket into oil.
- When frying doughnuts and fritters, turn product only once during frying.
- When cooking French fries or onion rings, shake basket several times in a way that does not splatter the shortening.
- Batter-covered foods should be dropped carefully, one by one, into shortening or basket. If you use the basket, first dip basket into shortening to reduce batter build-up on basket surfaces.
- When frying is completed, remove basket or product. Hang basket on rear basket hanger. Remove food and season it. Do not salt food over the shortening because salt could cause a chemical change in the oil.

## DAILY FILTERING

**WARNING:** HOT OIL AND PARTS CAN CAUSE BURNS. USE CARE WHEN OPERATING, CLEANING AND SERVICING THE FRYER.

### Filtering Procedure

1. Turn the fryer off.
2. Slowly remove the baskets and raise the elements out of the tank, especially if shortening is hot, to prevent splashing.
3. Open the fryer door and attach the drain pipe to the drain valve.
4. Select a container of sufficient capacity and place it below the drain pipe.
5. If you are using a filter bag, tie it securely to the drain pipe. If other filter medium is used, place it in the container.
6. Open the drain valve carefully so the oil stream is directed through the filter.
7. With a small amount of warm shortening, flush out scraps and sediment in the fry tank. Drain the tank thoroughly and wipe clean.
8. If it is necessary to clean the tank more thoroughly, follow the procedure shown in CLEANING — WEEKLY OR AS REQUIRED in this manual.
9. Close the drain valve.
10. Pour strained shortening back into the tank.
11. Shortening level should be between the MIN and MAX lines. If using new solid shortening, refer to MELT OPTIONS procedures in this manual.

## **DRAIN INTERLOCK**

Prevents the heating elements from operating when the drain valve is open.

## **SHORTENING LIFE**

Shortening life may be extended by following these 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 surroundings clean.
- Set thermostats correctly.
- Remove excess moisture and particles from food products before placing in fryer.

# **CLEANING**

**WARNING:** DISCONNECT THE ELECTRICAL POWER SUPPLY TO THE MACHINE AND FOLLOW LOCKOUT/TAGOUT PROCEDURES.

## **DAILY**

- Clean all exterior surfaces of your fryer at least once daily.
- Use a damp cloth with warm water and a mild soap or detergent.
- Rinse thoroughly, 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 nonmetallic scouring pad for particularly stubborn discolorations.
- Always rub with the grain of the stainless steel.
- Do not use a scouring pad or harsh cleaners on the keypad or display area.
- Cleaning instructions for fryers equipped with KleenScreen are covered in a separate instruction manual. Follow the instructions accordingly.

## **WEEKLY OR AS REQUIRED**

1. Once the shortening has been drained, flush out scraps and sediment with a small amount of warm shortening. Allow the tank to drain thoroughly.
2. Close the drain valve and fill the tank with a non-corrosive, grease-dissolving commercial cleaner, following the manufacturer's instructions.
3. Add commercial boil out solution. Solution level must be between the MIN and MAX level on the fryer tank.
4. Press the boil button and bring the solution to a simmer for about 15 to 20 minutes.
5. Drain the cleaning solution from the tank.

6. Close the drain valve and refill the tank with water. Add 1 cup (0.2 L) of vinegar to neutralize alkaline left by the cleaner. Solution level must be between the MIN and MAX level on the fryer tank. Bring the solution to a simmer and allow it to stand for a few minutes.
  7. Drain the tank and rinse thoroughly with clear, hot water. All traces of cleaner must be removed. Dry the tank thoroughly.
  8. Close the drain valve and add shortening. Follow the FILLING FRY TANK WITH SHORTENING procedure in this manual. If using solid shortening, refer to MELT OPTIONS in this manual.
- The fryer is now ready for use.

## TROUBLESHOOTING

### ALARMS AND ERROR MESSAGES

**Open Probe** - If an open probe is detected, the heat demand is disabled and any running cooking cycles are cancelled. All operator buttons are disabled. The control displays the following message:

1ERD Models - Prob

1ERC Models - OPEN PROBE

The alarm sounds continuously until the fault clears or the fryer is turned off, then back on. If the problem persists, call service.

**Shorted Probe** - If a shorted probe is detected, the heat demand is disabled and any running cooking cycles are cancelled. All operator buttons are disabled. The control displays the following message:

1ERD Models - Hi

1ERC Models - SHORTED PROBE

The alarm sounds continuously until the fault clears or the fryer is turned off, then back on. If the problem persists, call service.

**Hi Temperature** - If the temperature is greater than or equal to 415°F (212°C), the heat demand is disabled and any running cooking cycles are cancelled. All operator buttons are disabled. The control displays the following message:

1ERD Models - Hi

1ERC Models - SHORTED PROBE

The alarm sounds continuously until the fault clears or the fryer is turned off, then back on. Normal fryer operations resumes when temperature drops below 415°F (212°C). If the problem persists, call service.

**Display Flashing "FILTER"** - When the display flashes FILTER, the countdown timer has reached zero. Refer to the Filter Programming procedure in this manual to reset the timer.

1ERC Models - FILTER

# MAINTENANCE

**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.

## SERVICE AND PARTS INFORMATION

To obtain service and parts information concerning this fryer, contact the Vulcan-Hart Service Agency in your area (refer to our website, [www.vulcanhart.com](http://www.vulcanhart.com) for a complete listing of Authorized Service and parts depots).

When calling for service, the following information must be available: model number, device number, serial number, manufacture date (MD) and voltage.

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