



**IMPORTANT FOR FUTURE REFERENCE**

Please complete this information and retain this manual for the life of the equipment:

Model #: \_\_\_\_\_

Serial #: \_\_\_\_\_

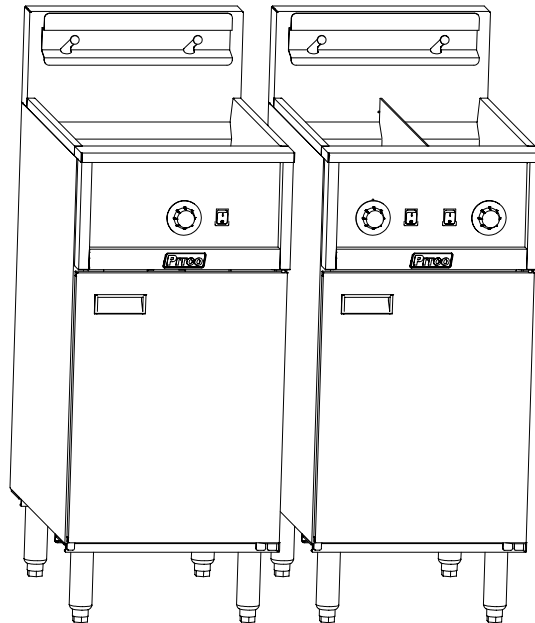
Date Purchased: \_\_\_\_\_

**ENGLISH**

# Installation and Operation Manual

## Covering Models

### E400, E400T and E500D



**THIS MANUAL MUST BE RETAINED FOR FUTURE REFERENCE**

**WARNING! FIRE HAZARD**

The shortening/oil level should not fall below the minimum indicated level at any time. The use of old shortening/oil can be dangerous as it will have a reduced flashpoint and be more prone to surge boiling.

**WARNING**

Installation and all connections must be made in accordance with National and Local regulations and codes in force.

**WARNING**

A country approved all pole circuit breaker with a minimum open contact gap of 3 mm must be used for proper installation.

**NOTICE**

Installation of this appliance should only be performed by a competent service technician. The model, serial number and electrical requirements of this appliance are on the data plate, located on the inside panel of the door.

**WARNING**

Shortening/oil, when it is at operating temperatures, is very hot and dangerous! Use extreme caution when handling! Use proper protective gear, such as insulated gloves, aprons, face shield and sleeves when handling hot shortening/oil. **DO NOT** attempt to move a machine that contains hot shortening/oil. Allow the oil to cool to room temperature or drain the shortening/oil into a suitable container before moving the appliance.

**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.

**WARNING**

This appliance is **NOT** Jet Stream approved. Do not clean the appliance with a water jet.

**NOTICE**

This appliance is intended for professional use, and as such, should be operated only by fully trained personnel.

**NOTICE**

It is recommended that this appliance be inspected by a qualified technician on a yearly basis.

**WARNING**

The power supply to this appliance **MUST** be disconnected before servicing or cleaning the unit.

**WARNING**

This appliance **MUST** be installed with the legs (or casters) supplied by the manufacturer.

# Table of Contents

<u>Section</u>	<u>Page</u>
Installation	
<u>Checking your new Pitco Appliance</u> . . . . .	1
<u>Assembly and Leveling</u>	
Leg and Caster Adjustment . . . . .	1
Installation Clearances . . . . .	2
Electrical Connection . . . . .	2
Ventilation and Fire Safety Systems . . . . .	2
<u>Initial Preparation</u>	
Initial Cleaning . . . . .	3
Operation	
<u>Filling the Tank</u>	
Filling the Tank with Liquid Shortening/oil . . . . .	4
Filling the Tank with Solid Shortening/oil . . . . .	4
<u>Operating Instructions</u>	
Appliance Start-Up . . . . .	5
Appliance Shut-Down . . . . .	6
Filtering Instructions . . . . .	6
Filter Paper Replacement . . . . .	7
Cleaning and Maintenance	
<u>Daily Cleaning</u> . . . . .	8
Filter Pan and Filter Pickup Assembly Cleaning . . . . .	8
<u>Weekly Cleaning</u> . . . . .	8
Weekly Boil Out Procedure . . . . .	8
Filter System Cleaning . . . . .	9
<u>Thermostat Calibration Check</u> . . . . .	10
<u>Thermostat Calibration</u> . . . . .	10
Troubleshooting	
<u>Basic Troubleshooting Tables</u> . . . . .	11
<u>Schematics</u> . . . . .	12

# INSTALLATION

## **CHECKING YOUR NEW PITCO APPLIANCE**

Your new Pitco appliance has been carefully packed into one crate. Every effort has been made to ensure that it is delivered to you in perfect condition. As you unpack your new appliance, 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 appliance to ensure that you have received all the parts to the appliance. If you are missing any parts, contact the dealer from whom the appliance was purchased. As you unpack the appliance and its accessories be careful to keep the weight of the appliance evenly distributed.

Locate your Pitco model number, serial number of the appliance and the date of purchase and write them on the cover of this manual for future reference. You will find the model number and serial number on the data plate located inside the door.

### **CAUTION**

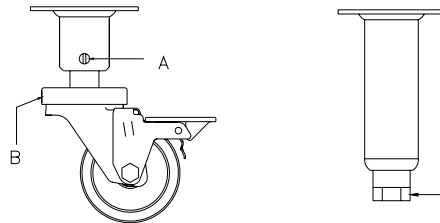
**To prevent equipment damage and/or personal injury, do not tilt the appliance onto any two of its casters or legs, or pull the appliance by the splash back.**

## **ASSEMBLY**

When you receive your appliance it is completely assembled with the possible exception of the legs (or casters).

### **Leg/Caster Installation and Leveling**

This appliance must be installed with legs or casters; it can not be curb mounted. Curb mounting may seriously inhibit this appliance's ability to operate properly.



### **WARNING**

**This appliance must be installed with the legs or casters provided by the manufacturer.**

### **WARNING**

**Do not install legs or casters, or perform leveling procedure when unit is in operation or fry tank is full. Serious injury could result.**

Required tools: 7/16 " wrench and socket and a large pair of pliers (water pump or plumber's pliers work best). The legs/casters must be installed before connecting the appliance to the electrical supply. The legs provide the necessary height to meet sanitation requirements and assure adequate air supply for component cooling. Use the following procedure.

- a. Lay the appliance on its back, being careful not to damage the splashback area by pulling on it. Protect the outside of the appliance with cardboard or a drop cloth when laying it down.
- b. Attach each leg/caster with the hex head screws and nuts supplied. Each leg/caster requires four ¼-20 x 5/8" hex head screws and nuts. Insure that all screws are tight.
- c. Mount the screws from the inside of the appliance with the nut on the outside (bottom) of the appliance. The nuts have lock washers attached to them, therefore it is not necessary to use lock washers
- d. When all four legs/casters are securely mounted, stand the unit up, being careful not to put too much weight on any one leg. Adjust the height and level the appliance by adjusting the leveling devices (B) with pliers. On casters, loosen 2 screws (A) before leveling, then retighten.

