MN-1144
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Belshaw®

Open Kettle Donut Fryer

Gas Heated

718 · 724 · 734

OPERATION AND MAINTENANCE MANUAL

ALI GROUP

WELBILT
an Ali Group Company

EQUIPMENT RECORD

Please provide information below when corresponding with Belshaw about your machine.

Purchased by _____

Installed by _____

Date of Installation _____

Model number _____

Serial number _____

IN CASE OF DAMAGE TO EQUIPMENT

In case of damage to the equipment upon delivery, follow these steps immediately.

1. Inform the freight carrier. The phone number will be on the shipping receipt or label.
2. Take photographs of the equipment, both inside and outside the box or crate.
3. Do not throw away any packaging.
4. Report damage to the distributor (or other party) from whom you bought the equipment.
5. Email your photos to the distributor (or other party) AND to Belshaw Customer Service at service@belshaw.com. Include a Belshaw Order Number in your communications.

IN CASE OF MISSING ITEMS

1. If possible, note the missing items on the delivery receipt of the freight carrier.
2. Take photographs of the entire shipment.
3. Follow steps 2 – 5 above.

TABLE OF CONTENTS

PREFACE

The 718, 724 and 734 Gas Fryers are designed to fry cake and yeast-raised donut products. Each leg of the fryer must be bolted to a flat, dry floor. The operator shall stand in front of the fryer doors.

The operator must work safely at all times, read this manual and follow its instructions and warnings. A thorough understanding of how to install, maintain, and safely operate the fryer will prevent production delays and injuries.

Heed the following warnings and all other warnings that appear in this manual:

- Ensure the machine is bolted securely to the floor. Doing so will prevent the machine from moving, tipping, or falling, which could cause serious injury.
- To avoid damaging the machine, never use force to assemble, disassemble, operate, clean, or maintain it.
- Never let water and hot shortening come in contact with each other. Moisture causes hot shortening to spatter, which may cause serious burns.
- Do not overfill the kettle with shortening. If shortening overflows, it could cause serious burns or cause someone to slip on the floor and be seriously injured.
- Hot shortening can cause serious burns. Ensure that the system and shortening are cool before attempting adjustment, repair, disassembly, or cleaning.
- To avoid electrocution or other injury, unplug machine before any adjustment, repair, disassembly, or cleaning.
- Be careful never to get shortening, water, or other materials on the floor. If anything spills, clean the area immediately. Materials on the floor can cause people to slip or fall, resulting in serious injury or fatality.
- To prevent unintentional startup and possible fire, unplug the machine if there is a power outage. When power is restored, it is safe to plug the machine in.
- To avoid electrocution, ensure all electrical cords are not frayed or cracked and that they do not pass through any water or shortening.
- Ensure that all electrical cords are routed so that no one will trip over them.
- This product contains chemicals known to the State of California to cause birth defects or other reproductive harm. Operation, installation and servicing of this product could expose you to carbon monoxide if not adjusted properly. Inhalation of carbon monoxide is known to the State of California to cause birth defects or other reproductive harm.
- Maintenance and repairs shall only be carried out by a factory representative or qualified serfice personnel.
- Liquid propane models are designed for use with a secure, commercially installed propane tank located remotely from your fryer. Do not use with a portable propane tank.

In a prominent location, post instructions to be followed in the event the user smells gas. Obtain this information by consulting your local gas supplier.

WARNING

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

WARNING

Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or fatality. Read the installation, operating and maintenance instructions thoroughly before installing or servicing.

Conforming to Codes

The installation of this fryer must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code (ANSI Z223.1), with the Natural Gas Installation Code (CAN/CGA-B149.1), or with the Propane Installation Code (CAN/CGA-B149.2), including:

- The fryer and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressues in excess of 13.0 IWC (3.45 kPa).
- The fryer must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 13.0 IWC (3.45 kPa).
- Propane fueled fryers must be used with a secure commercially installed propane tank located remotely from your fryer. Do not use with a portable propane tank.
- The fryer, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or with the Canadian Electrical Code, CSA C22.1, as applicable.

WARNING

This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from the plug.

Selecting a Workstation

The room in which the fryer is to be used should provide enough air for combustion. A ventilation hood with grease filters must be used with the fryer. The hood must be installed and operated in conformance with all applicable fire codes and emissions standards.

Maintain these safety clearances between the fryer and any construction, whether combustible or noncombustible.

- Sides - 2" (51 mm)
- Back - 6" (153 mm)

INSTALLATION

Unpacking the Fryer

1. Use a forklift or pallet jack to transport the shipping crate to the work station.
2. Break down the shipping crate.
3. Remove all packing materials from the fryer. These include foam, tape, brown paper, plastic and white protective coating.
4. Position the fryer to allow sufficient space on either end of the machine for any equipment you plan to use with it.

Initial Cleaning

Clean your fryer before using it. Wipe the inside of the kettle with a soft, damp cloth. Dry the kettle thoroughly.

WARNING

To avoid electrocution or damaging the machine, never allow water, steam, cleaning solution, or other liquid to enter the heater head or the electrical box.

WARNING

Never let water and hot shortening come in contact. Moisture causes hot shortening to spatter, which may cause serious injury. Prior to use, ensure any parts you have washed are dry.

Assembling the Fryer

1. Install the flue stack as follows:
   a. Slide the flange on the bottom of the flue stack underneath the retaining strip on the flue base. The mounting holes must line up. See Figure 1.
   b. Fasten the flue stack to the flue base using the two pan-head sheet metal screws provided.

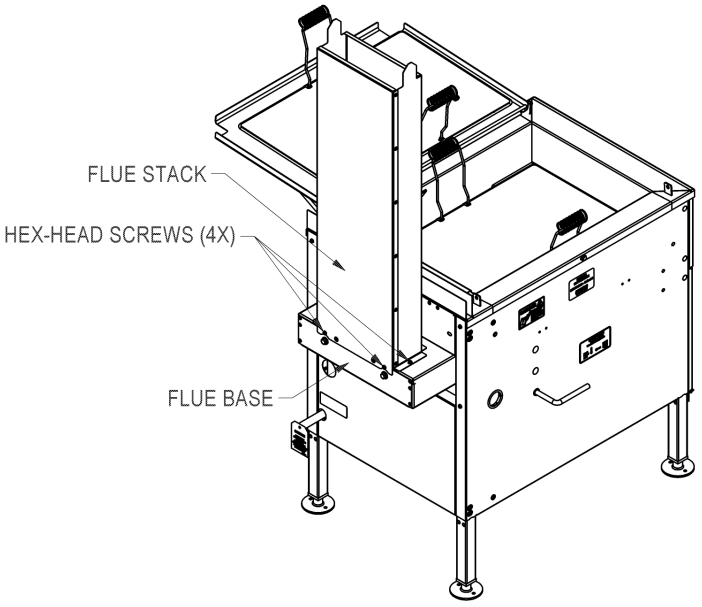


Figure 1
Installing the Flue Stack

2. Attach the heat shield to the splash shield as follows:
   a. Slide the flanges on the sides of the heat shield under the bent edges of the splash shield. The mounting holes must line up.

b. Fasten the heat shield to the splash shield using the 10-24 x 3/8" hex-head screws, lockwashers, and nuts provided. The screws go through the front of the splash shield; the lockwasters and nuts go on the back of the heat shield.

3. Put the heat shield and splash shield on the fryer. They slide over the flue stack, and the back of the kettle slides between the heat shield and the splash shield. The mounting holes in the heat shield and the fryer cabinet must line up. See Figure 2.

4. Fasten the heat shield to the fryer cabinet using the four hex-head sheet metal screws provided.

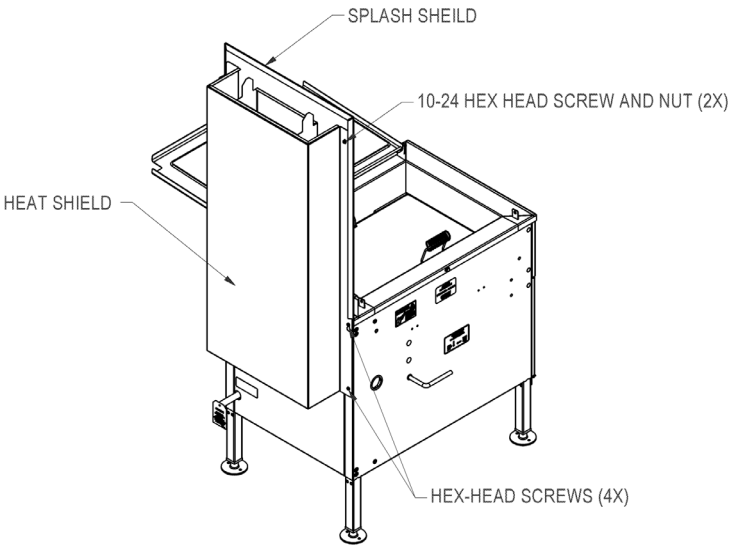


Figure 2
Installing the Heat Shield and Splash Shield

Installing the Fryer

1. Ensure the power requirements of the machine, found on the data plate, match your power source.

2. Using a forklift or pallet jack, lift the fryer cabinet and screw each leg in as far as possible.

3. Set the fryer on a flat, dry floor.

4. Level the fryer by following these steps:

   a. Check to see if the fryer is level by placing a level across the top of the fryer cabinet.

   b. If the fryer is not level, lift the fryer using a forklift or pallet jack, and turn the legs to adjust them.

   c. Using a forklift or pallet jack, lower the fryer to the floor. Ensure all legs rest on the floor when the fryer is level.

5. Bolt the fryer to the floor. The foot of each leg has two holes in it for this purpose.

WARNING

To avoid serious burns, injury, or fatality, ensure the fryer is securely fastened to the floor so it will not tip or fall over.

6. If you want to perform pressure testing on the building's gas supply system at pressures greater than 13.0 IWC (3.45 kPa), do so now, before connecting the fryer to the gas supply.

INSTALLATION

WARNING

To avoid damaging the fryer, do not perform pressure testing on the building's gas supply system at pressures greater than 13.0 IWC (3.45 kPa) when the fryer is connected to the system.

7. Connect fryer to the gas supply as follows:
   a. Ensure gas line to the fryer is 1/2" NPT. The gas supply line on the fryer itself is 1/2" NPT. If it is too small, the gas pressure at the burner manifold will be too low, resulting in slow heat recovery, delayed ignition, and pilot outage.
   b. Connect the fryer to the building's gas supply.
   c. Install pressure regulator ahead of the fryer and ensure inlet pressure to the fryer is adjusted to value listed on fryer nameplate.
   d. Seal all threaded joints between gas pipes with pipe joint compound. You must use a compound that resists the action of liquefied petroleum (LP) gases.
   e. Bleed the gas lines of all air.
   f. Check all gas connections and fittings for leaks using a gas leak detector, a soap solution, or a similar substance. When such a substance is applied to connections and fittings, bubbles indicate gas leaks. Repair any leaks before continuing.

WARNING

To avoid a fire or explosion, which could cause serious burns or fatality, never use an open flame to check connections for gas leaks.

8. If you want to perform pressure testing on the building's gas supply system at pressures at or below 13.0 IWC (3.45 kPa), you may do so now. Before testing, make sure the fryer's individual manual shutoff valve is closed.
9. Connect the fryer to a properly grounded power source.

WARNING

This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from the plug.

Ventilation

Adequate ventilation should be provided in the room where the fryer is used. The products of combustion and grease fumes must be removed efficiently and safely without producing drafts that interfere with the burner and pilot operation.

The fryer flue opening must not be located close to the intake of an exhaust blower. Do not connect a flue pipe directly to the fryer flue opening. The minimum vertical distance from top of the fryer flue opening to the vent system filters must be at least 18" (46 cm).

WARNING

Do not obstruct the flow of combustion and ventilation air to the fryer. When a flame is "starved" for air, it gives off carbon monoxide as a by-product.

Moving the Fryer

If you ever want to move the fryer to a different work station, follow this procedure:

1. Turn off the fryer and disconnect it from the power source.
2. Disconnect the fryer from the gas supply.
3. Allow the fryer and shortening to cool.

WARNING

Do not touch hot shortening. It can cause serious burns.

4. Remove the shortening from the fryer as explained in "Removing the Shortening" in the cleaning section of this manual.
5. Remove the bolts that secure the fryer to the floor.
6. Using a forklift or pallet jack, transport the fryer to the new work station.
7. Level the fryer, bolt it to the floor, connect it to the gas line, and connect it to the power source.

WARNING

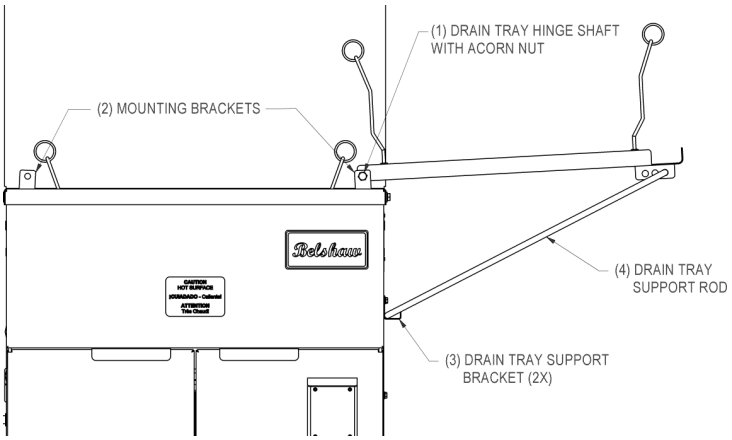
To avoid burns, falls, other injury or fatality, never attempt to move the fryer when it has shortening or other liquid in it.

WARNING

Thoroughly clean and dry the floor if shortening is spilled. Materials on the floor can cause people to slip or fall, resulting in serious injury or fatality.

Mounting the Drain Tray

The drain tray is mounted on the right side of the fryer. To move it to the left side, see the diagram below and follow these steps.



1. Remove the acorn nut from the back side of the drain tray hinge shaft. (①)
2. Slide the drain tray hinge shaft out of the drain tray mounting brackets. (②)
3. Lift off the drain tray.
4. Remove the two drain tray support brackets that are mounted on the right side of the cabinet. (③)
5. Install the drain tray support brackets on the left side of the cabinet. Each bracket is held in place by two hex-head machine screws, two hex nuts, two internal tooth lock washers, and two flat washers. Tighten all of these securely.

6. Put the drain tray in place on the left side of the fryer. The holes on the drain tray should line up with the holes in the mounting brackets on the left side.
7. Slide drain tray hinge shaft through holes in the mounting brackets and drain tray.
8. Tighten the acorn nut (removed in step 1) on the end of the drain tray hinge shaft.
9. Lift the drain tray support rod (④) so it is held in place by the support brackets installed on the left side in step 5.

Assembling the Frying Screen Handles

Frying screens come with handles and hardware unassembled. When assembled, the location of the handles should be as follows:

- For Model 718, center the handles along the long sides of the screen.
- For Model 724, center the handles along any opposing sides of the screen.
- For Model 734, center the handles along the short sides of the screen.

To assemble frying screens, refer to Figure 3.

1. Install #10-32 nuts (B) on threaded handle rods (A).
2. Locate clips (D) on the screen (C). Center the handles as listed above.
3. Insert threaded end of handle (A) with handle to outside as shown, ensuring that the spacer (E) is in place.
4. Install #10-32 nuts (F) flush onto threaded end of handle (A).
5. Tighten #10-32 nuts (B) locking handle assembly to screen.

CAUTION

You may be using detachable handles rather than fixed handles, particularly when making raised donuts using screens that are placed inside a proofer. In this case, your handles should not be attached to screens.

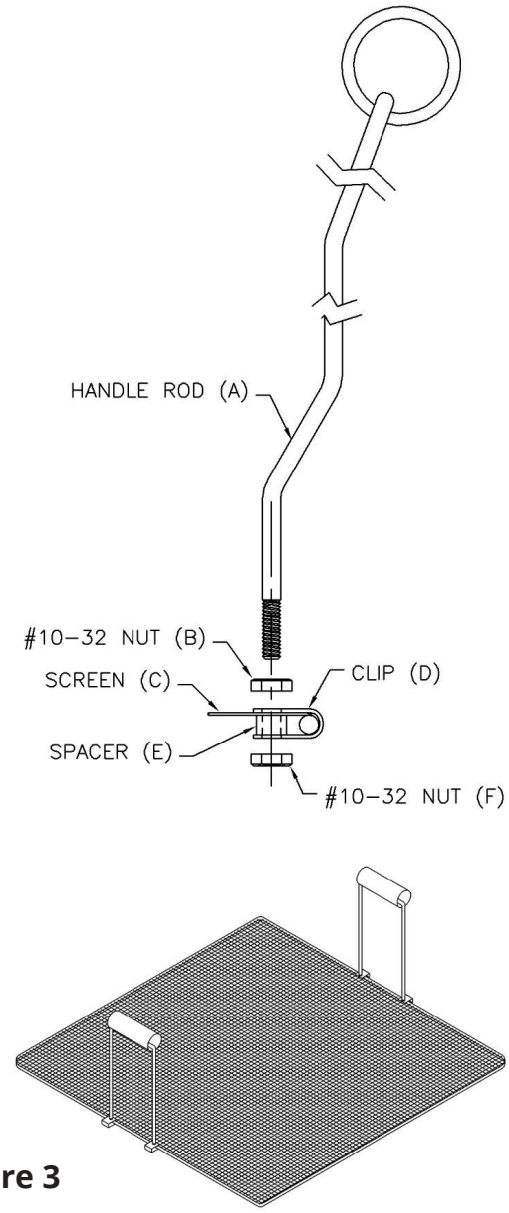


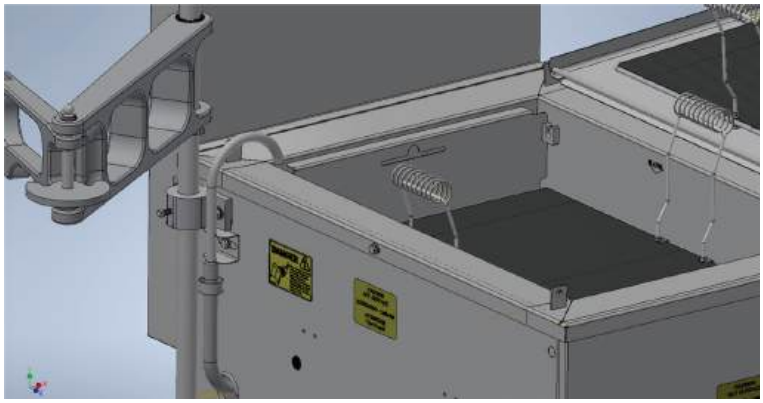
Figure 3

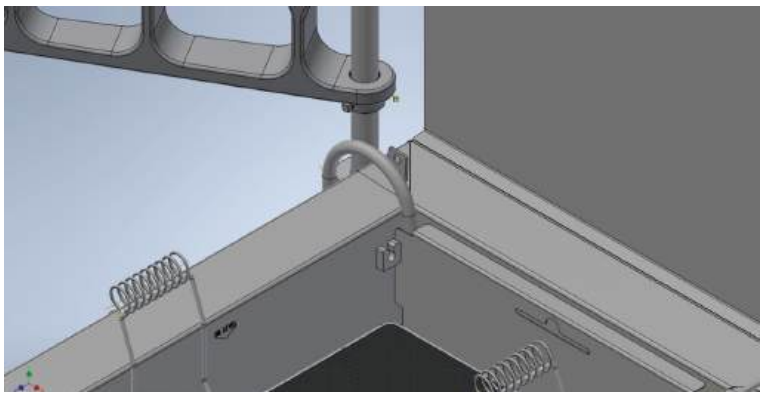
Installing the EZMelt

If you have a Belshaw EZMelt shortening melter-filter, refer to your EZMelt manual and follow the installation instructions prior to connecting the EZMelt hose to the fryer.