## **INSTALLATION**

If you have completed the above steps that are applicable to the appliance you purchased, the appliance is now ready to be installed. Although it may be possible for you to install and set up your new appliance, it is **STRONGLY** recommended that you have this done by qualified professionals. A qualified professional will ensure that the installation is safe and meets local building and fire codes.

### **Installation Clearances**

The clearances shown below are for combustible and non-combustible installations and will allow for safe and proper operation of your appliance.


	Combustible Construction	Non-Combustible Construction
Back	0	0
Sides	0	0
Floor	4 ¾ (12 cm)	4 ¾ (12 cm)

In addition to the above clearances there must also be at least 28 inches of aisle space in front of the unit for the removal/installation of the filter pan.

### **Electrical Connection**

Your Pitco appliance is manufactured to operate on a particular electrical supply. **DO NOT** attempt to connect the appliance to an electrical supply other than that indicated on the data plate. Electrical connection should be performed by qualified personnel.

The electrical connection used by this appliance must comply with local codes. If there are no local codes that apply, refer to the National Electrical Code (NEC), ANSI/NFPA 70 for installation in the US. In Canada, refer to CSA Standard C22.1 and local codes. In all other cases, refer to local and national codes and regulations.

The appliance must be grounded in accordance with local code; if there is no local code, comply with NEC ANSI/NFPA No. 70 latest edition (for US and Canadian installations). In all other cases, refer to local and national codes and regulations. To comply with European requirements, European models are equipped with an equalization-bonding clamp. An equalization bonding lead must be connected to this clamp to provide sufficient protection against potential difference. This clamp, located on the rear of the appliance is marked with the following universal symbol. 

### **Ventilation and Fire Safety Systems**

Your new appliance must have proper ventilation to function safely and properly. It is very important to install a fire safety system. Your ventilation system should be designed to allow for easy cleaning. Frequent cleaning and proper maintenance of the ventilation system and the appliance will reduce the chances of fire. The following tables contain a list of reference documents that will provide guidance on ventilation and fire safety systems. It is not necessarily complete. For US and Canada, additional information can be obtained from CSA International, 8501 East Pleasant Valley Road, Cleveland, OH, 44131 or visit their website at [www.csa-international.org](http://www.csa-international.org).

#### **Hoods and Ventilation Systems**

TOPIC	UL Document	National Fuel Gas Code Document
Exhaust Hoods	ANSI/UL 70	ANSI/NFPA 96
Power Ventilators	ANSI/UL 705	ANSI/NFPA 96
Filter Units	ANSI/UL 900	ANSI/NFPA 96

# INSTALLATION

## Types of Fire Extinguishers and Detection Equipment

Topic	UL Document	National Fuel Gas Code Document
CO <sub>2</sub> Type Extinguishers	ANSI/UL 154	ANSI/NFPA 12
Dry Chemical Type Extinguishers	ANSI/UL 299	ANSI/NFPA 17
Water Type Extinguishers	ANSI/UL 626	ANSI/NFPA 13
Foam Type Extinguishers	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

It is essential that the appliance be operated only when adequate ventilation is provided. Your ventilation hood should be properly maintained. A qualified installation professional should ensure that the hood is operating properly in conjunction with the appliance. Inadequate ventilation may not properly evacuate all appliance emissions.

### Initial Cleaning

When your appliance is shipped, many of its parts are covered with a thin coat of oil for protection. Before the appliance 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. Refer to the following procedure to clean the appliance.

- a. Fill the tank with water. Turn the appliance on and set the thermostat to 200°F (93°C) Refer to the APPLIANCE START UP section of this manual for instructions.
- b. Allow the appliance to heat for 15 minutes. Add Pitco cleaner to the water, stirring with the cleaning brush to ensure that the cleaner dissolves thoroughly.

### CAUTION

**DO NOT leave the appliance unattended during cleaning. Never let the water level go below the "Oil Level" mark stamped on the tank.**

- c. Using the cleaning brush, scrub the inside of the tank to remove the protective coating.
- d. When cleaning is complete turn the appliance off and drain the water into a container suitable for hot water and dispose of it.

### WARNING

**Wear protective gloves and clothing when cleaning and draining the appliance and when disposing of water. The water is extremely hot and can cause severe injuries.**

- e. When the tank has cooled, rinse thoroughly with cool water. Continue to rinse the tank until the cleaner has been completely and thoroughly rinsed from the tank.
- f. Using a clean dry cloth, wipe out all of the water. Be very thorough when removing the water, as any residual water will cause hot shortening/oil to splatter out of the appliance.

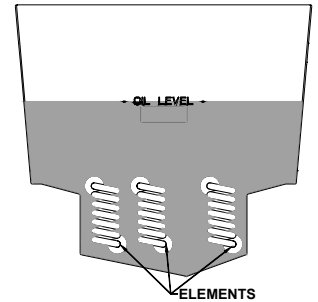
## FILLING THE TANK

Both liquid and solid shortening/oil can be used in this appliance, but liquid is preferred. If solid shortening/oil is used it is recommended that you melt the shortening/oil before adding it to the appliance. You can melt solid shortening/oil in the appliance, but you must be very careful not to scorch the shortening/oil.

### Filling the tank with liquid shortening/oil

To fill the tank with liquid shortening/oil refer to the following procedure.

- a. Ensure that the drain valve is completely closed and that there is no residual moisture in the tank.
- b. Fill the tank with shortening/oil. You may fill the tank to the "OIL LEVEL" mark or slightly below the nominal level mark: the shortening/oil will expand slightly when it heats up, raising the level slightly.



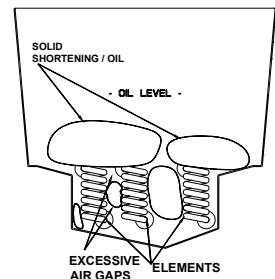
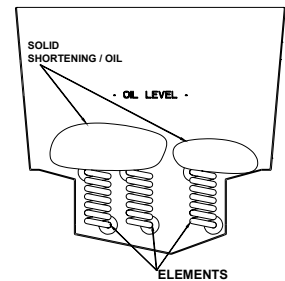
### Filling the tank with solid shortening/oil

To fill the tank with solid shortening/oil, refer to the following procedure.