Connecting EZMelt Hose to the Fryer

1. Insert the threaded end of the hose through the opening on the fryer cabinet frame.
2. Place the nozzle into the nozzle splash shield at the back corner of the fryer kettle and align the mounting bracket with the threaded hole in the cabinet frame. Secure with provided bolt and washers.
3. Connect the threaded end of the hose to the EZMelt and slide the EZMelt inside the Open Kettle fryer.





OPERATION

Operation of Electronic Ignition (CG) Models

For standing pilot (FG) models, proceed to page 15 for operation instructions.

Safety Precautions

In a prominent location, post information about what to do if there is a gas leak. Ensure that all employees know what to do.

WARNING

To avoid the possibility of fire, explosion, property damage, serious burns, and even fatality, never store gasoline or any other flammable liquid or vapor near the fryer.

WARNING

To avoid serious injury or fatality, if you smell gas or suspect a gas leak, proceed as follows: 1. Turn off the gas. 2. Evacuate the building. 3. Do not touch any electrical switch or telephone until you are sure no spilled gas remains.

Filling with Shortening

1. Ensure the drain valve is closed.
2. Put enough shortening in the kettle to completely cover the burner tubes, thermocouple, and high-temperature limit control probe. Use one of these 3 methods:
   a. If you have a Belshaw EZMelt shortening melter-filter, warm the shortening and then transfer it to the kettle. (Refer to the EZMelt manual.)
   b. Melt shortening in a pan on the stove and pour it into the kettle.
   c. Put solid shortening manually into the kettle. Pack it tightly around the heating elements, thermocouple, and high-temperature limit control probe.

WARNING

Hot shortening causes severe burns.

WARNING

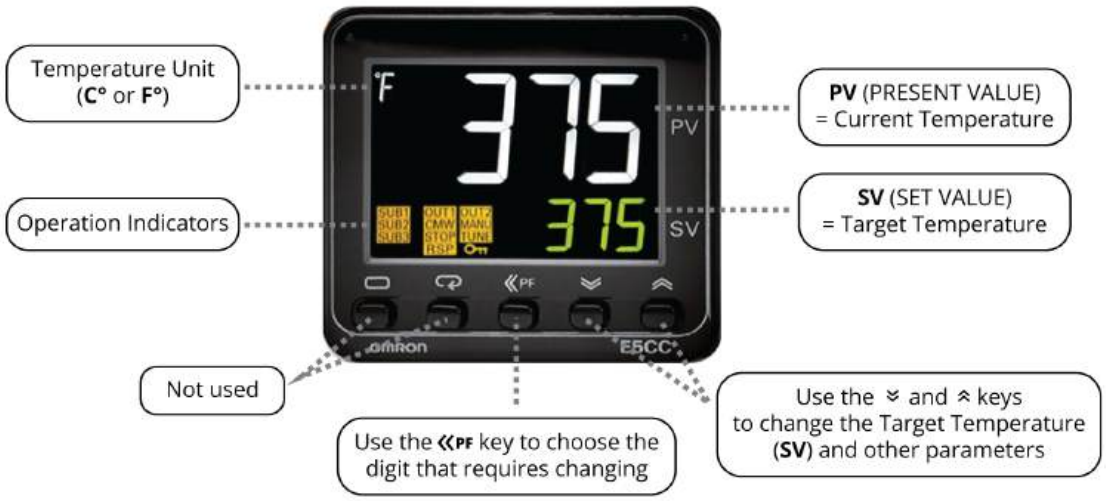
Air spaces can cause the shortening to overheat and catch on fire.

WARNING

To avoid severe damage to the kettle, never turn on the heat unless the heat tubes are completely covered by liquid.

3. Move the on/off switch to the OFF position.
4. Rotate the gas control knob counterclockwise to the ON position.
5. Move the on/off switch to the ON position. The yellow pilot light near the on/off switch and the red pilot light on the fryer cabinet will both light up.
6. On the digital temperature controller, push the up and down arrow keys the adjust the target frying temperature (SV). A common target frying temperature is 375°F (190°C).

Figure 4
OMRON Digital Temperature Controller



If the Pilot Light Fails to Ignite

If the pilot fails to ignite within 10 seconds, the gas system will go into safety lock-out. If this happens, move the on/off switch to OFF, wait at least one minute, and move the on/off switch to ON again.

WARNING

Failure to wait at least one minute for the gas to dissipate could result in a fire or an explosion when the pilot is lit again.

High Temperature Limit Switch

If the shortening temperature exceeds 435°F (224°C), the high-temperature limit control will break the circuit, and the electrical and gas systems will shut off.

If this happens, follow these steps to reset the system:

a. Move the on/off switch to the OFF position.

b. Wait for the shortening to cool to 385°F (196°C) or below. You will not be able to ignite the pilot until the shortening reaches this temperature.

c. Push the red High Limit Reset Button located just above the temperature controller.

d. Move the on/off switch to the ON position.

Adding Shortening to the Fryer

1. Continue adding shortening to the kettle until it reaches the proper depth for frying. Use one of the following methods.

WARNING

To avoid serious burns, be very careful not to splatter hot shortening when you add shortening to the kettle.

   - If you have a Belshaw EZMelt shortening melter-filter, warm the shortening and then transfer it to the kettle. (Refer to the EZMelt manual.)
   - Melt shortening in a pan on the stove and pour it into the kettle.
   - Very carefully put solid shortening into the kettle.
2. Because shortening expands as it increases in temperature, put shortening in the kettle gradually. Let the shortening in the kettle heat up before you add more.
3. Wait for the shortening to reach the desired temperature.

WARNING

To avoid serious burns, when the fryer is operating, do not touch the flue, exhaust manifold, stacks, gas burners, or any part of the fryer that is in contact with hot shortening. Keep clear from the area above the flue outlet.

4. Continue supplying shortening to the kettle as required. Keep the kettle filled up to the "Oil Level" marks on the side.
5. When you have finished frying, move the on/off switch to the OFF position.

OPERATION

Operation of Standing Pilot (FG) Models

Safety Precautions

In a prominent location, post information about what to do if there is a gas leak. Ensure that all employees know what to do.

WARNING

To avoid the possibility of fire, explosion, property damage, serious burns, and even fatality, never store gasoline or any other flammable liquid or vapor near the fryer.

WARNING

To avoid serious injury or fatality, if you smell gas or suspect a gas leak, proceed as follows: 1. Turn off the gas. 2. Evacuate the building. 3. Do not touch any electrical switch or telephone until you are sure no spilled gas remains.

Controls

The gas cock knob on the gas control has three settings: Off, Pilot, and On.

Off: Prevents any gas from passing through the valve to either main or pilot burner.

Pilot: Permits gas to flow to pilot burner only when gas cock knob is held depressed or when generator is heated sufficiently to hold valve open.

On: Permits gas to flow to both main and pilot burners when the system is functioning correctly.

Initial Lighting

This procedure is only required after a complete shut down or installation.

Light the fryer as follows:

1. Turn the thermostat knob to the OFF position. Wait five minutes.
2. Rotate the gas control knob counterclockwise to the PILOT position. Fully depress the knob and hold it down while lighting the pilot burner. Continue to hold down the knob approximately one minute. Release the knob and check to see that the pilot burner remainds lit. Turn the knob to ON.
3. Turn the thermostat knob to the desired temperature to light the main burners.

Complete Shut Down

This procedure is only required before servicing.

Turn the gas control knob clockwise from the ON position to the PILOT position. Slightly depress the knob and turn to OFF position. Ensure all flames are fully extinguished.

Filling with Shortening

1. Ensure the drain valve is closed.
2. Add enough shortening in the kettle to completely cover the burner tubes, thermocouple, and high-temperature limit control probe. Use one of these 3 methods:
   a. If you have a Belshaw EZMelt shortening melter-filter, warm the shortening and then transfer it to the kettle. (Refer to the EZMelt manual.)

b. Melt shortening in a pan on the stove and pour it into the kettle.

c. Put solid shortening manually into the kettle. Pack it tightly around the heating elements, thermocouple, and high-temperature limit control probe.

WARNING

Hot shortening causes severe burns.

WARNING

Air spaces can cause the shortening to overheat and catch on fire.

WARNING

To avoid severe damage to the kettle, never turn on the heat unless the heat tubes are completely covered by liquid.

3. Move the on/off switch to the OFF position.
4. Rotate the gas control knob counterclockwise to the ON position.
5. Move the on/off switch to the ON position. The yellow pilot light near the on/off switch and the red pilot light on the fryer cabinet will both light up.
6. Turn the thermostat control knob to the desired temperature. This will cause the pilot to ignite. The yellow pilot light on the fryer cabinet will light up, indicating that the thermostat is calling for heat.

If the Pilot Light Fails to Ignite

If the pilot fails to ignite within several minutes, the gas system will go into safety lock-out. If this happens, move the on/off switch to OFF, wait at least one minute, and move the on/off switch to ON again.

WARNING

Failure to wait at least one minute for the gas to dissipate could result in a fire or an explosion when the pilot is lit again.

High Temperature Limit Switch

If the shortening temperature exceeds 435°F (224°C), the high-temperature limit control will break the circuit, and the electrical and gas systems will shut off.

If this happens, follow these steps to reset the system:

a. Move the on/off switch to the OFF position.

b. Wait for the shortening to cool to 385°F (196°C) or below. You will not be able to ignite the pilot until the shortening reaches this temperature.

c. Move the on/off switch to the ON position.

Adding Shortening to the Fryer

1. Continue adding shortening to the kettle until it reaches the proper depth for frying. Use one of the following methods.

WARNING

To avoid serious burns, be very careful not to splatter hot shortening when you add shortening to the kettle.

   a. If you have a Belshaw EZMelt shortening melter-filter, warm the shortening and then transfer it to the kettle. (Refer to the EZMelt manual.)
   b. Melt shortening in a pan on the stove and pour it into the kettle.
   c. Very carefully put solid shortening into the kettle.

4. Because shortening expands as it increases in temperature, add shortening in the kettle gradually. Let the shortening in the kettle heat up before you add more.
5. Wait for the shortening to reach the desired temperature.

WARNING

To avoid serious burns, when the fryer is operating, do not touch the flue, exhaust manifold, stacks, gas burners, or any part of the fryer that is in contact with hot shortening. Keep clear from the area above the flue outlet.

4. Continue supplying shortening to the kettle as required. Keep the kettle filled up to the "Oil Level" marks on the side.
5. When you have finished frying, move the on/off switch to the OFF position.

CLEANING

Observe the following warnings throughout the entire cleaning process.

WARNING

Thoroughly clean and dry the floor if shortening, water, or other materials are spilled. Materials spilled on the floor may cause serious injury or fatality.

WARNING

To avoid electrocuting yourself or damaging the fryer, never allow water, steam, shortening, cleaning solution, or any other liquid to enter the electrical box.

WARNING

To avoid serious burns while cleaning, do not touch the flue, exhaust manifold, stacks, gas burners, or any part of the fryer that is in contact with hot liquids.

There are four basic steps to cleaning the fryer: removing the shortening, washing, rinsing, and drying. You must perform all four steps and perform them in the order listed.

Step 1: Removing the Shortening

WARNING

To avoid being burned or electrocuted, disconnect the machine from the power source before cleaning the fryer.

1. Disconnect the fryer from the power source.
2. Let the shortening cool to 250°F (120°C).
3. Place a Belshaw EZMelt Filter under the drain valve of the fryer.
4. Open the drain valve by turning the drain valve extension knob on the side of the fryer cabinet. Allow all the shortening to drain into the EZMelt.

WARNING

Do not use a plastic container. If the shortening is not cool enough, the container will melt, possibly causing burns and shortening to get on the floor.

WARNING

Do not allow the shortening to overflow the containers. Shortening will get on the floor, and if it is not cool enough, you may get burned.

WARNING

Thoroughly clean and dry the floor if shortening is spilled. Shortening on the floor can cause serious injury or fatality.

5. Using a non-abrasive, non-metallic spatula, scrape the sediment and any remaining shortening into the drain valve.
6. Close the drain valve.

WARNING

To avoid fire, serious injury, and equipment damage, do not attempt to burn carbon off of the heat tubes.

CLEANING

Step 2: Washing the Kettle

1. Carefully pour hot water into the kettle, up to the normal level of the shortening. Add appropriate cleaner.

WARNING

To avoid severe damage to the kettle, never turn on the heat unless the heat tubes are completely covered by liquid.

2. Connect the fryer to the power source. Move the on/off switch to ON. Set the temperature control to 200°F (93°C). Keep the cleaning solution at this temperature for 15-20 minutes.
3. Scrub the soiled parts while the solution is hot. Do not use any abrasive cleaners or scrapers.
4. Move the on/off switch to OFF and disconnect the fryer from the power source. Allow the cleaning solution to cool to 100°F (38°C).

WARNING

To avoid getting burned, be very careful as you work with hot cleaning solution. Never put your hands in the solution. Wear gloves and long sleeves in case solution splashes.

5. Place a large metal container under the drain valve.
6. Open the drain valve and allow the cleaning solution to drain into the container.

WARNING

Do not use a plastic container. If the cleaning solution is not cool enough, the container will melt, possibly causing burns and solution to get on the floor.

7. Watch the container to ensure the cleaning solution does not overflow. If the container becomes full, close the drain valve, place another large metal container under the drain valve, and open the drain valve again.
8. When the draining is complete, close the drain valve.
9. Carefully carry the container(s) to the sink and slowly pour the solution out.

WARNING

Thoroughly clean and dry the floor if cleaning solution is spilled. Liquid on the floor can cause serious injury or fatality.

Step 3: Rinsing

1. Pour clean, hot water into the kettle, up to the normal level of the shortening.
2. Connect the fryer to the power source. Move the on/off switch to ON. Set the temperature controls at 200°F (93°C). Leave the water at this temperature for 5-10 minutes.
3. Move the on/off switch to OFF and disconnect the machine from power source. Allow water to cool to 100°F (38°C).
4. Place a large metal container under the drain valve.

WARNING

To avoid severe damage to the kettle, never turn on the heat unless the heat tubes are completely covered by liquid.

WARNING

Do not use a plastic container. If water is not cool enough, the container will melt, possibly causing burns and causing water to get on the floor.

5. Open the drain valve and allow the water to drain into the container.
6. Watch the container to ensure water does not overflow. If the container becomes full, close the drain valve, place another metal container underneath, and open the drain valve again.
7. When the draining is complete, close the drain valve.
8. Carefully carry the container(s) to the sink and slowly pour the water out.

WARNING

Do not allow water to overflow the containers. Water will get on the floor, and if it is not cool enough, you may be burned.

WARNING

Thoroughly clean and dry the floor if water is spilled. Water on the floor may cause serious injury or fatality.

Step 4: Drying

Dry the kettle, drain valve and burner tubes thoroughly, using a soft cloth. Ensure no water is in the drain or drain tube.

WARNING

Dry all parts of the fryer thoroughly. Failure to dry the fryer and kettle completely will cause an eruption. Shortening will overflow sides of the fryer and may result in fire, injury, or fatality.

TROUBLESHOOTING

The following section is designed as an aid in troubleshooting to help you identify and solve some basic problems. It does not cover every possible problem that might arise, and is not a substitute for a qualified technician. Follow all warnings to ensure your safety.

If you have a problem with your fryer that you cannot solve, call your dealer or another qualified technician.

If your dealer cannot help you, please call Belshaw.

When you call, please specify the following:

- The model name of the machine.
- The serial number of the machine.
- The voltage, phase, and frequency of the machine.

WARNING

If you perform repairs yourself or have them performed by anyone other than a service technician authorized by Belshaw, you do so at your own risk.

WARNING

To avoid getting burned, electrocuted, or otherwise injured, unplug the machine from the power source before disassembling, repairing or wiring.