#### **WARNING**

**NEVER melt blocks of solid shortening/oil on top of the elements. This will cause a fire and could result in personal injury.**

- a. Ensure that drain valve is completely closed and that there is no residual moisture in tank. Remove the screen covering the elements.
- b. Cut the solid shortening/oil into cubes no larger than one inch. ALWAYS pack the shortening/oil below, between, and on top of the elements. **DO NOT** leave any large air gaps. Use care when packing the solid shortening/oil into the tank. **DO NOT** bend or break the temperature or high limit sensor probes. If these are damaged the appliance will not function properly.
- c. Once the appliance tank is firmly packed with shortening/oil, the shortening/oil must be melted. Melt the shortening/oil by cycling the elements on for 4 seconds and off for 30 seconds repeatedly, using the thermostat knob. If your appliance has a Melt Cycle option, use this to melt the shortening/oil automatically.



## OPERATING INSTRUCTIONS

To ensure the quality of the food you cook in this appliance, follow the preparation instructions from the food manufacturer. Using the best shortening/oil makes the best fried foods. The best shortening/oil will last longer than lower grade shortening/oil and save you money. When not in use, the shortening/oil should be cooled and covered to prevent contamination. A maximum load of 1.5 lbs. (0.7 kg) per basket is recommended. Exceeding this recommendation may affect food quality and could cause surge boiling.

# OPERATION

## WARNING

This appliance must be installed using restraining devices to prevent accidental tipping or movement. **DO NOT** attempt to move the appliance when it is in use or has hot liquid in it. Splashing hot liquids can cause severe burns.

## WARNING

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

## Appliance Start-Up

### WARNING

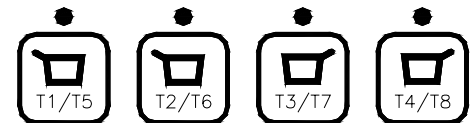
**DO NOT start the appliance without filling the tank with shortening/oil first!**

For models with electric thermostat option refer to the following instructions.

- Place the ON/OFF (I/O) rocker switch on the front panel to the ON ( I ) position. A light on the switch will illuminate.
- Turn the temperature control knob (thermostat) to the desired temperature setting. The thermostat will automatically raise the oil temperature to the desired setting.
- You may begin cooking product once the appliance has reached setpoint. To cook product, fill basket with the product to be cooked and place basket in fry tank. The thermostat will automatically begin to compensate for the temperature drop. You will need to time your cook session.

For models with Compact Computer Control refer to the following instructions.

- Press the ON/OFF (I/O) button to turn appliance on.
- The control will automatically raise the oil temperature to the preprogrammed setpoint.
- You may begin cooking product once the appliance reaches setpoint or the display reads “drop”. To cook product, fill basket with product to be cooked, place basket in fry tank and press the preprogrammed cook timer key associated with the product that you are cooking.
- Cook timers T1-T4 may be used merely by pressing the corresponding key. To use cook timers T5-T8, first press the SHIFT key, followed by the appropriate cook timer key.



- For programming and further operation instructions refer to the programming guide that was shipped with your appliance.



## Appliance Shut-down

For models with electric thermostat option refer to the following instructions.

- a. Turn the temperature control knob (thermostat) to the OFF ( O ) position.
- b. Place the ON/OFF (I/O) rocker switch to the OFF ( O ) position. The light on the switch will extinguish.

For models with Compact Computer Control refer to the following instructions.

- a. If the appliance is on, press the ON/OFF (I/O) key and hold for 3 seconds to turn the appliance off.



## FILTERING INSTRUCTIONS

### NOTE

**Filter option is not available on Model E500D**

It is recommended that the shortening/oil be filtered, at a minimum, on a daily basis. Filtering removes suspended food particles from the shortening/oil, preventing them from burning and imparting an undesirable taste to your food products. Proper filtering will increase the usable life of your shortening/oil. Old shortening/oil has a lower flash point and foams up more than clean oil.

For models with filter option refer to the following instructions.

### WARNING

**Shortening/oil, when it is at operating temperatures, is very hot and dangerous! Use extreme caution when filtering! Use proper protective gear, such as insulated gloves, aprons, face shield and sleeves when filtering or otherwise handling hot shortening/oil.**

- a. Insure that filter pan is placed properly in appliance and that filter paper is clean and serviceable. If the filter paper is not serviceable, replace the filter paper per the instructions in this manual.

**DO NOT run the filter without a filter paper on the pickup assembly.**

- b. Connect the quick disconnect on the filter pickup assembly into white donut fitting on the left-hand side of the appliance. Ensure that it snaps tightly and securely into donut fitting. Connect quick disconnect on return hose to black donut fitting on the right-hand side of the appliance. Ensure that it snaps tightly and securely into donut fitting.
- c. Perform the appropriate appliance shut down for your appliance type per the instructions in this manual.

### WARNING

**Ensure that the appliance is turned OFF before opening the drain valve.**

- d. Open the drain valve for the fryer to be filtered and allow the shortening/oil to drain into the filter pan.

### WARNING

**NEVER drain more than one tank at a time into the filter pan. The filter pan will only hold one (1) tank at a time.**

# OPERATION

## **FILTERING INSTRUCTIONS (continued)**

- e. Ensure that flush hose is pointed into tank and place Filter ON/OFF ( I/O ) switch in the ON ( I ) position. The pump will begin to return shortening/oil to the tank.

### **WARNING**

**For your safety, NEVER allow flush hose nozzle to point away from the tank while filtering.**

- f. Carefully rinse the tank back and sides with stream of returning shortening/oil. You can use the cleaning brush and cleaning rod to aid in removing debris from the tank.
- g. Once all debris has been rinsed from the tank, close the drain valve and allow the tank to refill. To ensure that filter lines are purged, allow the filter to run for 15 seconds after all shortening is returned to the tank. Additionally, it may be necessary to add a small amount of shortening/oil to bring the shortening/oil back to the OIL LEVEL line.
- h. It may be necessary to repeat steps d through h if shortening/oil quality is not acceptable. Otherwise, you may now turn the appliance on per the instructions in this manual and resume operation.

To ensure proper operation and sanitary conditions, the filter system should be disassembled and cleaned with hot water and mild detergent daily. Refer to the CLEANING AND MAINTENANCE section of this manual for instructions.

## **FILTER PAPER REPLACEMENT**

For models with filter option refer to the following instructions

- a. Detach the pickup tube from the filter pickup assembly by unscrewing it (counterclockwise), at the knurled fitting, from the threaded fitting on the filter screen.
- b. Slide off the filter paper clip and remove used filter paper from filter screen. Replace with new filter paper, ensuring that the hole in the paper is on the top, so that threaded fitting in filter screen protrudes through it.
- c. Fold filter paper to the underside of the filter screen and replace filter paper clip.
- d. Re-attach filter pickup tube to the filter screen by screwing it (clockwise) into the threaded fitting in filter screen.
- e. Reinstall the filter pickup assembly into the filter system by placing the newly covered screen portion of the assembly into the filter pan and connecting the quick disconnect on the filter pickup assembly into white donut fitting on the left-hand side of the appliance. Ensure that it snaps tightly and securely into donut fitting.

You are now ready to filter the shortening/oil in your appliance. Refer to the FILTERING INSTRUCTIONS section of this manual for instructions.

# CLEANING and MAINTENANCE

## **DAILY CLEANING**

Your appliance should be cleaned every day to maintain peak performance, proper sanitation and appearance. Perform the following procedures daily.

- a. Wipe up any shortening/oil that spills onto the exterior of the appliance. This should be done with a clean soft cloth while the shortening/oil is still warm. **DO NOT** spray or pressure wash the appliance!
- b. Use warm water with a mild detergent to clean surfaces. Be careful not to get water into the shortening/oil and be sure to completely remove any detergent from the fry tank.
- c. Use a non-abrasive scouring powder or pad to clean stains if necessary.

## **Filter Pan and Filter Pickup Assembly Cleaning**

Your filter pan and pickup assembly should be cleaned every day to maintain peak performance and proper sanitation. Perform the following procedures daily.

- a. Remove filter pan and filter pickup assembly from the appliance
- b. Disassemble the filter pickup assembly by unscrewing the filter pickup tube from the screen assembly (counterclockwise) at the knurled fitting, from the threaded fitting on the screen assembly. Slide off the filter paper clip; remove the used paper from the screen assembly and discard.
- c. Soak filter pan, flush hose and all pickup assembly components in hot water and mild, grease-cutting detergent and scrub thoroughly with a non-abrasive scouring pad.
- d. Thoroughly rinse all parts and allow them to dry completely.

### **WARNING**

**Hot shortening/oil and water, if mixed react violently. Ensure that your filter pan and components are thoroughly and completely dry before attempting to filter.**

## **WEEKLY CLEANING**

The appliance should be thoroughly cleaned AT LEAST once a week. This should include a thorough wipe down of the entire appliance with a rag and mild detergent. **DO NOT** spray or pressure wash the appliance!

### **WARNING**

**The power supply must be disconnected before cleaning and servicing this appliance!**

## **Boil Out Procedure**

The appliance should be boiled out AT LEAST once a week to remove food debris and shortening/oil build up. You will need a container large enough to hold 1 ½ times the shortening/oil in the tank. Refer to the following procedure for weekly boil out.

### **WARNING**

**Completely shut the appliance down when the shortening/oil is being drained and replaced with water. This will prevent the elements from energizing while the tank is empty.**

## CLEANING and MAINTENANCE

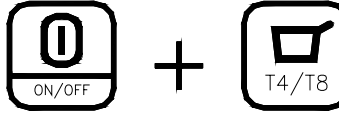
### WARNING

**At operating temperatures, the shortening/oil in the appliance is VERY HOT and can cause severe burns. Do not let the hot shortening/oil touch your skin or clothing. ALWAYS wear insulated, shortening/oil proof gloves, protective clothing and eyewear when working on a hot appliance.**

For models with electric thermostat option refer to the following instructions.

- a. Drain the shortening/oil from the appliance and discard or save for reuse. Remove the element screen. Close the drain valve and fill the tank with warm water and non-caustic detergent. For best results, use Pitco Cleaner. A sample packet is included with your new appliance.
- b. Restart the appliance as described in this manual and set the thermostat to 200°F (93°C). Bring the water to a slow boil. **DO NOT** allow the water to boil excessively as this will cause excessive foaming and boil over.
- c. Allow the appliance to soak for 20 minutes to soften shortening/oil deposits. Use the cleaning brush to scrub and remove any residue from the tank, elements and tank walls.
- d. When finished drain the water and wipe the tank dry with a soft clean cloth.
- e. Ensure that the drain valve is closed and replace the element screen.
- f. You may now refill the tank with shortening /oil per the filling instructions in this manual.

For models with Compact Computer, refer to the following procedure:

- a. Drain the oil from the appliance and discard or save for reuse. Remove the element screen. Close the drain valve and fill the tank with warm water and non-caustic detergent. For best results, use Pitco Cleaner. A sample packet is included with your new appliance
- b. Restart the appliance as previously described in this manual.
- c. Press the ON/OFF (I/O) and T4/T8 key simultaneously. Control will indicate that it has entered “boil” mode and will cycle around a fixed setpoint of 195°F (90 °C), preventing the appliance from boiling over, while allowing the operator to clean the appliance tank while. 
- d. Allow the appliance to soak for 20 minutes to soften shortening deposits. Use the cleaning brush to scrub and remove any residue from the tank, elements and tank walls.
- e. When finished turn the appliance OFF (O), drain the water and wipe the tank dry with a soft clean cloth.
- f. Ensure that the drain valve is closed and replace the element screen.
- g. You may now refill the tank with shortening/oil per the instructions in this manual.

### Filter System Cleaning

#### WARNING

**The power supply must be disconnected before cleaning and servicing this appliance!**

The filter system should be thoroughly cleaned AT LEAST once a week. This should include a thorough wipe down of the entire non-removable components with a rag and mild detergent. **DO NOT** spray or pressure wash any non-removable part of the filter system!

## Thermostat Calibration Check

### NOTICE

**Thermostat calibration requires that the temperature of the appliance be raised above boiling. If you have water in the tank you will need to drain it, dry it and fill it with shortening/oil. Follow the filling instructions in this manual.**

To check the calibration of your appliance, refer to the following procedure.

- a. Remove the element screen from the tank.
- b. Place the tip of a digital thermometer probe into the shortening/oil approximately one inch above the temperature sensor.
- c. Perform the appliance startup as described in this manual, set the thermostat to 325°F (163 °C) and allow the shortening/oil to come up to temperature. Watch the thermometer closely as the temperature rises.
- d. If the shortening/oil temperature reaches 350°F (177 °C) and the elements do not turn off, turn the thermostat down. Keep lowering the thermostat setting until the elements turn off.

### CAUTION

**If the elements do not shut off at the LOWEST thermostat setting, the thermostat may be defective. Contact your local service company.**

- e. Let the appliance 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 (3 °C) apart, calibrate the thermostat using procedure in this manual.

## Thermostat Calibration

For Electric Thermostats refer to the following procedure.

- a. Remove the element screen from the tank and place the tip of a digital thermometer into the shortening approximately one inch above the temperature sensor.
- b. Perform the appliance startup as described in this manual, set the thermostat to 325°F (163 °C) and allow the shortening/oil to come up to temperature; let the appliance cycle 4-6 times to insure that the oil temperature has stabilized. Compare the thermostat setting of 325°F (163 °C) to the digital thermometer reading.
- c. Remove the thermostat dial by pulling the knob straight out. DO NOT rotate the dial.
- d. Holding the outside of the shaft so that it does not move, scrape away the sealing compound in the center of the shaft with a small flat blade screwdriver.
- e. Turn the adjustment screw clockwise to lower the thermostat's temperature setting or counter-clockwise to raise it.