TROUBLESHOOTING

WARNING

To avoid being burned, turn off the machine and allow the shortening to cool.

WARNING

To avoid injury, turn off the machine and remove the hopper.

The donuts ball or blister	
Possible Causes	**What To Do**
The dough is too cold.	See "Donut Making Tips" section.
The shortening is too hot.	Decrease the temperature setting.
The dough is overmixed.	Review the mixing procedure.
The donuts are too large.	Adjust the dial on the depositor to produce smaller donuts.
The shortening is old or contaminated.	Replace the bad shortening with fresh.

The donuts are shaped imperfectly	
Possible Causes	**What To Do**
The shortening level is too low.	Add shortening to reach the proper level.
The tip of the cylinder is dirty.	Clean the cylinder.
The tip of the cylinder is nicked.	Replace the hopper.
The dough is overmixed.	Review the mixing procedure.

TROUBLESHOOTING

The donuts are undercooked	
Possible Causes	**What To Do**
The shortening is not hot enough.	Increase the temperature setting.
The dough is too cold.	See "Donut Making Tips" section.
The dough has not had enough floor time.	See "Donut Making Tips" section.
The controller (CG) or thermostat (FG) reads inaccurately.	Contact Belshaw.

The donuts are overcooked	
Possible Causes	**What To Do**
The shortening is too hot.	Decrease the temperature setting. The temperature setting should never exceed 375°F (191°C).
The controller (CG) or thermostat (FG) reads inaccurately.	Contact Belshaw.

Fryer will not turn on	
Possible Causes	**What To Do**
Power cord is unplugged.	Check the outlet to verify if the fryer is plugged in. If it is unplugged, plug it in.
The on/off switch is in the OFF position.	Move the switch to the ON position.
Tripped circuit breaker.	Check that the circuit breaker is tripped. Reset the circuit breaker if tripped.

Fryer will not turn on (continued)	
Possible Causes	**What To Do**
High temperature limit is tripped or faulty.	Either reset the high temperature limit or have it replaced if resetting does not clear the problem.
Faulty on/off switch or power cord.	Check if the on/off switch or power cord are damaged. If either is defective, have it replaced by an authorized technician immediately.

WARNING

If the pilot fails to ignite, move the on/off switch to OFF and wait at least 1 minute until attempting to relight again. Failure to wait at least 1 minute for the gas to dissipate could result in a fire or explosion when the pilot is lit again.

Pilot will not stay lit or ignite	
Possible Causes	**What To Do**
Shut off valve is closed.	Check the valve ahead of the fryer. If the valve is closed, open it.
Gas valve is closed.	Rotate the gas control knob counterclockwise to the ON position.
Defective gas valve.	If gas valve control knob is in the ON position and there is no gas flowing past, gas valve may be defective and may need replacement.
Inadequate gas supply pressure.	Gas supply pressure to the fryer is below the requirement listed on the nameplate affixed to the fryer. Verify that the regulator ahead of the fryer is adjusted to the correct pressure and gas supply is on.

TROUBLESHOOTING

Pilot will not stay lit or ignite (continued)	
Possible Causes	**What To Do**
Debris buildup.	The supply of gas could be limited by debris buildup in the pilot assembly or gas valve. Clear any debris and restart.
Tripped high limit switch.	Reset the high limit switch by pressing the red button.
Not sparking.	When you open the door, turn the on/off switch ON and see if there is sparking at the pilot. If it is not sparking, hit the high limit reset button. If the button clicks, this means the fryer overheated or the high limit is faulty. Press the button until it stops clicking. If clicking persists or the issue continues, further troubleshooting should be done by an authorized technician. Check the spacing between the electrode and the pilot hood. If the spacing is more than 1/8”, the spark may not be able to jump across. Adjust the spacing to approximately 1/8” and turn the on/off switch to ON again. Check for carbon accumulation on the electrode, if present, clean with a steel brush. Verify the cable between ignition module and igniter electrode is connected and undamaged.
Loss of electrical power.	Verify the power has re-established and restart the fryer.

Main burner will not stay lit or ignite	
Possible Causes	**What To Do**
Defective gas valve.	If gas valve control knob is in the ON position and there is no gas flowing past, gas valve may be defective and may need replacement.

Main burner will not stay lit or ignite (continued)	
Possible Causes	**What To Do**
Gas valve wiring connections defective.	Check gas valve wiring for loose or damaged wires.
Temperature setpoint below actual shortening temperature.	Ensure that the digital temperature controller or thermostat dial, depending on model, have the setpoint temperature adjusted to above the actual shortening temperature.
Inadequate gas supply pressure.	Gas supply pressure to the fryer is below the requirement listed on the nameplate affixed to the fryer. Verify that the regulator ahead of the fryer is adjusted to the correct pressure and gas supply is on.
Debris buildup.	The supply of gas could be limited by debris buildup in the main manifold assembly or gas valve. Clear any debris and restart.
Loss of electrical power.	Verify the power has re-established and restart the fryer.

Combustion issues	
Possible Causes	**What To Do**
Delayed ignition due to lack of draft.	Ensure vent hood is turned on before starting the fryer and that there is sufficient make up air. For high elevation applications, contact Belshaw for draft inducer kit.
Main burner flame yellow due to high gas supply pressure.	Gas supply pressure to the fryer is above the requirement listed on the nameplate affixed to the fryer. Verify that the regulator ahead of the fryer is adjusted to the correct pressure.

TROUBLESHOOTING

Combustion issues (continued)	
Possible Causes	**What To Do**
Debris causing not all main burners to light off at the same time.	Ensure vent hood is turned on before starting the fryer and that there is sufficient make up air. Ensure there is no cross draft around the fryer. Check for debris in the pilot tube, clear the debris and restart the fryer.

Heating issues	
Possible Causes	**What To Do**
No heat.	If the fryer is ON but not heating, there could be a defective or tripped high limit or an internal wiring error. If the high limit is tripped, reset it, for wiring issues contact qualified technician.
Pilot is not lit.	Turn the on/off switch to ON position.
Temperature setpoint below actual shortening temperature.	Ensure that the digital temperature controller or thermostat dial, depending on model, have the setpoint temperature adjusted to above the actual shortening temperature.
Fryer heating up slowly.	Gas supply pressure to the fryer is below the requirement listed on the nameplate affixed to the fryer. Verify that the regulator ahead of the fryer is adjusted to the correct pressure and gas supply is on. Debris accumulation on the burner nozzles and inside of the burner tubes. Clean debris and restart operation. Debris in the fryer kettle around the tubes preventing heat transfer into the shortening. Drain fryer and clean debris.

Heating issues (continued)	
Possible Causes	**What To Do**
Temperature drops significantly when product is added.	Verify “Heating” light is ON. Gas supply pressure to the fryer is below the requirement listed on the nameplate affixed to the fryer. Verify that the regulator ahead of the fryer is adjusted to the correct pressure and gas supply is on. Digital controller or thermostat, depending on model, or thermocouple are defective. If either is defective, the heating light would be “OFF”. Ensure product temperature is above 65ºF (18ºC), before depositing.
Shortening begins to smoke.	High limit defective and shortening temperature exceeds 435ºF (224ºC). Replace high limit and retest. Shortening is full of debris and requires filtering or replacement. Daily filtration using Belshaw EZMelt filter is recommended. Temperature setpoint attained and burners continue to heat. Debris in gas valve preventing it from shutting down gas flow.

Draining issues	
Possible Causes	**What To Do**
Drain valve is not open.	Check that the drain valve is open.
Kettle drain is clogged.	Use protective gear and long tool to clear away any blockage, making sure EZMelt filter is below the drain to catch any shortening once the blockage is removed.

DONUT MAKING TIPS

Tips on Making Quality Cake Donuts

1. **Use the correct batter temperature.**

   In general, the correct batter temperature is 75-80°F (24-27°C). Check the mix manufacturer's instructions, as the recommended ranges may vary.

   If the batter is too warm, the donuts will lack volume and may "ring out" or be misshapen. If the batter is too cold, the donuts will stay under the shortening too long, fry too slowly, and crack open or ball up. They may also absorb excess shortening and lose volume.

2. **Use the correct floor time.**

   A floor time of 10 minutes between mixing and cutting allows the baking powder to react with the water. This helps the donuts attain the proper volume for the proper level of shortening penetration.

   If the floor time exceeds 30 minutes, the mix will gas off, the donuts will lose volume and shape, and will absorb too much shortening.

3. **Use the correct frying temperature.**

   The correct shortening temperature for frying is 370-380°F (188-193°C).

   If the shortening is too hot, the donuts will fry too quickly on the outside and will lose volume. The donuts may also become dense inside.

   If the shortening is too cold, the donuts will spread too rapidly, form large rings, tend to crack open, be too light in appearance, and absorb too much shortening.

4. **Maintain the proper shortening level.**

   We recommend a distance of 1¼" (3.2 cm) between the cutter and the shortening.

   If the shortening is too deep, the donuts may not turn over when they reach the turner, causing them to cook unevenly.

   If the shortening is too shallow (too far below the cutter), the donuts may not drop flat, turn over while submerging and surfacing, and become irregular, cracked, or rough-crusted.

5. **Ensure that the donuts absorb the right amount of shortening.**

   Donuts should absorb 1½ to 3 oz (42 to 85 g) of shortening per dozen, depending on their weight. You can achieve proper absorption by following tips 1-3.

   If the donuts do not absorb enough shortening, they will not keep well.

   If they absorb too much shortening, they will lose volume and may become misshapen. If this happens, mix the batter a little longer than usual, turn the donuts as soon as they become golden brown, and turn the donuts only once.

DONUT MAKING TIPS

Calculating Correct Water Temperature

The following is an example of how to calculate the correct water temperature. You must use your actual room temperature, dry mix temperature, desired batter temperature, and, if you are making yeast-raised donuts, estimated temperature increase during mixing.

	Cake Donuts		Yeast-Raised Donuts	
	°F	**°C**	**°F**	**°C**
Room temperature	72	22.2	72	22.2
Dry mix temperature	+70	+21.1	+70	+21.1
Total **A**	142	43.3	142	43.3
Desired batter temperature	75	23.9	80	26.7
	x 3	x 3	x 3	x 3
Total **B**	225	71.7	240	80.1
Total **B**	225	71.7	240	80.1
– Total **A**	- 142	- 43.3	- 142	- 43.3
Desired water temperature for cake donuts	**83°F**	**28.4°C**	98	36.8
			↓	↓
Figure from above			98	36.8
Temperature increase during mixing (average: 30°F/17°C)			- 30	-17
Desired water temperature for yeast-raised donuts			**68°F**	**19.8°C**

DONUT MAKING TIPS

Ratios of Plunger Sizes to Donut Weights

The weights given are for donuts without icing or other toppings. They are provided for reference only, as weights vary according to the density of the batter.

Plunger Size	Donut Weight per Dozen
1"	5-8 oz / 142-227 g
1 5/8"	14-17 oz / 397-482 g
1 3/4"	16-20 oz / 454-567 g
1 7/8"	19-24 oz / 539-680 g
2"	22-27 oz / 624-765 g

Temperature Conversion

To convert temperatures from Fahrenheit to Celsius, subtract 32 from °F and divide the result by 1.8. For example, 212°F - 32/1.8 = 100°C.

To convert temperatures from Celsius to Fahrenheit, multiply °C by 1.8 and add 32 to the result. For example, (100°C x 1.8) + 32 = 212°F.

°F	°C	°F	°C
55	12.8	340	171.1
60	15.6	345	173.9
65	18.3	350	176.7
70	21.2	355	179.4
75	23.9	360	182.2
80	26.7	365	185.0
325	162.8	370	187.8
330	165.6	375	190.6
335	168.3	380	193.3

ADDITIONAL INFORMATION

Digital Temperature Controller Programming Procedure

This service bulletin covers the procedure for programing the TJ-0184C-2 (Omron E5CC-RX3D5M-000) and TJ-0184D-5 (Omron E5CC-RX3A5M-000) temperature controller used on Century and Open kettle fryers.

The TJ-0184C-2 controller comes pre-programmed and protected so the operator cannot change the setup parameters. To change any setting you must first unlock the controller.

Note: Only the settings that are changed from the Factory settings are listed below.

To unlock the controller:

1. Press the ◯ + ⟲ keys for more than 3 seconds
2. Press the ⟲ key to move to the next parameter
3. Press the ∧ or ∨ to change the parameter oAPt and CCPt from 2 to 0
4. Press the ◯ + M keys for more than 1 second to return to operator screen

Parameter	Factory default setting	Present setting	Unit	Front panel	Explanation of present setting
Protection parameters					
Operation/Adjustment Protect	0	2	.	oAPt	2:Display and change of only "PV" and "PV/SP" parameters is allowed. [2]
Initial Setting/Communications Protect	1	2	.	CCPt	2:Prohibited [2]

To change operator set points: (Must be unlocked to change Alarm Value 1)

1. Press the ⟲ key to move to the next parameter
2. Press the ∧ or ∨ to change the parameter
3. Press the ◯ key to return to operator screen

ADDITIONAL INFORMATION

Set Point	0.0	375.0/190.0	°F/°C		.
Alarm Value 1	0.0	10.0/5.0	°F/°C	AL - 1	.

To change operator level parameters: (Must be unlocked)

1. Press the ⊙ key for less than 1 second
2. Press the ↵ key to move to the next parameter
3. Press the ⩓ or ⩔ to change the parameter
4. Press the ⊙ key to return to operator screen

Operator level parameters					
Process Value Input Shift	0.0	0.0	°F/°C	INS	**This is the offset setting for calibration**
Hysteresis (Heating)	1.0	0.5	°F/°C	HYS	.

To change initial level parameters: (Must be unlocked)

1. Press the ⊙ key for move than 1 second to adjust intial parameters
2. Press the ↵ key to move to the next parameter
3. Press the ⩓ or ⩔ to change the parameter
4. Press the ⊙ key for more than 1 second return to operator screen

Initial level parameters					
Input Type	5	7	.	IN-t	7:Thermocouple[J] (-100 to 850°C or -100 to 1500F) [7]
Temperature Unit	0	1/0	.	d-U	°F [F]/ °C [C]
SP Upper Limit	130.0	400.0/205.0	°F/°C	SL-H	.
SP Lower Limit	-20.0	0.0	°F/°C	SL-L	.
Alarm 1 Type	2	7	.	ALt1	7:Lower limit alarm with standby sequence [7]
Alarm 2 Type	2	0	.	ALt2	0:Alarm function OFF [0]
Alarm 3 Type	2	0	.	ALt3	0:Alarm function OFF [0]
Alarm 4 Type	2	0	.	ALt4	0:Alarm function OFF [0]

ADDITIONAL INFORMATION

To change advanced level parameters: (Must be unlocked)

1. Unlock the controller
2. Press the ◯ key for more than 1 second to adjust intial parameters
3. Press the ⊂⊃ key until you get to parameter AMAV
4. Press the ⩓ or ⩔ to change AMAV parameter to -169

Advanced level parameters					
PV/SP No. 1 Display Selection	4	1	.	SPd 1	1:"PV/SP/No display" [1]
PV Decimal Point Display	1	0	.	PV dP	OFF [oFF]
SV Status Display Function	0	3	.	SV St	Alarm 1 [ALM 1]

After programming: To lock the controller:

1. Press the ◯ + ⊂⊃ keys for more than 3 seconds
2. Press the ⊂⊃ key to move to the next parameter
3. Press the ⩓ or ⩔ to change the parameter oAPt and CCPt from 0 to 2
4. Press the ◯ + M keys for more than 1 second to return to operator screen

To set the controller back to factory default settings: (Must be unlocked, see page 1)

1. Press the ◯ key for more than 1 second to adjust intial parameters
2. Press the ⊂⊃ key until you get to parameter AMAV
3. Press the ⩓ or ⩔ to change AMAV parameter to -169
4. Change parameter CNCt from oFF to FACt
5. Press the ◯ key for more than 1 second return to intial screen
6. Press the ◯ key for more than 1 second return to operator screen

ADDITIONAL INFORMATION

Pilot Module

This section contains supplemental information about the Honeywell S8600 Intermittent Pilot Module. The Belshaw 718LCG, 724CG, and 734CG gas fryers all use this module. Fryers using natural gas use the S8600H-1014.

All of the procedures explained below should be performed by qualified technicians.

WARNING

To avoid fire or explosion, resulting in property damage, injury, or fatality, if you smell gas or suspect a gas leak, turn off the gas at the manual service valve and evacuate the building. Do not try to light any appliance or touch any electrical switch or telephone in the building until you are sure no spilled gas remains.

WARNING

To avoid fire or explosion, resulting in property damage, injury, or fatality, perform gas leak tests at the time of initial installation and at any time work is done involving the gas piping.

Checkout Procedure

Step 1: Perform Visual Inspection

1. Ensure the fryer's on/off switch is in the OFF position.
2. Ensure all wiring connections are clean and tight. If they are not, correct them.
3. Move the on/off switch to ON.
4. Open the manual shutoff valves in the gas line to the fryer.
5. If the piping has been disturbed, perform a gas leak test ahead of the gas control as follows:
   a. Paint the pipe joints with a gas leak detector or solution of soap and water. Bubbles in solution indicate gas leaks.
   b. If there are leaks, tighten the joints.
   c. Test again for leaks.
   d. Repeat procedure until no leaks remain.

Step 2: Review the Normal Operating Sequence

Trial for Ignition

When the fryer's thermostat calls for heat, the module energizes the first main valve operator. The first main valve opens, allowing gas to flow to the pilot burner. At the same time, the electronic spark generator in the module produces a spark pulse output of over 10,000 volts. The voltage generates a spark at the ignitor-sensor that lights the pilot.

If the pilot does not light, or the pilot flame current is not at least 1.0 µA and steady, the module will not energize the second main valve, and main burner will not light. The S8600F, used on natural gas fryers, will continue to spark as long as the fryer's thermostat calls for heat or until the pilot lights.