### NOTE

**One-quarter turn of the adjustment screw changes the temperature setting approximately 24°F (13 °C).**

- f. Turn the adjustment screw until the elements energize at 325°F (163 °C).
- g. Replace the knob and allow the appliance to cycle 4 to 6 times. Check the temperature of the digital thermometer against the thermostat dial setting; if there is greater than a 5°F (3 °C) difference, repeat the calibration procedure.

# TROUBLE SHOOTING

## TROUBLESHOOTING

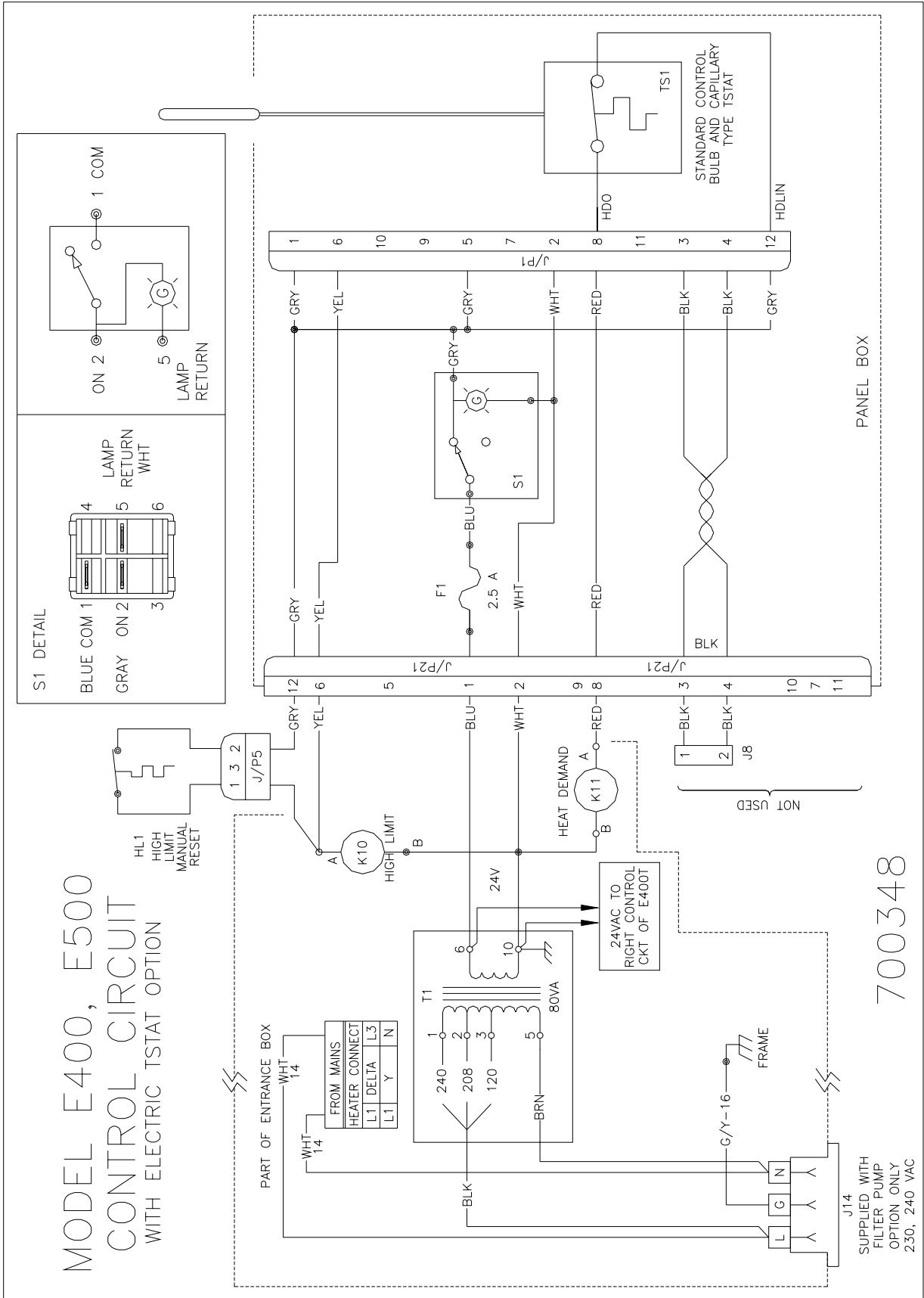
Should there be a problem with your appliance, use the following tables to isolate possible faults before calling your Authorized Service Agent.

Check these items before calling your Authorized Service Company.	
ITEM TO CHECK	HOW TO CHECK
Power to appliance	Check main power breaker to appliance.
Hi-Limit reset	Press Hi-Limit reset button..
Power switch on	Power switch should be in the ON ( I ) position.

COOK SYSTEM TROUBLESHOOTING	
SYMPTOM	POSSIBLE CAUSES
Appliance will not run, front panel lights are not on.	Check main power breaker to appliance, blown control fuse, faulty transformer.
Appliance will not run, front panel lights are on.	Tripped hi-limit, faulty temperature probe, faulty temperature control.
Appliance will not maintain temperature properly	Faulty temperature probe, faulty hi-limit switch

FILTERING SYSTEM TROUBLESHOOTING	
SYMPTOM	POSSIBLE CAUSES
Filter system will not operate	Filter switch/circuit breaker is in the OFF ( O ) position
Filter system will not operate, filter switch/circuit breaker is in the ON ( I ) position.	Thermal cutout on filter pump is tripped, faulty filter switch/circuit breaker, faulty filter pump.
Filter system runs, but does not return shortening to tank.	Filter paper is dirty, filter pickup is clogged with debris, filter line strainer is clogged with debris, filter return line is clogged with debris, faulty filter pump
Filter system runs but returns shortening very slowly or blowing air into tank.	Filter pickup tube is not properly seated, air leak in filter system, faulty filter pump.

# MODEL E400, E500 CONTROL CIRCUIT WITH ELECTRIC TSTAT OPTION



700348

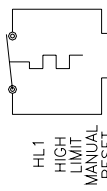
# MODEL E400 CONTROL CIRCUIT COMPACT CONTROLLER OPTION

TABLE 2: A1 CONTROLLER CONNECTIONS AT J1

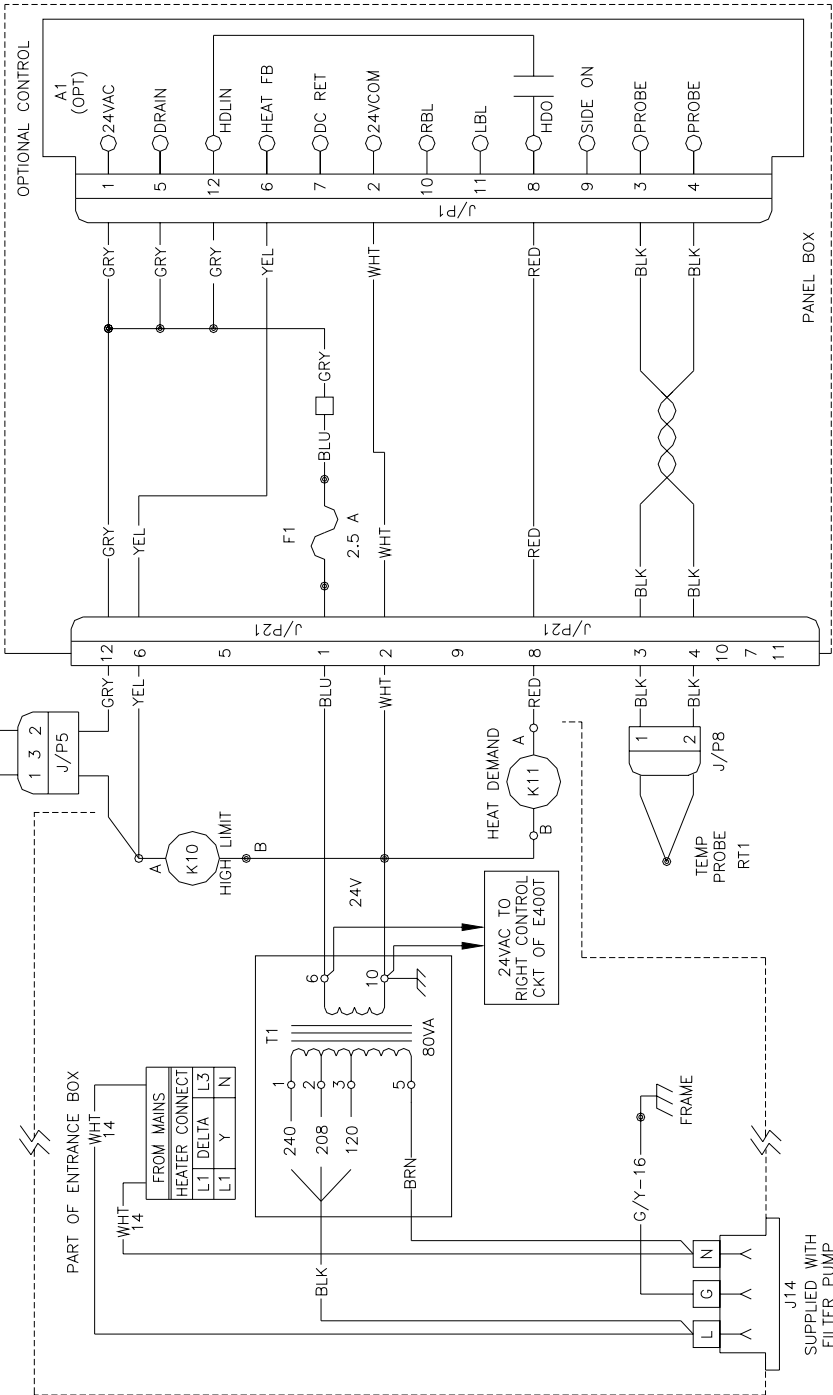
PIN #	TYPE	DESCRIPTION
1	24V AC POWER	24 VAC POWER IN
2	24 VAC RETURN	24 VAC RETURN
3	RESISTIVE INPUT	PROBE +
4	RESISTIVE INPUT	PROBE -
5	24V AC INPUT	FROM DRAIN SWITCH
6	24V AC INPUT	HEAT FEED BACK
7	24V DC POWER	DC RETURN
8	RELAY CONTACT	HD OUT
9	RELAY CONTACT	SIDE ON
10	24V DC POWER	RIGHT BASKET LIFT
11	RELAY CONTACT	LEFT BASKET LIFT
12	RELAY CONTACT	HD LINE IN



J1  
(WIRE SIDE  
VIEW AT P1)