The S8600H, which is used on propane fryers, provides 100 percent shutoff and safety lockout. Its ignition sparks only for a pre-set length of time (15 or 90 seconds, as stamped on the module). If the pilot does not light

within the timed trial for ignition period, the module goes into safety lockout, de-energizing the first main valve operator, closing the first main pilot valve in the gas control, and stopping the flow of gas to the pilot. You must then set the fryer's thermostat below 200°F (93°C), move the on/off switch to OFF, and wait at least one minute before trying again to light the pilot.

Main Burner Operation

When the pilot flame is established, a flame rectification circuit is completed between the sensor and the burner ground. The flame sensing circuit in the module detects the flame current, shuts off the spark generator, and energizes the second main valve operator. The second main valve opens and gas flows to the main burner, where it is ignited by the pilot burner. On the S8600H, the safety lockout timer is held in the normal operating mode.

When the thermostat no longer calls for heat, both valve operators are de-energized, and both valves in the gas control close.

Step 3: Reset the Module

1. Turn the thermostat to its lowest setting.
2. Wait at least one minute.

Step 4: Perform Visual Inspection

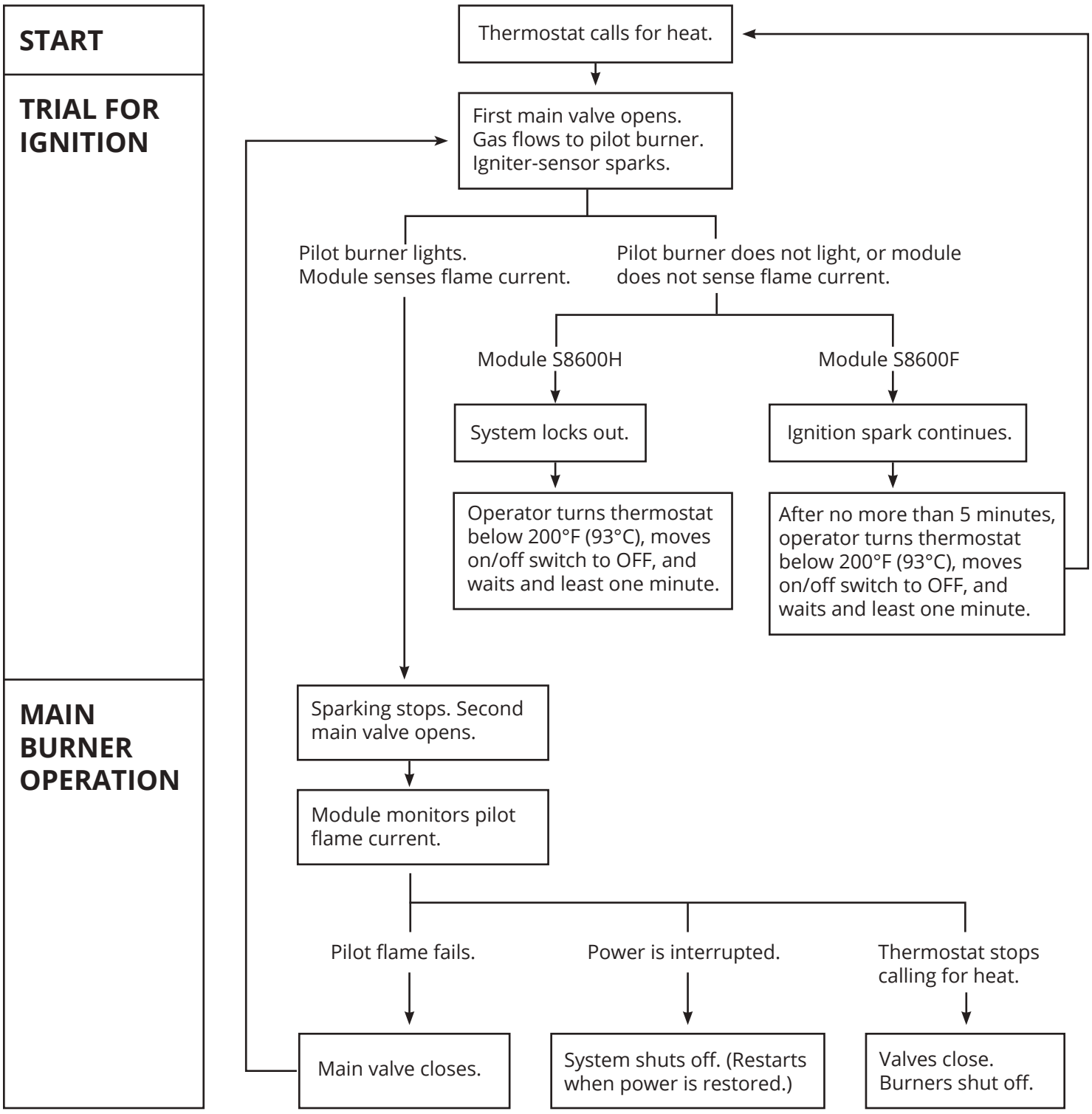
This step applies only to the S8600H, which is used on propane fryers.

1. Turn the gas supply off.
2. Move the on/off switch to ON.
3. Time the spark from the time it starts to the time it shuts off.
4. Compare this time with the shutoff time that is stamped on the module. They should be the same.
5. Open the manual gas cock and ensure that no gas is flowing to pilot or main burner.
6. Move the on/off switch to OFF and wait at least one minute before continuing.

Step 5: Check Normal Operation

1. Move the on/off switch to ON.
2. Set the temperature controller to 200°F (93°C) or higher.
3. Watch to see whether the pilot lights smoothly when gas reaches pilot burner.
4. Watch to see whether the main burner lights smoothly without flashback.
5. Watch to see whether the main burner operates smoothly without floating, lifting, flame rollout, or heat buildup.
6. If the gas line has been disturbed, perform a gas leak test as follows:
   a. Paint the gas control gasket edges and all pipe connections downstream of the gas control, including pilot tubing connections, with a gas leak detector or solution of soap and water. Bubbles in solution indicate gas leaks.
   b. If there are leaks, tighten the joints or screws, or replace the component.
   c. Test again for leaks.
   d. Repeat procedure until no leaks remain.
7. Move the on/off switch to OFF.
8. Watch to see whether the main burner flame and pilot flame go out.

ADDITIONAL INFORMATION



ADDITIONAL INFORMATION

Troubleshooting - General

The following service procedures are provided as a general guide.

For electrical troubleshooting, refer to the diagrams included with this manual or to the diagram on the inside of the fryer door. Heed all warnings and cautions.

- On lockout and retry models, meter readings between gas control and ignition module must be taken within the trial for ignition period. Once the ignition module shuts off, lockout models must be reset by setting the thermostat below 200°F (93°C) for at least one minute before continuing. On retry models, wait for retry or reset at the thermostat.
- If any component does not function properly, make sure it is correctly installed and wired before replacing it.
- The ignition module cannot be repaired. If it malfunctions, it must be replaced.
- Only trained service technicians should service intermittent pilot systems.

As the first step in troubleshooting, perform the checkout procedure. Then check the block diagram. If you think there is an ignition problem, see "Troubleshooting the Ignition System" to isolate and correct the problem.

Following troubleshooting, perform the checkout procedure again to be sure system is operating normally.

Troubleshooting the Ignition System

Step 1: Check Ignition Cable

1. Ensure the ignition cable does not run in contact with any metal surfaces.
2. Ensure the ignition cable is no more than 36" (0.9 m) long.
3. Ensure the connections to the ignition module and to the igniter-sensor are clean and tight.
4. Ensure the ignition cable provides good electrical continuity.

Step 2: Check Ignition System Grounding

Nuisance shutdowns are often caused by a poor or erratic ground.

A common ground, usually supplied by the pilot burner bracket, is required for the module and the pilot burner/igniter-sensor.

1. Check for good metal-to-metal contact between the pilot burner bracket and the main burner.
2. Check the ground lead from the GND (BURNER) terminal on the module to the pilot burner. Ensure the connections are clean and tight. If the wire is damaged or deteriorated, replace it with #14-18 gauge (2.5 mm^2 – 0.75 mm^2), moisture-resistant, thermoplastic-insulated wire with a 221°F (105°C) minimum rating
3. Check the ceramic flame rod insulator for cracks or evidence of exposure to extreme heat, which can permit leakage to the ground. Replace the pilot burner/igniter-sensor and provide a shield if necessary.

If the flame rod or the bracket are bent out of position, restore them to the correct position.

ADDITIONAL INFORMATION

Step 3: Check Spark Ignition Circuit

You will need a short jumper wire made from ignition cable or other heavily insulated wire.

1. Close the manual gas valve.
2. Disconnect the ignition cable at the SPARK terminal on the module.

WARNING

To avoid electric shock, when performing the following steps, do not touch the stripped end of the jumper or the SPARK terminal. The ignition circuit generates over 10,000 volts.

3. Energize the module and immediately touch one end of the jumper firmly to the GND terminal on the module. Move the free end of the jumper slowly toward the SPARK terminal until a spark is established.
4. Pull the jumper slowly away from the terminal and note the length of the gap when sparking stops.
5. Check the table below.

Arc Length	What To Do
No arc, or arc less than 1/8" (3 mm).	Check external fuse, if provided. Verify power at module input terminal. Replace module if fuse and power are OK.
Arc 1/8" (3 mm) or longer.	Nothing. Voltage output is OK.

Step 4: Check Pilot and Main Burner Light

1. Turn the on/off switch to ON.
2. Watch the pilot burner during the ignition sequence. Look for the following:
   - The ignition spark continues after the pilot is lit.
   - The pilot lights and the spark stops, but the main burner does not light.
   - The pilot lights, the spark stops and the main burner lights, but the system shuts down (S8600H only).
3. If any of the above happen, ensure flame current is adequate. Follow these steps:
   a. Turn off the fryer and disconnect it from the power source.
   b. Clean the flame rod with emery cloth.
   c. Ensure the electrical connections are clean and tight. Replace damaged wire with moisture-resistant #18 wire rated for continuous duty up to 221°F (105°C).
   d. Check to see if ceramic insulator is cracked. A cracked insulator can cause a short to ground. Replace the igniter-sensor if necessary.
   e. At the gas control, disconnect the main valve wire from the TH or MV terminal.
   f. Connect the fryer to the power source and move the on/off switch to ON.
   g. Turn on the power and set the thermostat above 200°F (93°C) to call for heat. The pilot should light, but the main burner will remain off because the main valve actuator is disconnected.

h. Check the pilot flame. Ensure it is blue, steady, and envelopes 3/8-1/2" (10-13 mm) of the flame rod. See the table on the right for possible flame problems and their causes.

i. If necessary, adjust the pilot flame by turning the pilot adjustment screw on the gas control clockwise to decrease or counterclockwise to increase the pilot flame. Following adjustment, always replace the pilot adjustment cover screw and tighten it firmly to assure proper gas control operation.

j. Move the on/off switch to ON.

4. Recheck the ignition sequence as follows:

   a. Reconnect the main valve wire.

   b. Set the thermostat above 200°F (93°C) to call for heat.

   c. Watch ignition sequence at the burner.

      If the spark still does not stop after the pilot lights, replace the ignition module.

      If the main burner does not light, check for 24V AC across MV-MV/PV terminals. If there is no voltage, replace the module. Also, check the electrical connections between the module and the gas control. If they are OK, replace the gas control or the gas control operator.

Appearance	Cause
Small blue flame	Lack of gas due to clogged orifice filter Lack of gas due to clogged pilot filter Low gas supply pressure Pilot adjustment is at minimum
Lazy yellow flame	Lack of air due to large orifice Pilot adjustment is at minimum
Waving blue flame	Excessive draft at pilot location Products of combustion are recirculating
Noisy lifting blowing flame	High gas pressure
Hard sharp flame	High gas pressure Orifice too small

PARTS AND ELECTRICAL DIAGRAMS

Fryer models are identified by an item number. You need your fryer's item number to find the correct parts diagrams for your fryer. The item number is located on a data tag attached to the back of the electrical panel, or inside the right side door.

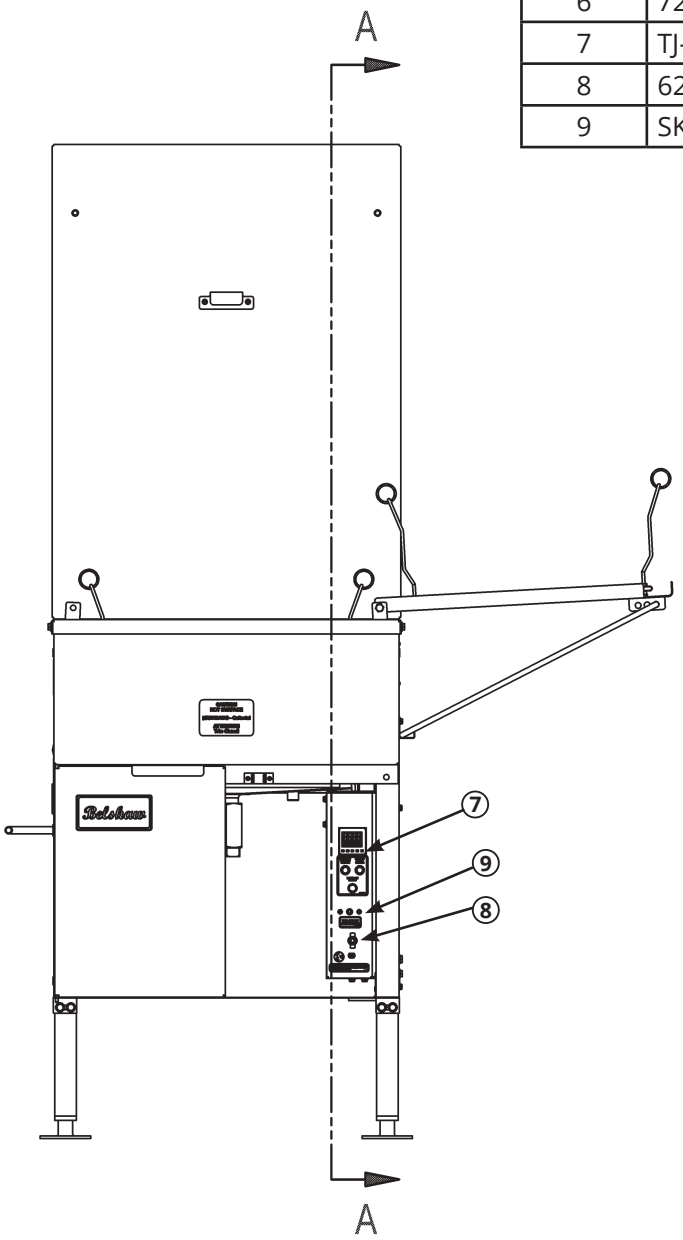
PARTS AND ELECTRICAL DIAGRAMS

Fryer Assembly

Model: 718/724/734 CG

Diagram: OPKG18-2000-CG

Item #	Part Number	Description
1	724G-0144	Thermocouple Type J
2	C600G-0647-2	Igniter wire assembly
3	724G-0273	Gas valve (NG)
4	724G-1013-SVC	Gas valve (LP)
5	724G-0269	Igniter controller (NG/LP)
6	724G-0037A	Transformer 120/280/240 x 24VAC, 60Hz
7	TJ-0184C-2	Temperature controller
8	624-0003A	On/off toggle switch
9	SK-1564	High limit switch with guard



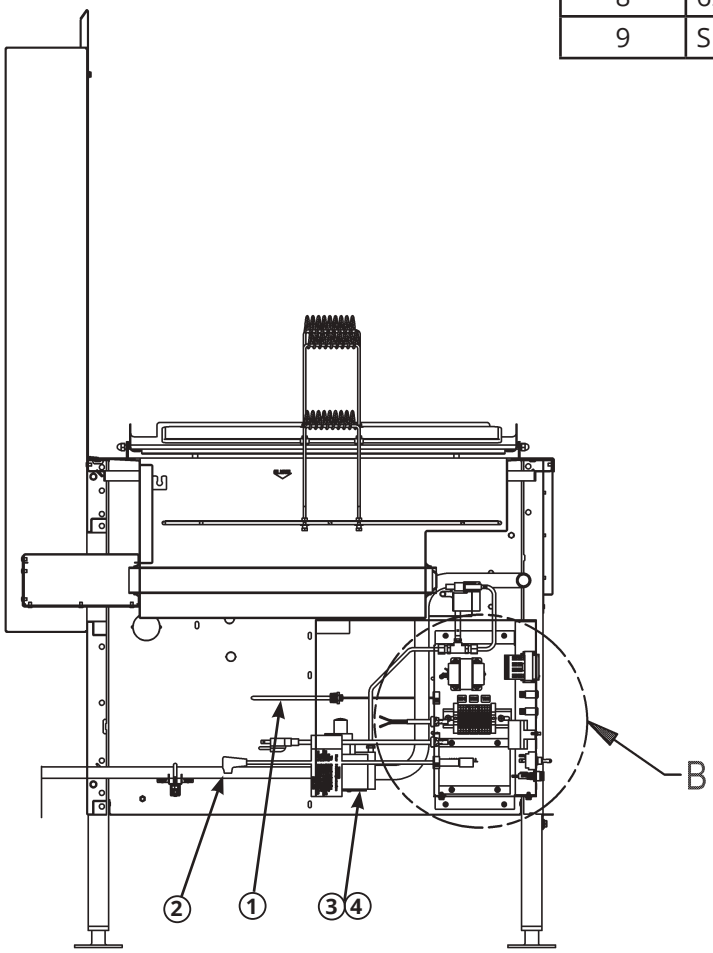
PARTS AND ELECTRICAL DIAGRAMS

Fryer Assembly

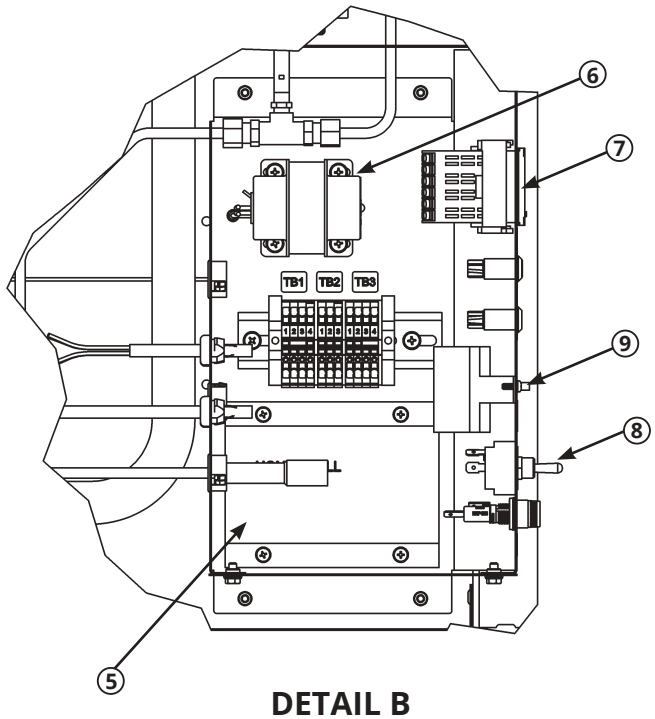
Model: 718/724/734 CG

Diagram: OPKG18-2000-CG

Item #	Part Number	Description
1	724G-0144	Thermocouple Type J
2	C600G-0647-2	Igniter wire assembly
3	724G-0273	Gas valve (NG)
4	724G-1013-SVC	Gas valve (LP)
5	724G-0269	Igniter controller (NG/LP)
6	724G-0037A	Transformer 120/280/240 x 24VAC, 60Hz
7	TJ-0184C-2	Temperature controller
8	624-0003A	On/off toggle switch
9	SK-1564	High limit switch with guard