HL1  
HIGH  
LIMIT  
MANUAL  
RESET

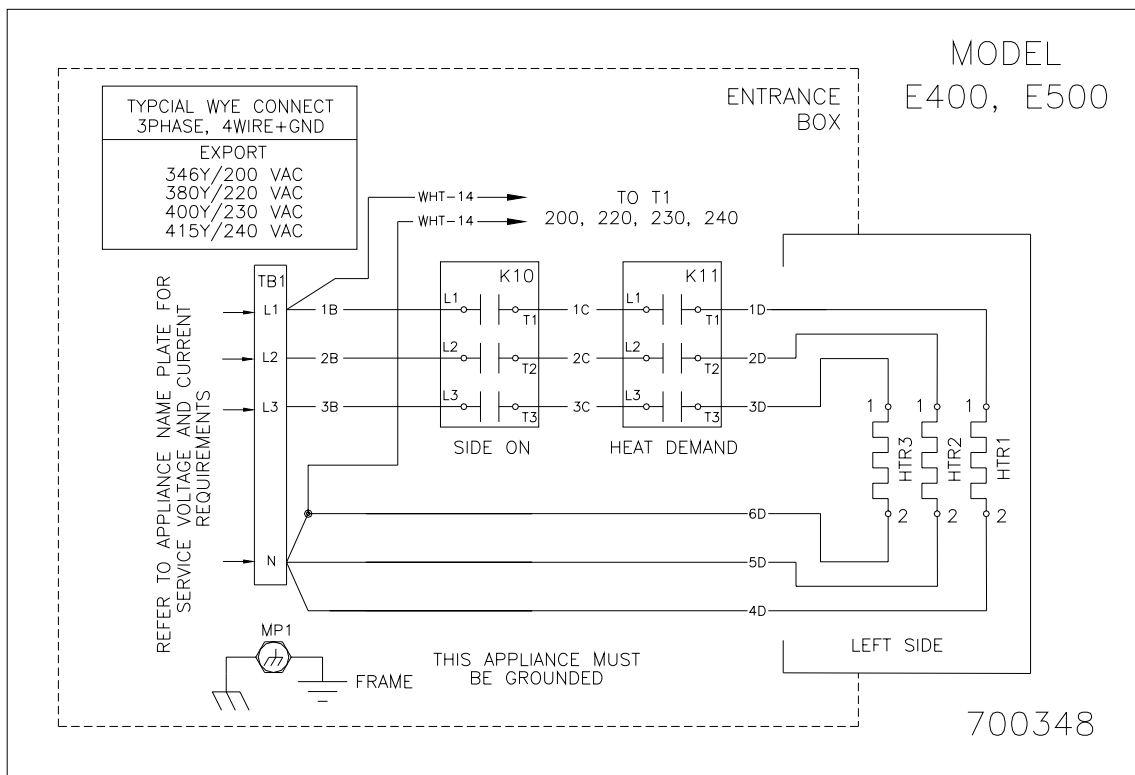
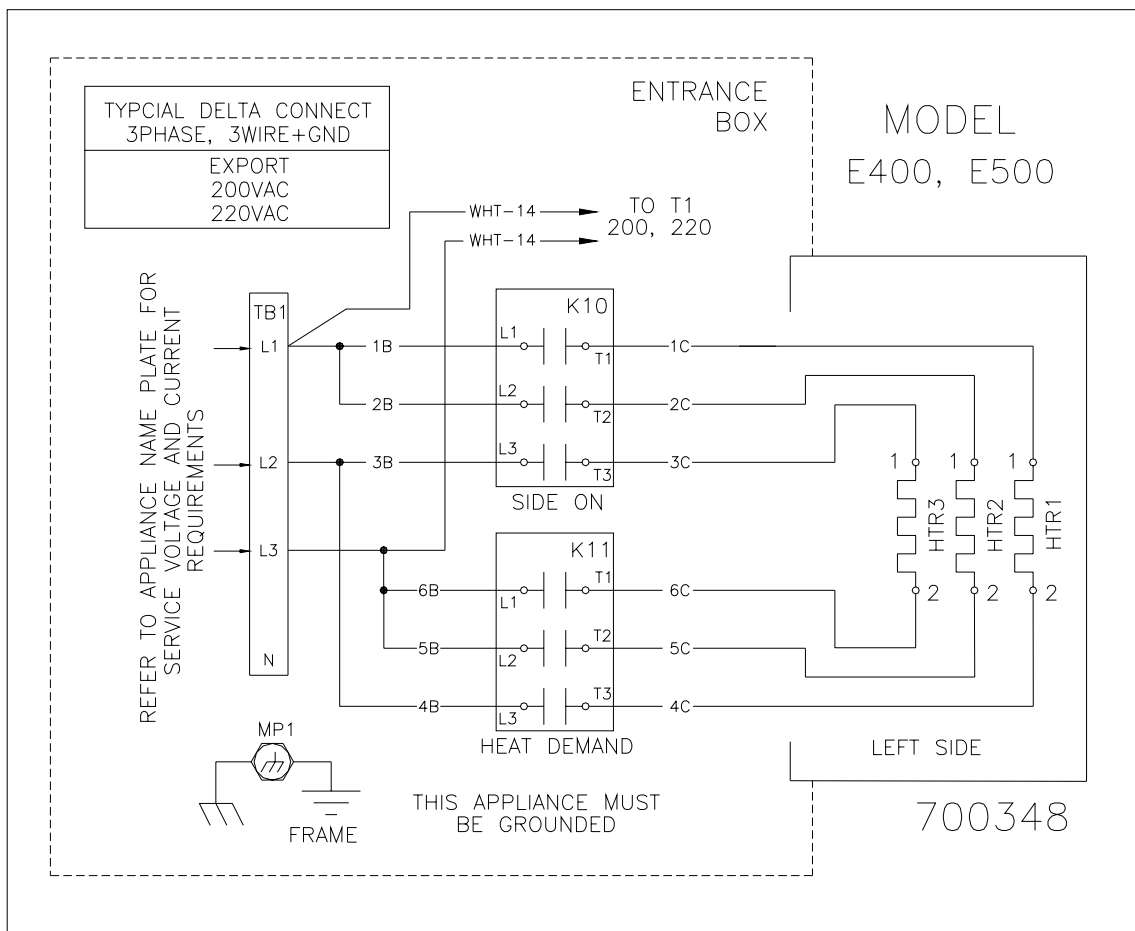


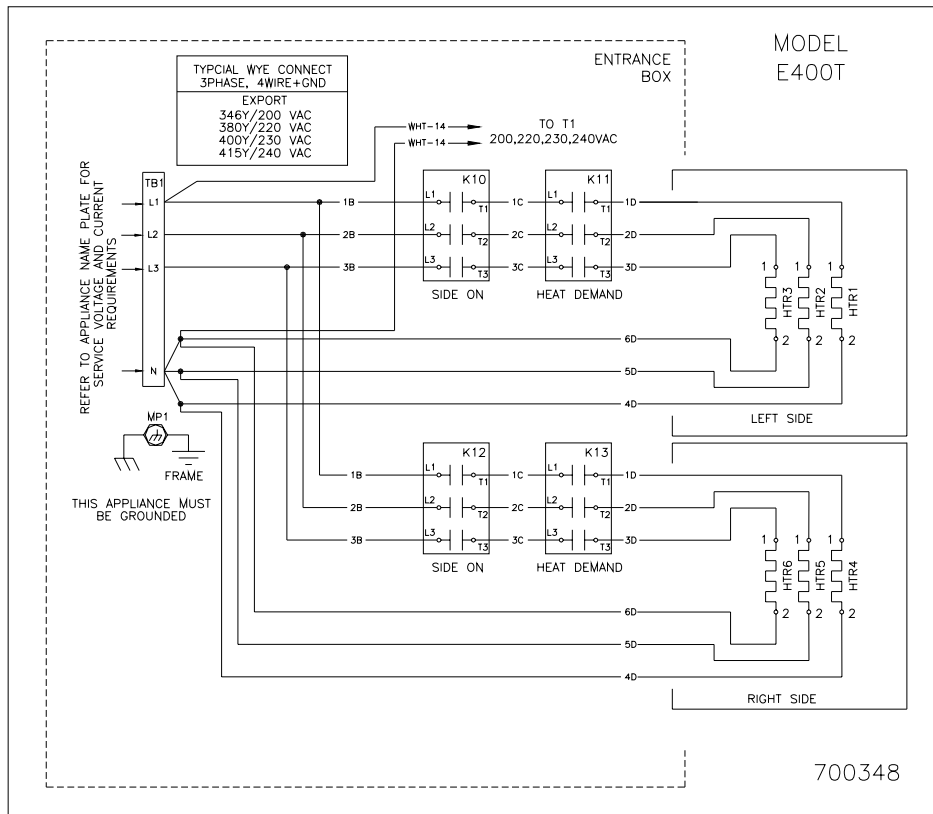
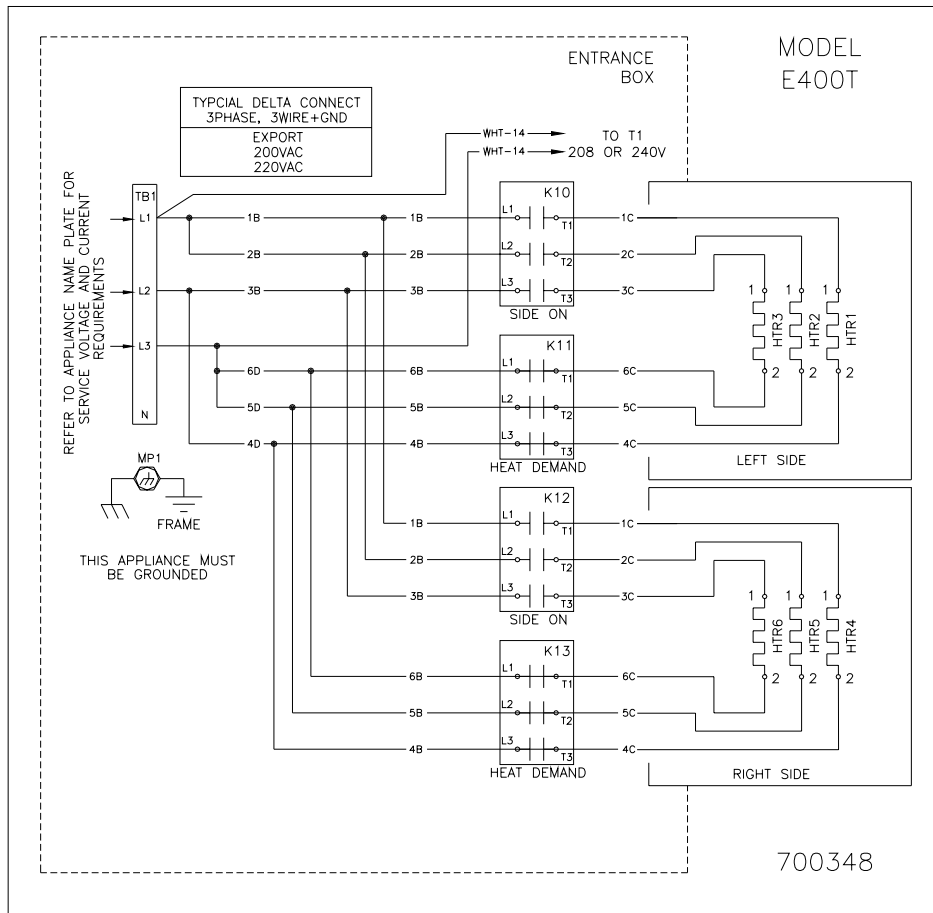
PANEL BOX