SECTION A-A



DETAIL B

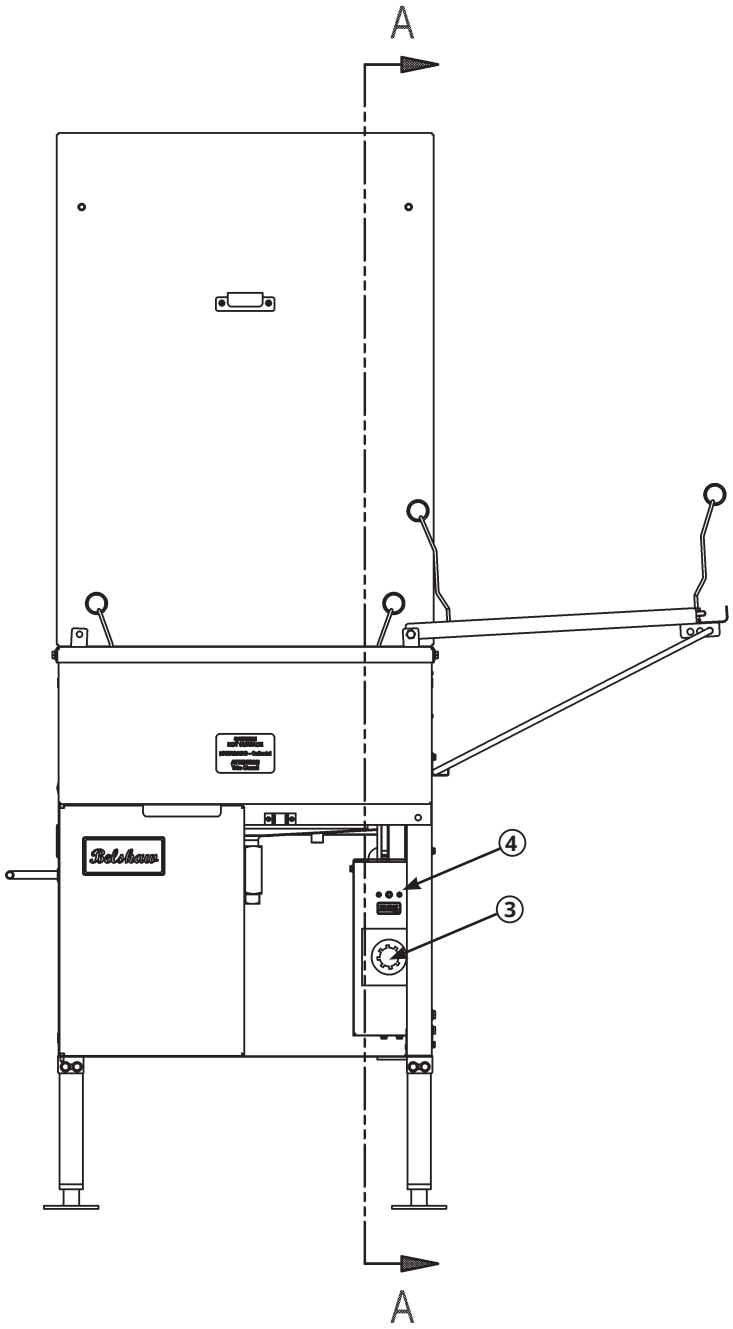
PARTS AND ELECTRICAL DIAGRAMS

Fryer Assembly

Model: 718/724/734 FG

Diagram: OPKG18-2000-FG

Item #	Part Number	Description
1	724G-0279	Gas valve (NG)
2	724G-1013-SVC	Gas valve (LP)
3	724G-0081	Thermostat
4	SK-1564	High limit with guard



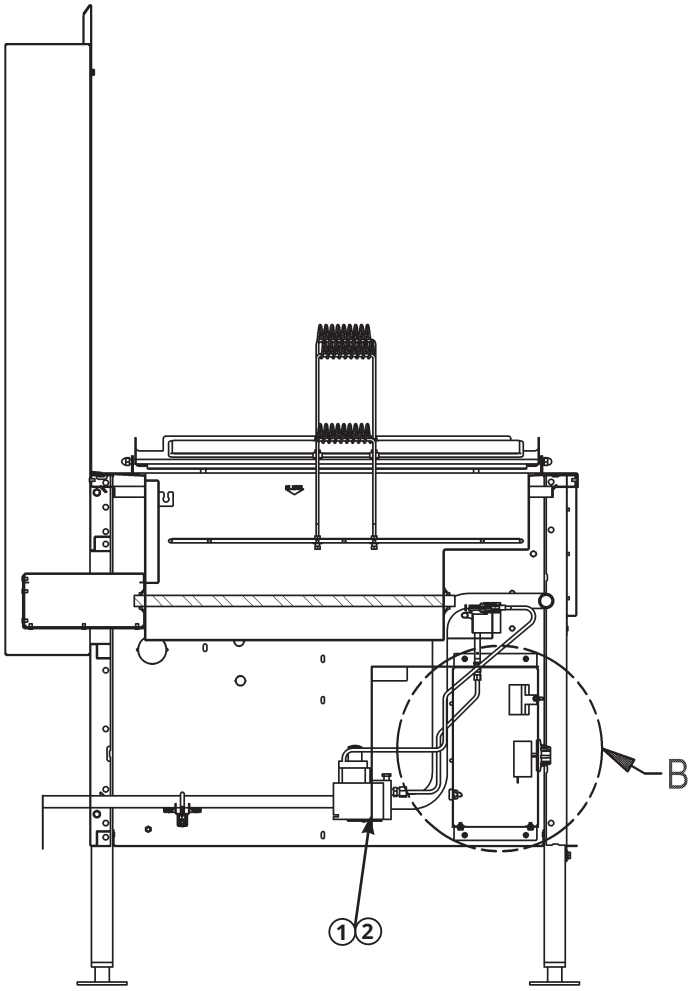
PARTS AND ELECTRICAL DIAGRAMS

Fryer Assembly

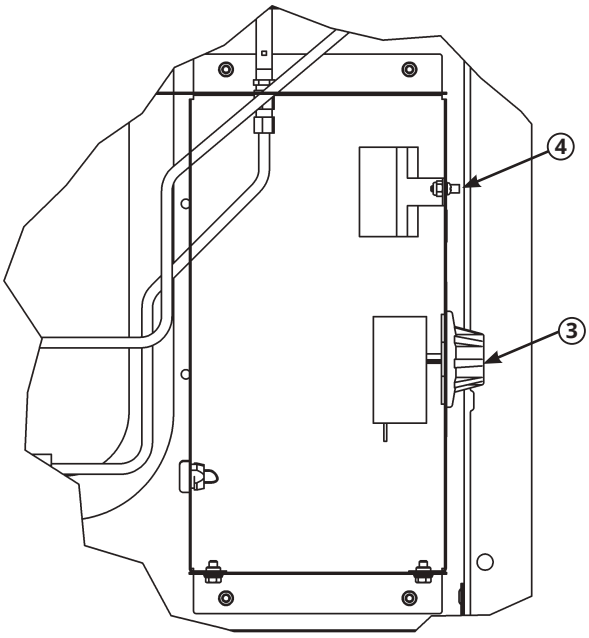
Model: 718/724/734 FG

Diagram: OPKG18-2000-FG

Item #	Part Number	Description
1	724G-0279	Gas valve (NG)
2	724G-1013-SVC	Gas valve (LP)
3	724G-0081	Thermostat
4	SK-1564	High limit with guard



SECTION A-A



DETAIL B

USE ONLY FOR 120V GAS FRYERS

MODEL: 718LCG
MODEL: 724CG
MODEL: 734CG

TO IDENTIFY MODEL AND ITEM NUMBER, SEE DATA TAG INSIDE FRYER.

PAGE 1 OF 4

724G–1718 ELEC, 724G, COMMON PARTS 120V			
ITEM	DESCRIPTION	QTY	BELSHAW PART NO.
100	HOLE SEAL,1/2" NEMA 3R	1	#ENC–0035–1
101	LABEL FUSE RATING 5 AMP	1	#FUS–0031–5
102	CLEAR PILOT LIGHT 24V AC/DC	1	#PLT–0020
103	POWER CORD, 18GA SJO 18 FT	1	232
104	TOGGLE SWITCH DPST 20A SLIP ON	1	624–0003A
105	XFMR; 38VA 24V AC OUT	1	724G–0037A
106	THERMOCOUPLE, TYPE J	REF	724G–0144
111	6–32X3/8 SS HX HEAD SCREW	6	903–0325.CSS
112	6–32X3/8 SS PHILIPS HEAD	2	903–0325.F
113	6–32X5/8 SS HEX MACHINE SCREW	2	903–0334SS
114	8–32X3/8 SS PHILIPS PAN HEAD	2	903–0410.A
115	6–32 SS NYLON INSERT LOCKNUT	2	903–5076
116	#6 SS INTERNAL TH LOCKWASHER	2	903–7502
117	LABEL,ETL LISTED,NSF STD 4	1	904–0035
118	LABEL; ETL––GAS FOOD SVC EQ	1	904–0037
119	STRAIN RELIEF BSHG .625"	5	905–0613
120	UNIVERSAL BUSHING, OPEN	3	905–0626 R00
121	3/8CONEC'T 90DEG LIQ–TITE FLX	1	990–0013
122	TB, 5MM, 20A, PUSH IN, GRAY	14	990–0413
123	TB, 5MM, GND, PUSH IN	3	990–0418
124	DIN RAIL 35MMX7.5MMX2M	0.5	990–0260M
125	TB, IEC, END ANCHOR	4	990–0315
126	TB, 5MM, JUMPER, 2 POLE	1	990–0417
127	TB, 5MM, 5X8, MARKER ROLL	3	990–0414
128	TB, 5MM, END BARRIER	1	990–0415
129	20/2 SHIELDED THEMOCPL WIRE J	3	990–1006
130	3/8 FLEX CONDUIT LA GRAY	3	991–0001
131			
132	18–4 PVC CABLE,90C, 0.287" OD	3	995–0110
133	IGNITOR WIRE ASSEMBLY 2 FT 40V	1	C600G–0647–2
134	SWITCH PLATE 25/pack	1	DR42–0050A
135	FUSEHOLDER 15 AMP/250V	1	DR42–0066
136	SWT, HILIM, 125VA, 2HP@250VAC	1	FM200–0065M
137	LABEL,TEMP CUTOUT	1	FM200–0066
138	BUSS FUSE–TYPE MDA 5AMP	1	FM200–0080A
139	LABEL,WARNING HAZ VOLTAGE	REF	MDD–0459
140	LABEL WARNING,ELEC GROUNDING	1	MKIIG–0005
141	IGNITER/SENSOR, LP	REF	724G–0179
142	WIRING HARNES OPEN KETTLE GAS 120V	1	724G–1020–1
143	GUARD, ENCLOSURE, OPEN KETTLE	REF	724G–7017
144	WLDT, ELEC ENC, OPEN KETTLE	1	724G–8008
145	DRAFT INDUCER KIT 110/60/1	REF	#DRFT–0003
146	PILOT LIGHT YELLOW 24V	REF	724G–0146
147	PILOT LIGHT RED 24V	REF	724G–0205
148	TEMP CRTL,1/16, 24V, OPK	REF	TJ–0184C–2
149	THERMOCLE PLUG(M) SEE EXT DESC	1	C600G–0226
150	THERMOCLE PLUG(F) SEE EXT DESC	1	C200G–0101
151	HEATING HI LIMIT LABEL OKF	REF	724G–0204–1

724G–1718–1 ELEC, 724G, NATURAL GAS, 120V			
ITEM	DESCRIPTION	QTY	BELSHAW PART NO.
200	724G 120V ELEC COMMON PARTS	1	724G–1718
201	IGNITER/SENSOR,NG, OPEN KETTLE	REF	724G–0152
202	IGNITER–CONTROLLER N.G.	1	724G–0269N
203	GAS VALVE–NG HONEYWELL	REF	724G–0273

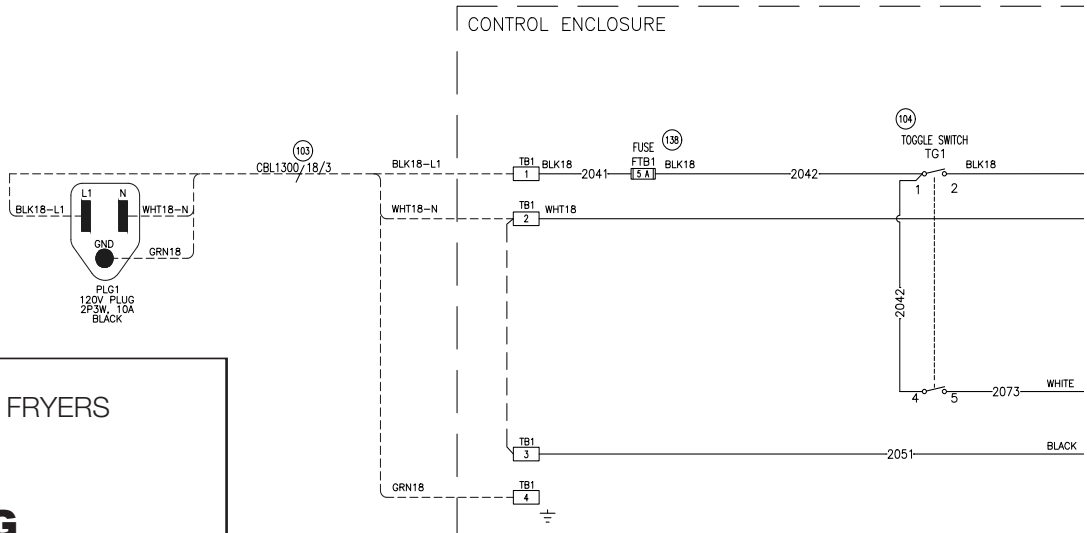
724G–1718–1 ELEC, 724G, NATURAL GAS, 120V			
ITEM	DESCRIPTION	QTY	BELSHAW PART NO.
300	724G 120V ELEC COMMON PARTS	1	724G–1718
301	IGNITER/SENSOR,LP, OPEN KETTLE	REF	724G–0179
302	IGNITER–CONTROLLER L.P.	1	724G–0269P
303	GAS VALVE, LP	REF	724G–0379

724G–1020–1: WIRE HARNESS & CABLE SET									
WIRE/CABLE NUMBER	WIRE COLORS/CONDUCTOR #	WIRE PART #	WIRE INCHES	COMPONENT1	PIN1	COMPONENT2	PIN2	END1 PART #	END2 PART #
2042	BLK18	995–0450	9	TG1	2	TB2	1	990–0560TR	908–0800.R
2042	BLK18	995–0450	5	FTB1	–	TG1	1	990–0560TR	990–0560TR
2043	BLK18	995–0450	9	TB1	1	FTB1	–	990–0560TR	908–0800.R
2043	BLK18	995–0450	3	TG1	1	TG1	4	990–0560TR	990–0560TR
2051	WHT18	995–0455	7	TB1	2	TB2	2	908–0800.R	800–0800.R
2051	BLK18	–	–	TB1	3	XFM1	COM	908–0800.R	–
2061	PPL18	995–0453	6	XFM1	24V	TAS1	1	990–0552	990–0504
2073	WHT18	–	–	TG1	5	XFM1	120V	990–0560TR	–
2075	PPL18	995–0453	7	TAS1	2	TB3	1	990–0504	908–0800.R
2075	PPL18	995–0453	12	TB3	2	LT2	X2	908–0800.R	990–0560TR
2082	WHT18	995–0455	11	LT2	X1	TB3	6	990–0560TR	908–0800.R
2082	WHT18	995–0455	8	XFM1	0	TB3	6	990–0504	908–0800.R
2231	PPL18	995–0453	6	TB3	4	DIV1	24V	990–0560TR	908–0800.R
2232	WHT–18	995–0455	6	TB3	7	DIV1	COM	990–0560TR	908–0800.R
GND	GRN18	995–0459	5	TB1	5	DIV1	GND	990–0560TR	908–0800.R
2081	PPL18	995–0453	36	TB3	1	TC1	11	908–0800.R	908–0800.R
2082	WHT18	995–0459	36	TB3	4	TC1	12	908–0800.R	908–0800.R
CBL1000	BLK	232	SPEC	TB1	1	PLG1	L1	908–0800.R	–
	WHT			TB1	2	PLG1	N	908–0800.R	–
	GRN			TB1	4	PLG1	GND	908–0800.R	–
CBL1001	BLK1	995–0043	48	TB2	1	M1	L1	908–0800.R	–
	BLK2			TB2	2	M1	N	908–0800.R	–
	GRN			TB2	3	M1	GND	908–0800.R	–
CBL1002	BLK2	995–0043	36	LT1	X2	TAS1	1	990–0560TR	990–0504
	GRN			TB3	7	LT3	X1	908–0800.R	990–0560TR
	BLK1			TB3	3	LT3	X2	908–0800.R	990–0560TR
CBL1003	WHT	990–1006	36	TB3	8	TC1	6	–	–
	RED			TB3	9	TC1	5	–	–
CBL1004	WHT	724G–0144	36	TB3	8	THC1	–	–	–
	RED			ENCL	9	THC1	–	–	–
CBL1005	GRN	995–0110	36	DIV3	GND	TB1	5	990–0560TR	908–0800.R
	BLK1			DIV1	MV	DIV3	MV	990–0560TR	990–0560TR
	BLK2			DIV1	MV/PV	DIV3	MV/PV	990–0560TR	990–0560TR
	BLK3			DIV1	PV	DIV3	PV	990–0560TR	990–0560TR
CBL1006	BLK22	C600G–0647–2	24	DIV1	SPARK	INGNITER	–	SPEC	SPEC

REVISION HISTORY: R4			
REVISION DESCRIPTION: STANDARDIZE PILOT LIGHT ON DOOR, LABEL, WIRING		REV BY: DL	DATE: 06/14/20
SHEET	ITEM	DESCRIPTION	ECR: N/A
1	1	REMOVE CABLE FOR PILOT LIGHTS	
2	1	REVISE WIRING FOR OMRON TEMP CONTROLLER, REMOVE TB3 5–10	
3	1	REVISE WIRING FOR OMRON TEMP CONTROLLER, REMOVE TB3 5–10	
4	1	REMOVE TB3 5–10	
4	2	ADD LABEL 724G–0204–1 DETAILS	
4	1		

DATA TAG	
VOLTAGE	120
HURTZ	60
PHASE	1
KW	0.04
FLA	0.34
LARGEST HP	N/A
AIC	N/A

PAGE 1 OF 4



USE ONLY FOR 120V GAS FRYERS

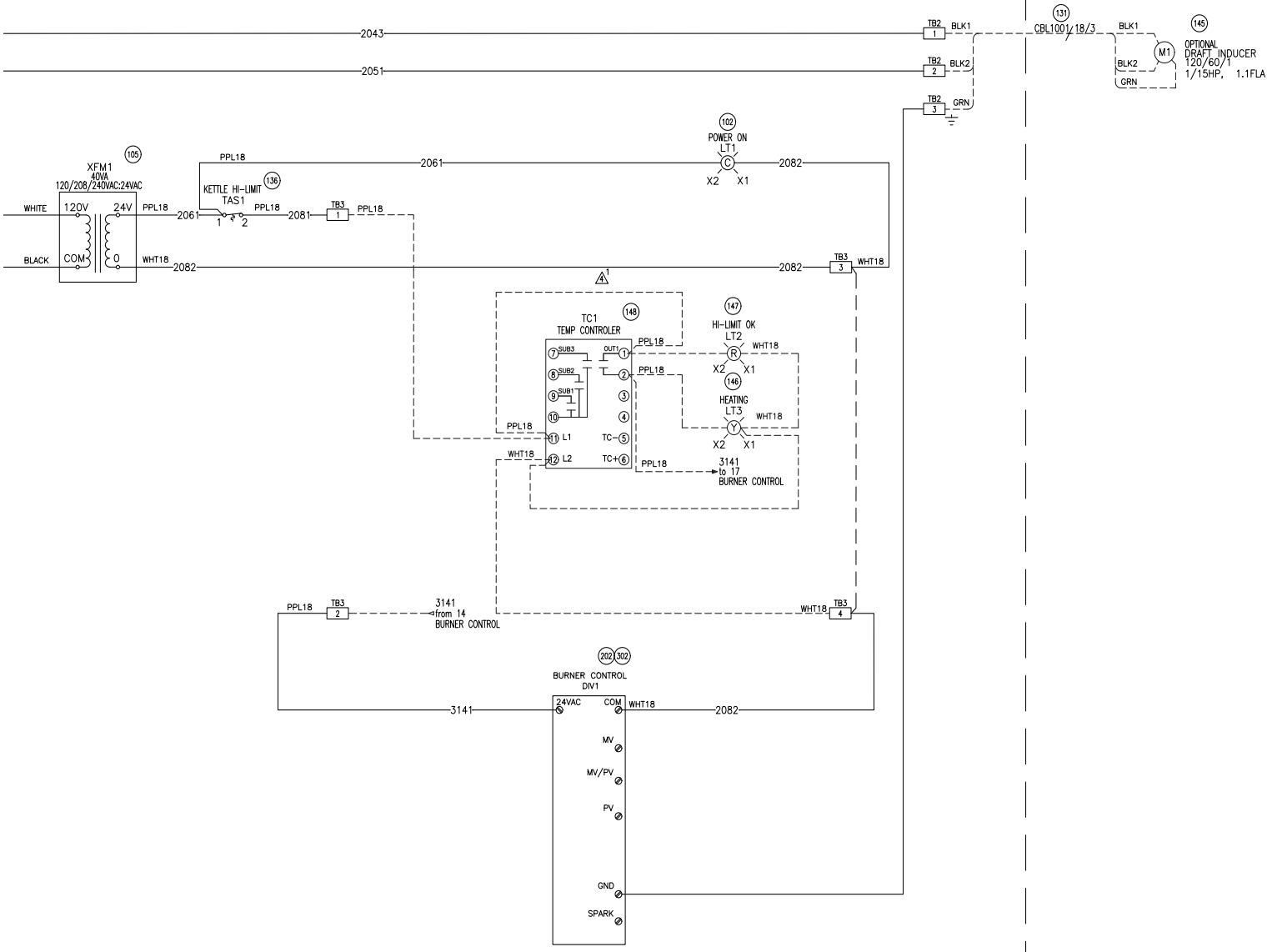
MODEL: 718LCG
MODEL: 724CG
MODEL: 734CG

TO IDENTIFY MODEL AND ITEM NUMBER, SEE DATA TAG INSIDE FRYER.

DOMESTIC/EXPORT WIRE COLOR STANDARD

AC POWER AT SUPPLY VOLTAGE	BLACK
AC CONTROL (UNGROUNDED) CIRCUIT AT LESS THAN SUPPLY VOLTAGE	RED
GROUNDED AC CONTROL CIRCUIT REGARDLESS OF VOLTAGE	WHITE
DC CONTROL (UNGROUNDED) CIRCUIT	BLUE
GROUNDED DC CONTROL CIRCUIT	WHITE/BLUE*
AC LOW VOLTAGE (<30VAC) CONTROL CIRCUIT	PURPLE (VIOLET)
POWER FROM SEPERATE SOURCE	YELLOW**
GROUND	GREEN/YELLOW

PAGE 2 OF 4

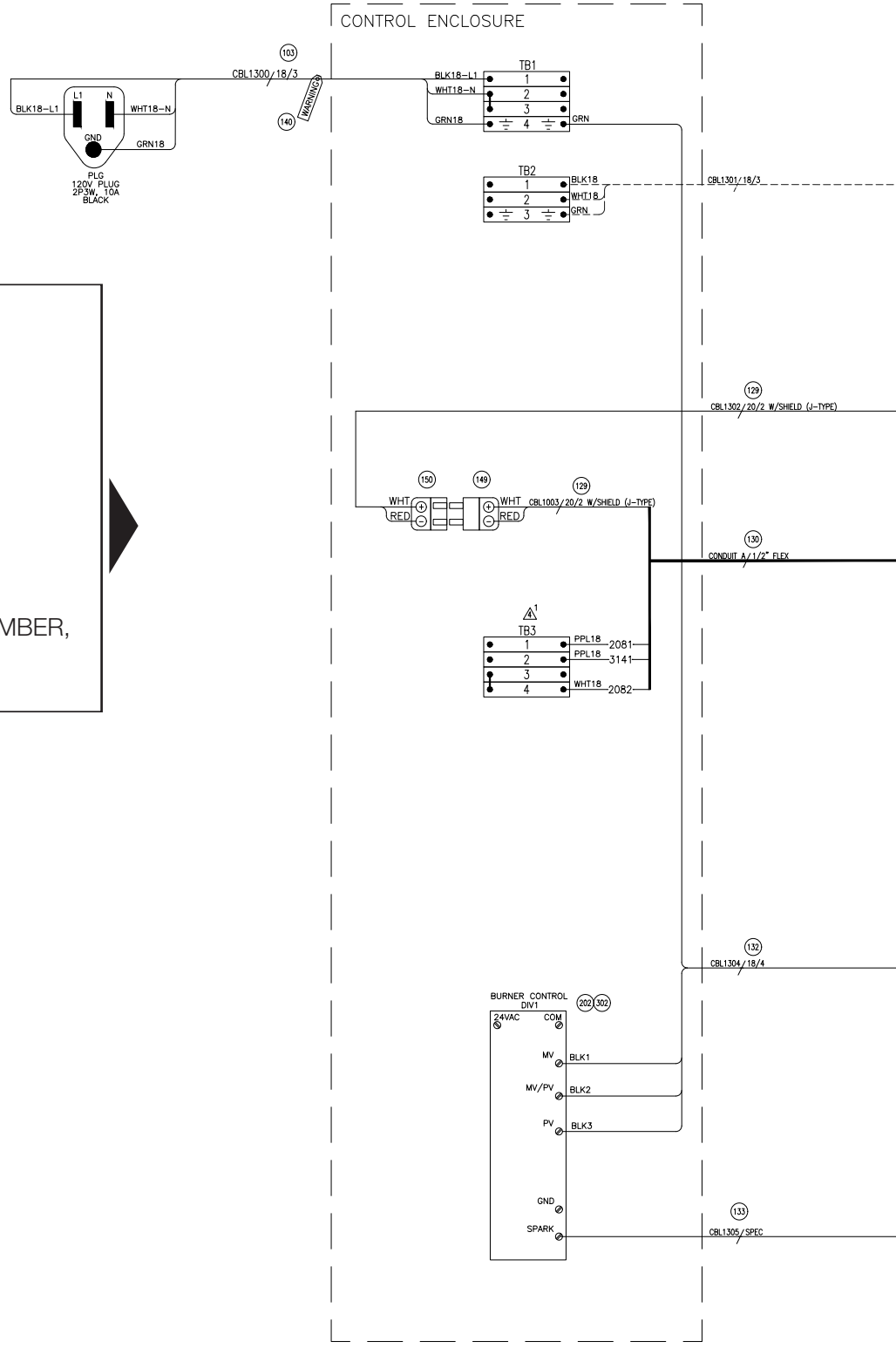

2043
2051
TB2 1 BLK1
TB2 2 BLK2
TB2 3 GRN
131
CBL1001/18/3
BLK1
BLK2
GRN
145
M1
OPTIONAL
DRAFT INDUCER
120/60/1
1/15HP, 1.1FLA
102
POWER ON
LT1
X2 X1
105
XFM1
40VA
120/208/240VAC:24VAC
WHITE
BLACK
120V
24V
COM
PPL18
WHT18
2061
2081
2082
136
KETTLE HI-LIMIT
TAS1
TB3 1
TB3 3
TB3 2
TB3 4
148
TC1
TEMP CONTROLER
SUB3
SUB2
SUB1
OUT1
L1
L2
TC-
TC+
147
HI-LIMIT OK
LT2
146
HEATING
LT3
3141
to 17
BURNER CONTROL
3141
from 14
BURNER CONTROL
202 302
BURNER CONTROL
DIV1
24VAC
COM
MV
MV/PV
PV
GND
SPARK

PAGE 2 OF 4

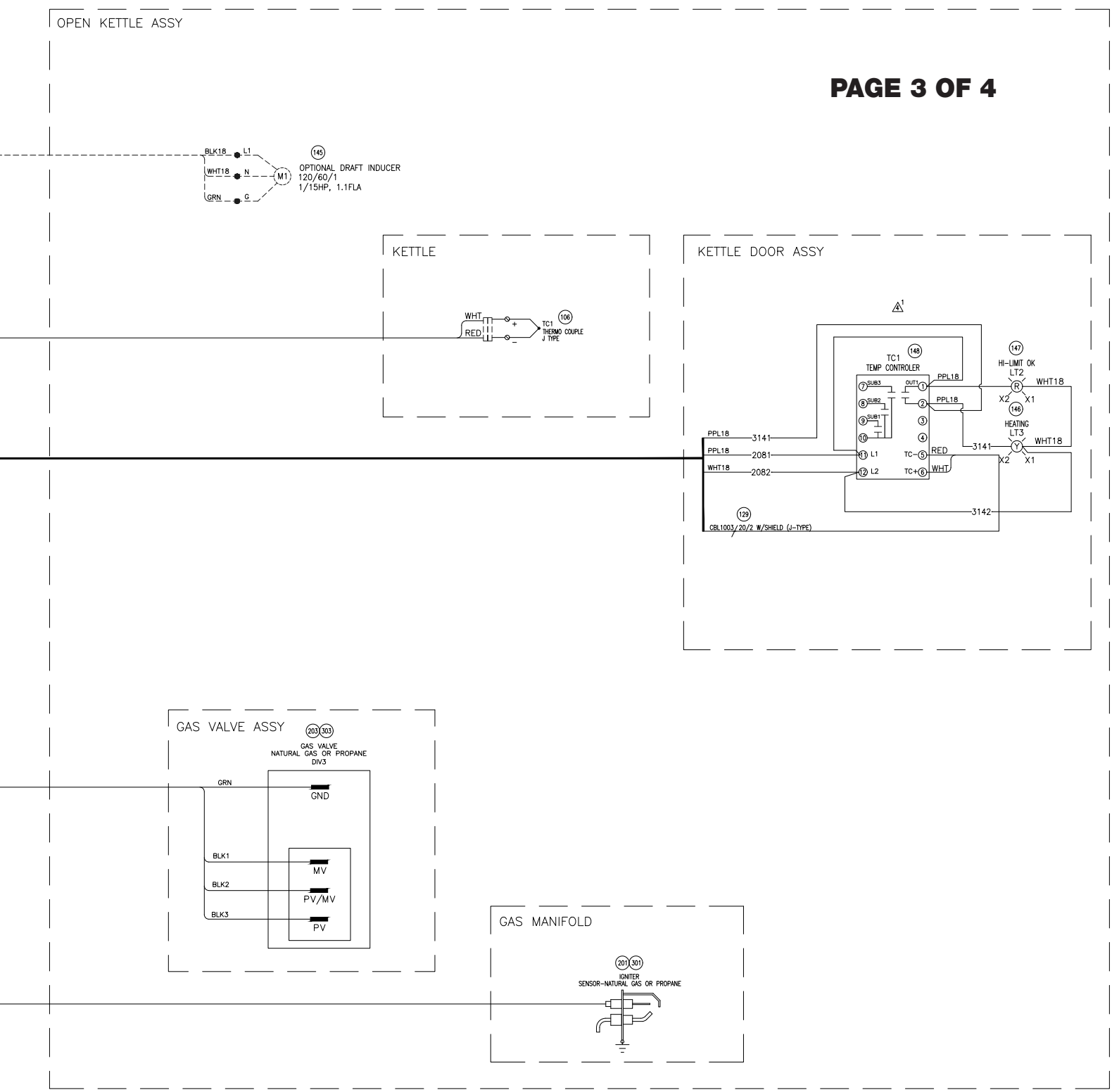
USE ONLY FOR 120V GAS FRYERS

MODEL: 718LCG
MODEL: 724CG
MODEL: 734CG

TO IDENTIFY MODEL AND ITEM NUMBER, SEE DATA TAG INSIDE FRYER.