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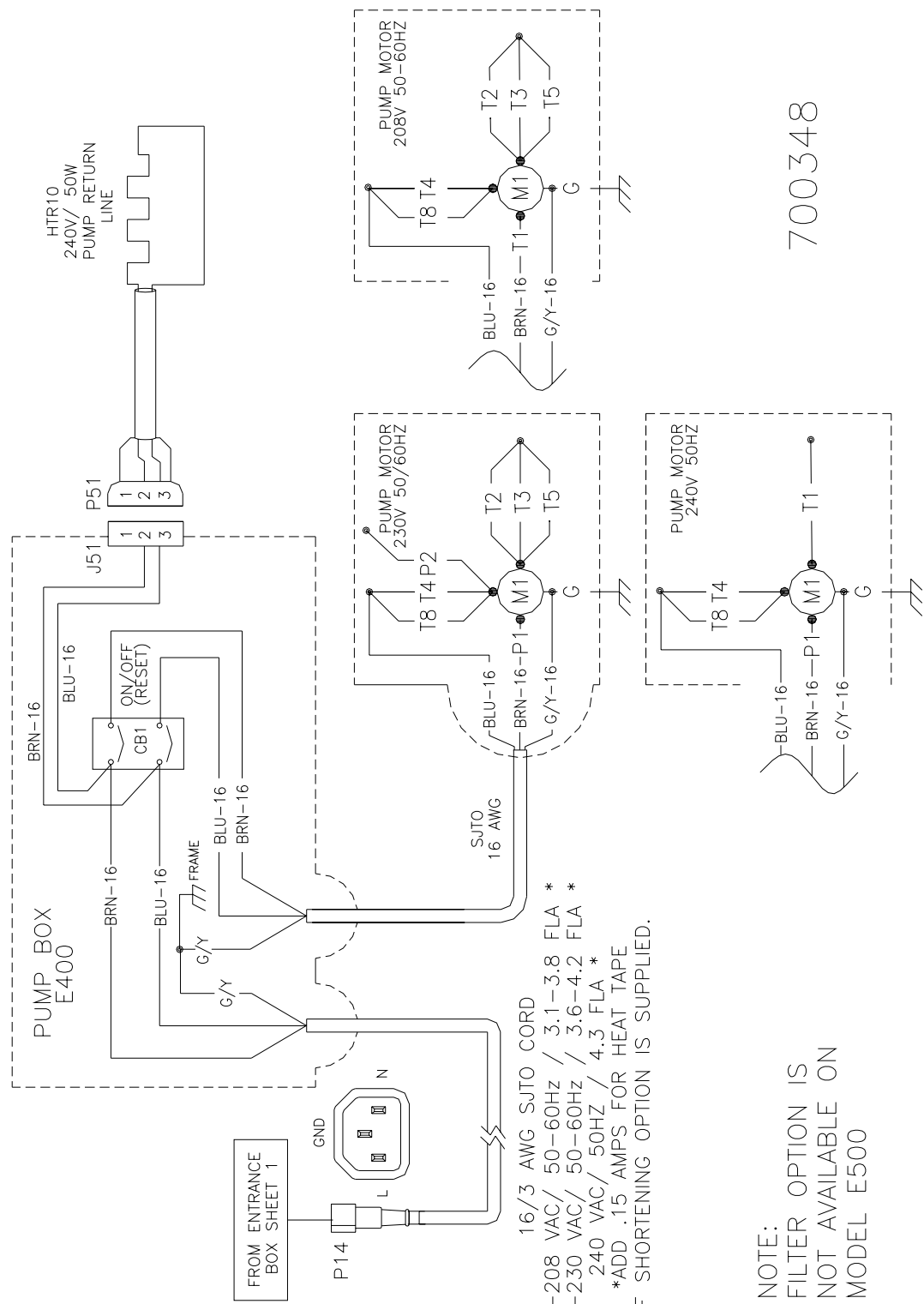
J14  
SUPPLIED WITH  
FILTER PUMP  
OPTION ONLY  
230, 240 VAC







FILTER PUMP 200-208V, 220-230V/50-60HZ OR 240V/50HZ EXPORT



16/3 AWG SJTO CORD  
 200-208 VAC/ 50-60Hz / 3.1-3.8 FLA \*  
 220-230 VAC/ 50-60Hz / 3.6-4.2 FLA \*  
 240 VAC/ 50HZ / 4.3 FLA \*  
 \*ADD .15 AMPS FOR HEAT TAPE  
 IF SHORTENING OPTION IS SUPPLIED.

NOTE:  
 FILTER OPTION IS  
 NOT AVAILABLE ON  
 MODEL E500

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In the event of problems with or questions about your order, please contact the Pitco Frialator factory at:

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

In the event of problems with or questions about your equipment, please contact the Pitco Frialator Authorized Service and Parts representative (ASAP) covering your area, or contact Pitco at the numbers listed to the left.

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**SHIPPING ADDRESS – 10 FERRY ST., CONCORD, NH 03301**