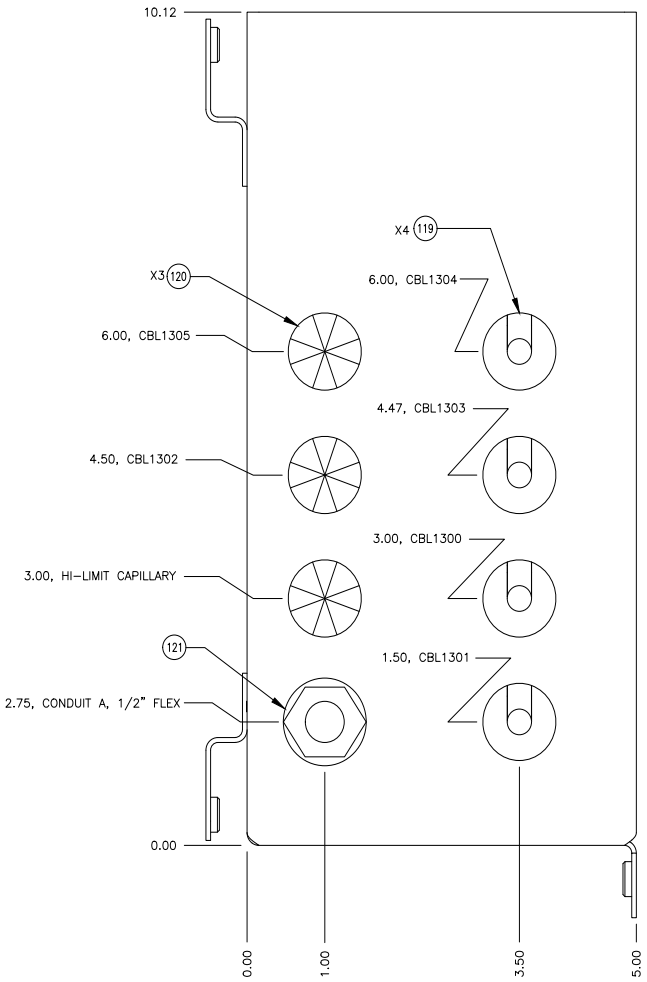
PAGE 3 OF 4


OPEN KETTLE ASSY
BLK18
L1
WHT18
N
M1
GRN
G
145
OPTIONAL DRAFT INDUCER
120/60/1
1/15HP, 1.1FLA
KETTLE
WHT
RED
106
TC1
THERMO COUPLE
J TYPE
KETTLE DOOR ASSY
A1
148
TC1
TEMP CONTROLER
SUB3
SUB2
SUB1
OUT1
PPL18
147
HI-LIMIT OK
LT2
WHT18
X2
X1
146
HEATING
LT3
PPL18
3141
PPL18
2081
WHT18
2082
L1
L2
TC-
TC+
RED
WHT
129
CBL1003/20/2 W/SHIELD (J-TYPE)
GAS VALVE ASSY
203
303
GAS VALVE
NATURAL GAS OR PROPANE
DIV3
GRN
GND
BLK1
MV
BLK2
PV/MV
BLK3
PV
GAS MANIFOLD
201
301
IGNITER
SENSOR-NATURAL GAS OR PROPANE

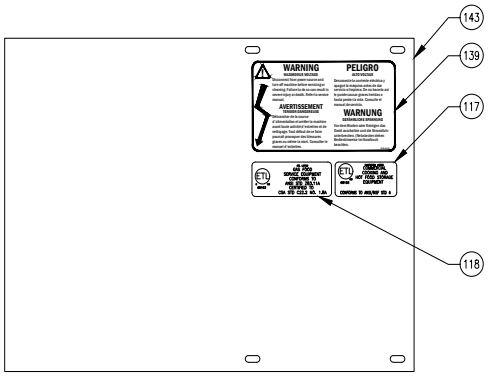
USE ONLY FOR 120V GAS FRYERS

MODEL: 718LCG
MODEL: 724CG
MODEL: 734CG

TO IDENTIFY MODEL AND ITEM NUMBER, SEE DATA TAG INSIDE FRYER.

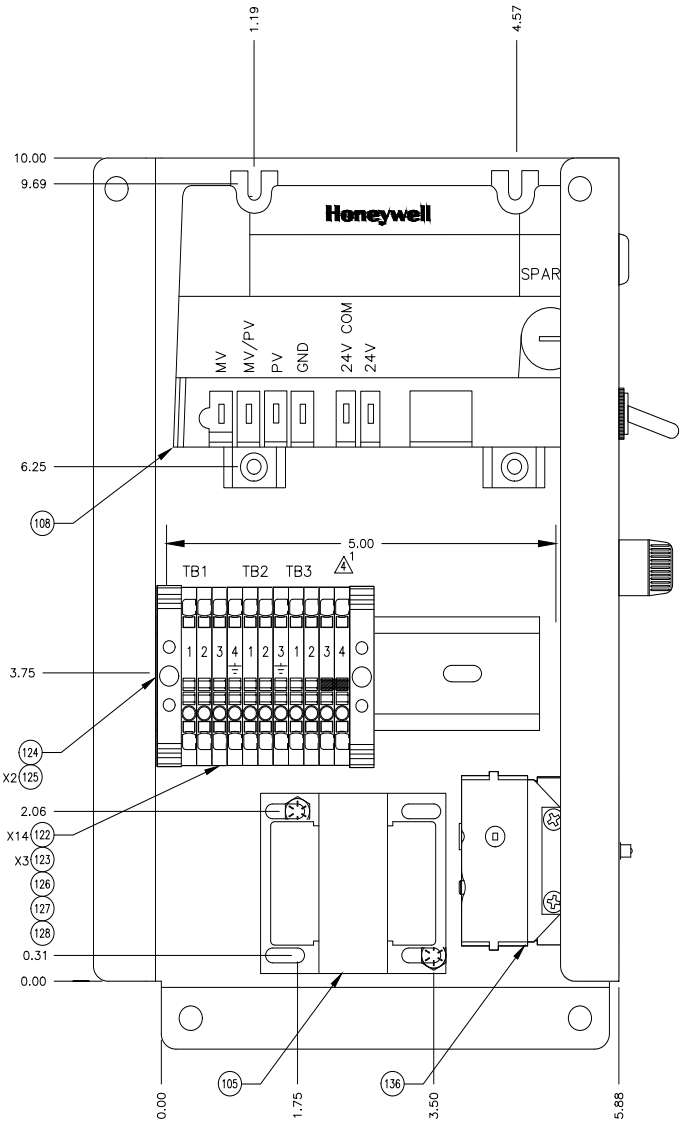


ENCLOSURE LAYOUT
(LEFT SIDE VIEW)

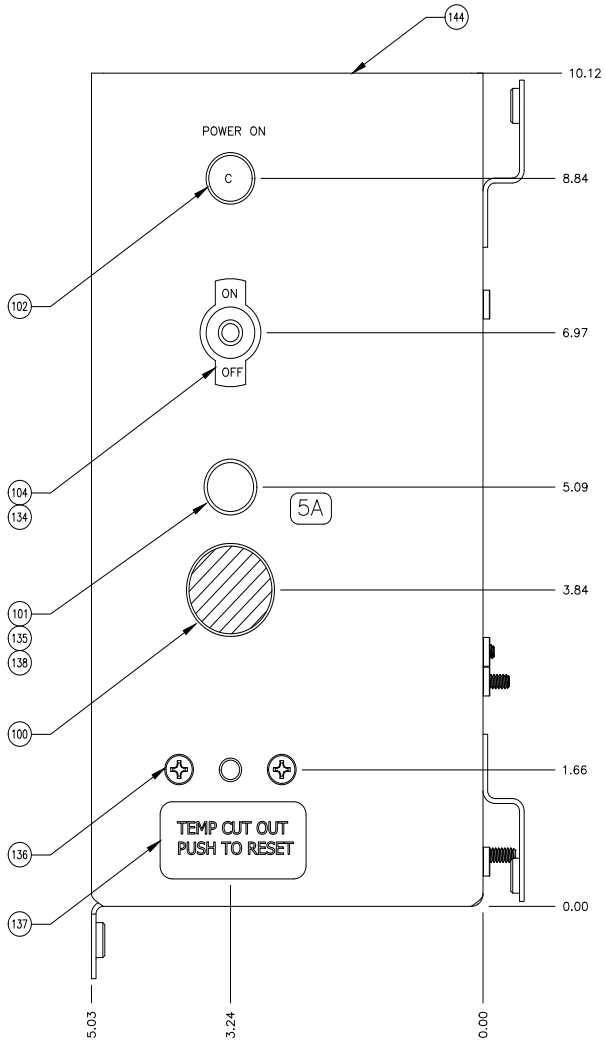


ENCLOSURE COVER
(NOT TO SCALE)

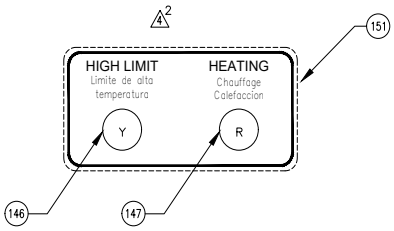
PAGE 4 OF 4



ENCLOSURE LAYOUT
(FRONT VIEW)



ENCLOSURE LAYOUT
(RIGHT SIDE VIEW)



PILOT LIGHT
CONFIGURATION

PAGE 4 OF 4

USE ONLY FOR 208-240V GAS FRYERS

MODEL: 718LCG
MODEL: 724CG

TO IDENTIFY MODEL AND ITEM NUMBER, SEE DATA TAG INSIDE FRYER.

PAGE 1 OF 4

724G–1719 ELEC, 724G, COMMON PARTS 120V				
ITEM	DESCRIPTION	QTY	UNIT	BELSHAW PART NO.
100	LABEL FUSE RATING 5 AMP	2	EA	#FUS–0031–5
101	IGNITOR WIRE ASSEMBLY 2 FT	1	EA	C600G–0647–2
102	FUSEHOLDER 15 AMP/250V	2	EA	DR42–0066
103	SWT,HILIM(5.75) USE SK–1204,	1	EA	FM200–0065M
104	BUSS FUSE–TYPE MDA 5AMP 25	2	EA	FM200–0080A
105	LABEL WARNING,ELEC GROUNDING	1	EA	MKIIG–0005
106	LABEL, GROUND, BLK ON GREEN	2	EA	618–0128
107	TOGGLE SWITCH DPST 20A SLIP ON	1	EA	624–0003A
108	XFMR; 38VA 24V AC OUT	1	EA	724G–0037A
109	PILOT LIGHT RED 24V	1	REF	724G–0205
110	IGNITER–CONTROLLER N.G.	1	EA	724G–0269N
111	WLDT, ELEC ENC, OPEN KETTLE	1	EA	724G–8008
112	TB, MINI, 2.5MM, 24A, GRAY	15	EA	990–0329
113	TB, MINI GND, 2.5MM, 24A, GRN	3	EA	990–0343
114	DIN RAIL 15MMX5.5MMX1M	1	MT	990–0344
115	TB, MINI, END ANCHOR	4	EA	990–0345
116	TB, JUMPERS, 10 POLE, MINI	1	EA	990–0346
117	TB, MINI, END BARRIER	1	EA	990–0348
118	TEMP CRTL,1/16, 24V, OPK	1	REF	TJ–0184C–2
119	THERMOCOUPLE, TYPE J	1	REF	724G–0144
120	PILOT LIGHT YELLOW 24V	1	REF	724G–0146
121	CLEAR NEON PILOT LIGHT 24V	1	EA	#PLT–0020
122	20/2 SHIELDED THERMOCPL WIRE J	3	FT	990–1006
123	THERMOCLE PLUG(M) SEE EXT DESC	1	EA	C600G–0226
124	THERMOCLE PLUG(F) SEE EXT DESC	1	REF	C200G–0101
125	DRAFT INDUCER	1	REF	#DRFT–0003
126	TRANSFORMER BOX 240/120VAC	1	REF	DRFT–1700
127	CABLE,18–3 PVC, 90C, 0.263" OD	1	EA	995–0043
128	CABLE,18–4 PVC,90C, 0.287" OD	1	EA	995–0110
129	LABEL, TEMPERATURE CONTROL	1	REF	724G–0204–1
130	HOLE SEAL,1/2" NEMA 3R	1	EA	#ENC–0035–1
131	STRAIN RELIEF BSHG .625"	5	EA	905–0613
132	UNIVERSAL BUSHING, OPEN	1	EA	905–0626 R00
133	3/8CONEC'T 90DEG LIQ–TITE FLX	1	EA	990–0013
134	WIRING LABEL SCHEMATIC	1	EA	724G–9001 240V
135	WARNING LABEL	1	EA	MDD–0459
136	ETL CONFORM LABEL	1	EA	904–0035
137	ANSI CONFORM LABEL	1	EA	904–0037

724G–1719–1 ELEC, 724G, NATURAL GAS, 120V				
ITEM	DESCRIPTION	QTY	UNIT	BELSHAW PART NO.
200	ELEC, 724G, COMMON PARTS 240V	1	EA	724G–1719
201	IGNITER/SENSOR, N.G. OPEN KETTLE	1	REF	724G–0152
202	GAS VALVE–NG	1	REF	724G–0273

724G–1719–2 ELEC, 724G, L.PROPANE, 240V				
ITEM	DESCRIPTION	QTY	UNIT	BELSHAW PART NO.
300	ELEC, 724G, COMMON PARTS 240V	1	EA	724G–1719
301	IGNITER/SENSOR PROPANE	1	REF	724G–0179
302	GAS VALVE, LP	1	REF	724G–0379

724G–1719–3: WIRE HARNESS & CABLE SET									
WIRE/CABLE NO.	WIRE COLORS	PART NO.	WIRE INCHES	CMP1	PIN1	CMP2	PIN2	END1 P/N	END2 P/N
2052	BLK18	–	–	TB1	5	XFM1	COM	908–0800.R	–
2232	BLU_WHT–18	995–0458	5.5	TB3	7	DIV1	COM	908–0800.R	990–0560TR
2041	BRN18	995–0462	5	TB1	1	FTB1	–	908–0800.R	990–0560TR
2042	BRN18	995–0462	6.5	TG1	2	TB2	1	990–0560TR	908–0800.R
2043	BRN18	995–0462	4	FTB1	–	TG1	1	990–0560TR	990–0560TR
2043	BRN18	995–0462	3	TG1	1	TG1	4	990–0560TR	990–0560TR
GND	GRN18	995–0259	3	TB1	6	DIV1	GND	908–0800.R	990–0560TR
2051	LTBLU18	995–0467	5.5	TB1	2	FTB2	–	908–0800.R	990–0560TR
2052	LTBLU18	995–0467	3	TB1	4	TB2	2	908–0800.R	908–0800.R
2052	LTBLU18	995–0467	5.5	FTB2	–	TB1	4	990–0560TR	908–0800.R
2071	ORN18	–	–	TG1	5	XFM1	240V	990–0560TR	–
2061	PPL18	–	–	XFM1	24V	TAS1	1	–	990–0504
2231	PPL18	995–0453	5	TB3	4	DIV1	24VAC	908–0800.R	990–0560TR
2081	PPL18	995–0453	36	TB3	1	TC1	11	908–0800.R	908–0800.R
2081	PPL18	995–0453	3	TC1	1	TC1	11	908–0800.R	908–0800.R
3141	PPL18	995–0453	36	TB3	4	TC1	2	908–0800.R	908–0800.R
2075	PPL18	995–0453	6	TAS1	2	TB3	1	990–0504	908–0800.R
2061	PPL18	995–0453	10	LT1	X2	TAS1	1	990–0560TR	990–0504
2082	WHT18	–	–	XFM1	0	TB3	5	–	908–0800.R
2082	WHT18	995–0459	36	TB3	4	TC1	12	908–0800.R	908–0800.R
2082	WHT18	995–0459	6	LT1	X1	TB3	5	990–0560TR	908–0800.R
LT23JMPR	WHT18	995–0459	4	LT3	X1	LT2	X1	990–0560TR	990–0560TR
CBL1003	RED	990–1006	36	THC1	–	TC1	5	–	–
	WHT			THC1	+	TC1	6	–	–
CBL1302	RED	990–1006	36	TC1	5	THC1	–	908–0800.R	–
	WHT			TC1	6	THC1	+	908–0800.R	–
CBL1303	BLK1	995–0043	48	TB3	2	LT2	X2	908–0800.R	990–0560TR
	BLK2			TB3	3	LT3	X2	908–0800.R	990–0560TR
	GRN			TB3	7	LT3	X1	908–0800.R	990–0560TR
CBL1304	BLK1	995–0110	36	DIV1	MV	DIV3	MV	990–0560TR	990–0560TR
	BLK2			DIV1	MV/PV	DIV3	PV/MV	990–0560TR	990–0560TR
	BLK3			DIV1	PV	DIV3	PV	990–0560TR	990–0560TR
	GRN			TB1	6	DIV3	GND	908–0800.R	990–0560TR
CBL1305	BLK22	C600G–0647–2	24	DIV1	SPARK	IGNITER	–	SPEC	SPEC

REVISION HISTORY: R4			
REVISION DESCRIPTION: STANDARDIZE PILOT LIGHT ON DOOR, LABEL, WIRING		REV BY: DL	DATE: 06/14/20
SHEET	ITEM	DESCRIPTION	ECR: N/A
1	1	REMOVE CABLE FOR PILOT LIGHTS	
2	1	REVISE WIRING FOR OMRON TEMP CONTROLLER, REMOVE TB3 5–10	
3	1	REVISE WIRING FOR OMRON TEMP CONTROLLER, REMOVE TB3 5–10	
4	1	REMOVE TB3 5–10	

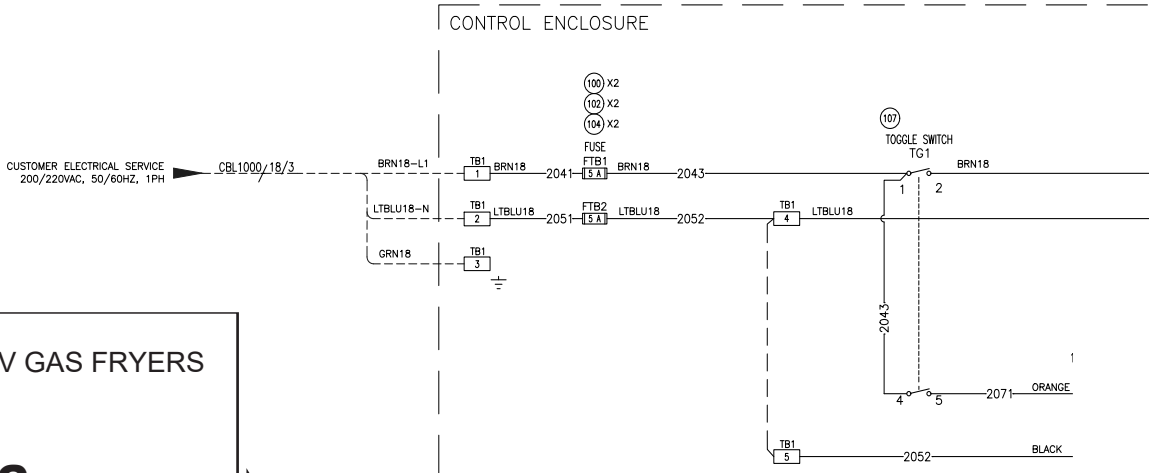
DATA TAG		
VOLTAGE	200	240
HERTZ	50	50
PHASE	1	1
KW	0.04	0.04
FLA	0.18	0.17
LARGEST HP	NA	NA
AIC	5KA	5KA

PAGE 1 OF 4

USE ONLY FOR 208-240V GAS FRYERS

MODEL: 718LCG
MODEL: 724CG

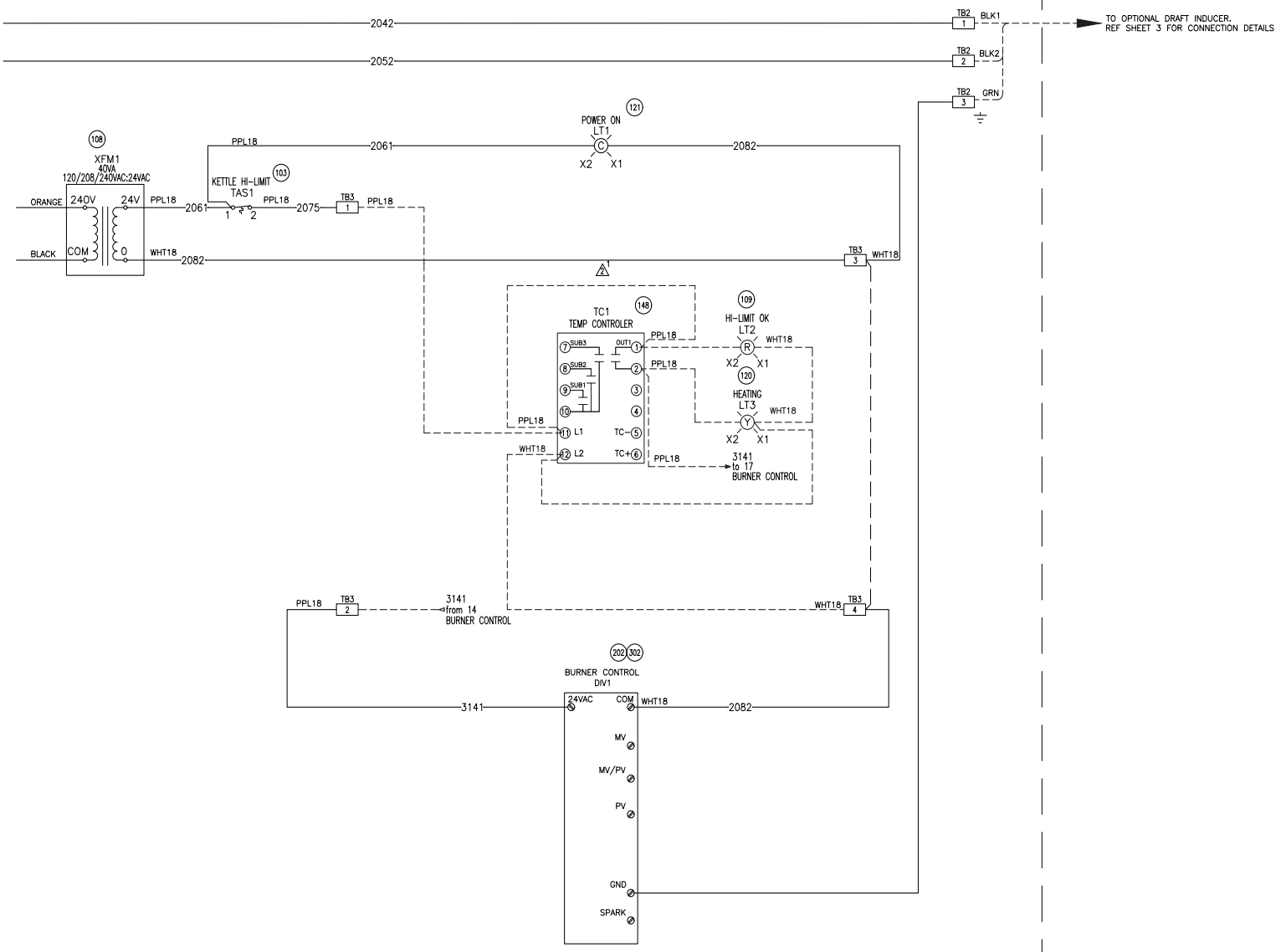
TO IDENTIFY MODEL AND ITEM NUMBER, SEE DATA TAG INSIDE FRYER.



PAGE 2 OF 4

CE/EXPORT WIRE COLOR STANDARD

AC POWER AT SUPPLY VOLTAGE	BLACK
AC CONTROL (UNGROUNDED) CIRCUIT AT LESS THAN SUPPLY VOLTAGE	RED
NEUTRAL	LIGHT BLUE
DC CONTROL (UNGROUNDED) CIRCUIT	BLUE
GROUNDED DC CONTROL CIRCUIT	WHITE/BLUE*
AC LOW VOLTAGE (>30VAC) CONTROL CIRCUIT	PURPLE (VIOLET)
UNGROUNDED CONTROL CIRCUIT WHICH REMAINS ENERERGIZED	ORANGE
GROUND	GREEN/YELLOW


2042
2052
TB2 BLK1
TB2 BLK2
TB2 GRN
TO OPTIONAL DRAFT INDUCER.
REF SHEET 3 FOR CONNECTION DETAILS
121
POWER ON
LT1
X2 X1
108
XFM1
40VA
120/208/240VAC:24VAC
ORANGE
BLACK
240V
24V
COM
0
PPL18
WHT18
2061
2082
KETTLE HI-LIMIT
103
TAS1
2075
TB3 1
TB3 3 WHT18
148
TC1
TEMP CONTROLER
SUB3
SUB2
SUB1
OUT1
L1
L2
TC-
TC+
109
HI-LIMIT OK
LT2
120
HEATING
LT3
3141
to 17
BURNER CONTROL
TB3 2
3141
from 14
BURNER CONTROL
TB3 4
202 302
BURNER CONTROL
DIV1
24VAC
COM
MV
MV/PV
PV
GND
SPARK

PAGE 2 OF 4

USE ONLY FOR 208-240V GAS FRYERS

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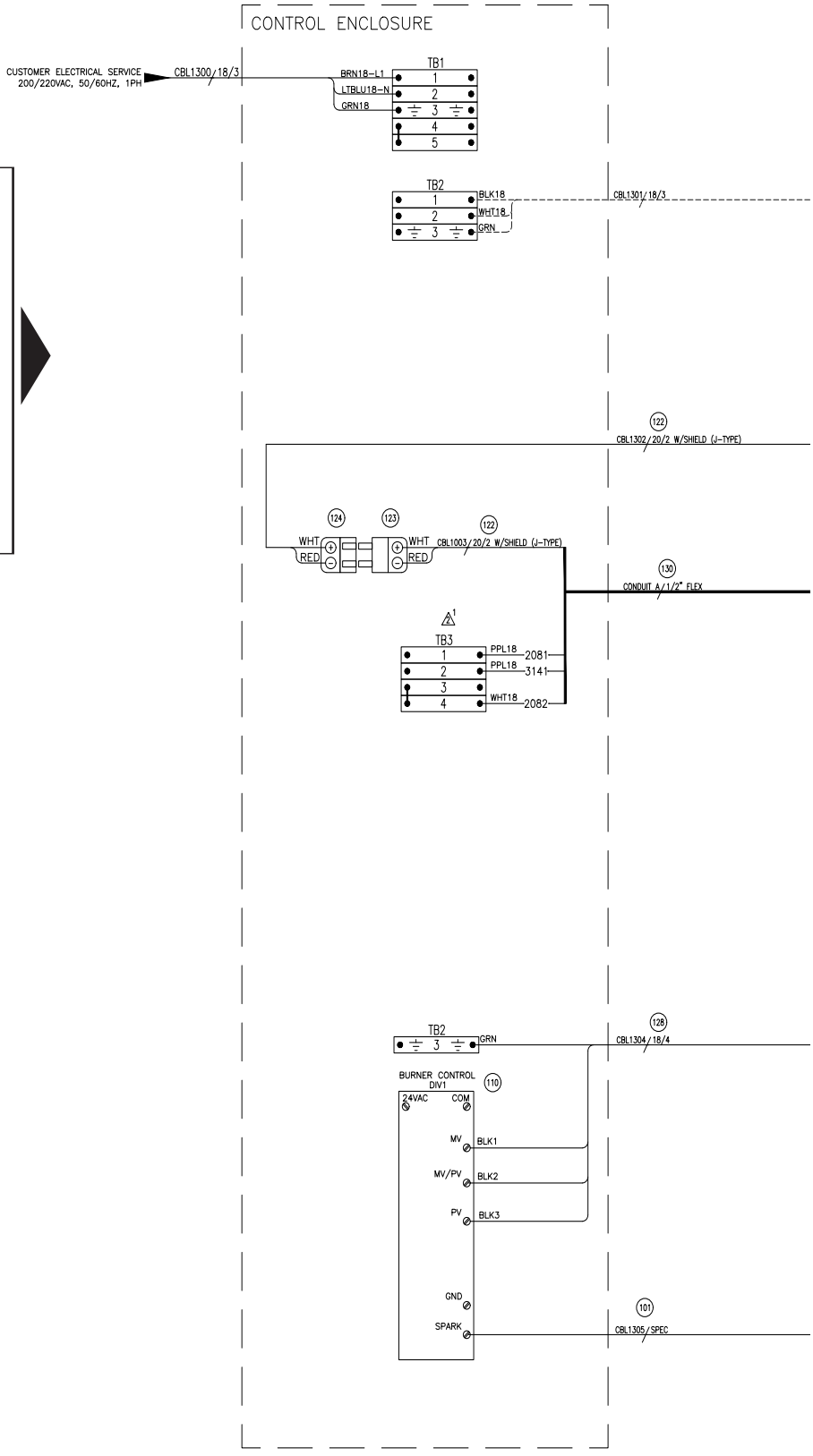
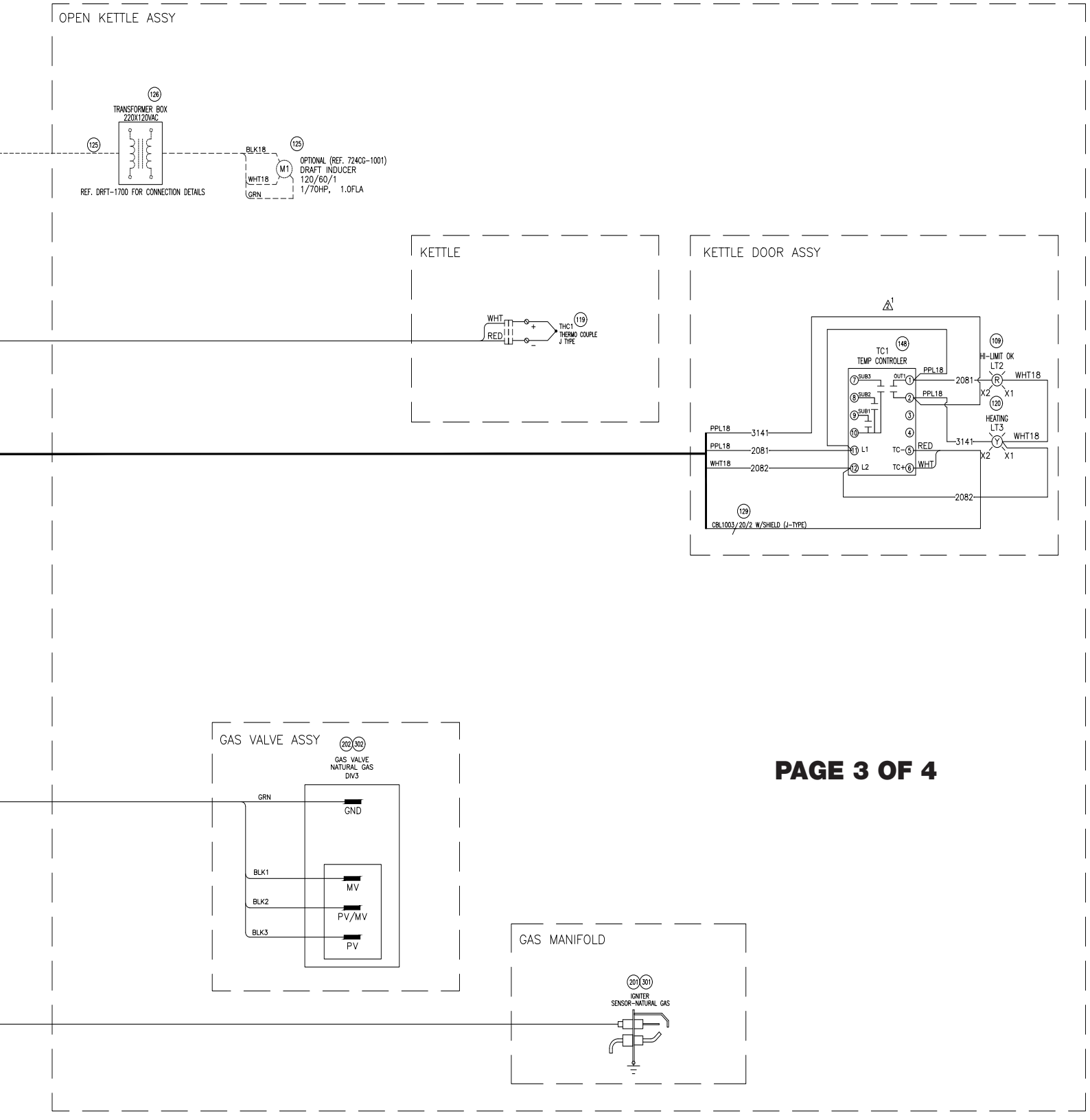


PAGE 3 OF 4


OPEN KETTLE ASSY
126
TRANSFORMER BOX
220X120VAC
125
REF. DRFT-1700 FOR CONNECTION DETAILS
BLK18
WHT18
GRN
125
M1
OPTIONAL (REF. 724CG-1001)
DRAFT INDUCER
120/60/1
1/70HP, 1.0FLA
KETTLE
WHT
RED
119
THC1
THERMO COUPLE
J TYPE
KETTLE DOOR ASSY
A1
148
TC1
TEMP CONTROLER
SUB3
SUB2
SUB1
OUT1
L1
L2
TC-
TC+
PPL18
2081
3141
2082
WHT18
RED
WHT
109
HI-LIMIT OK
LT2
R
X2
X1
120
HEATING
LT3
Y
129
CBL1003/20/2 W/SHIELD (J-TYPE)
GAS VALVE ASSY
202
302
GAS VALVE
NATURAL GAS
DIV3
GRN
GND
BLK1
MV
BLK2
PV/MV
BLK3
PV
GAS MANIFOLD
201
301
IGNITER
SENSOR-NATURAL GAS

PAGE 3 OF 4

USE ONLY FOR 208-240V GAS FRYERS

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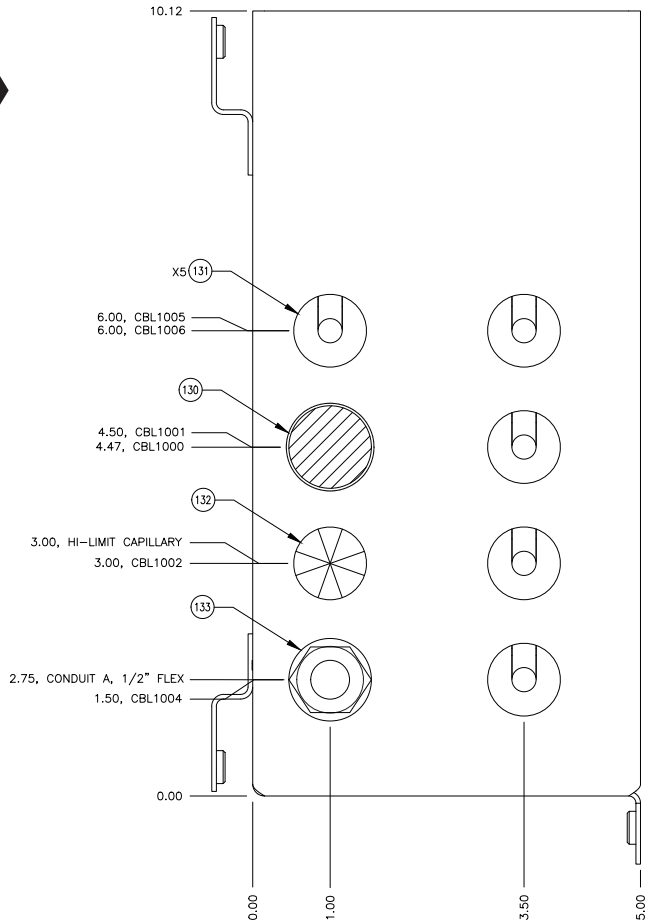
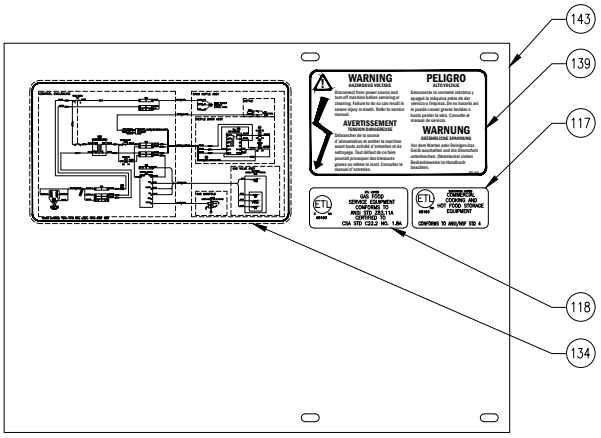
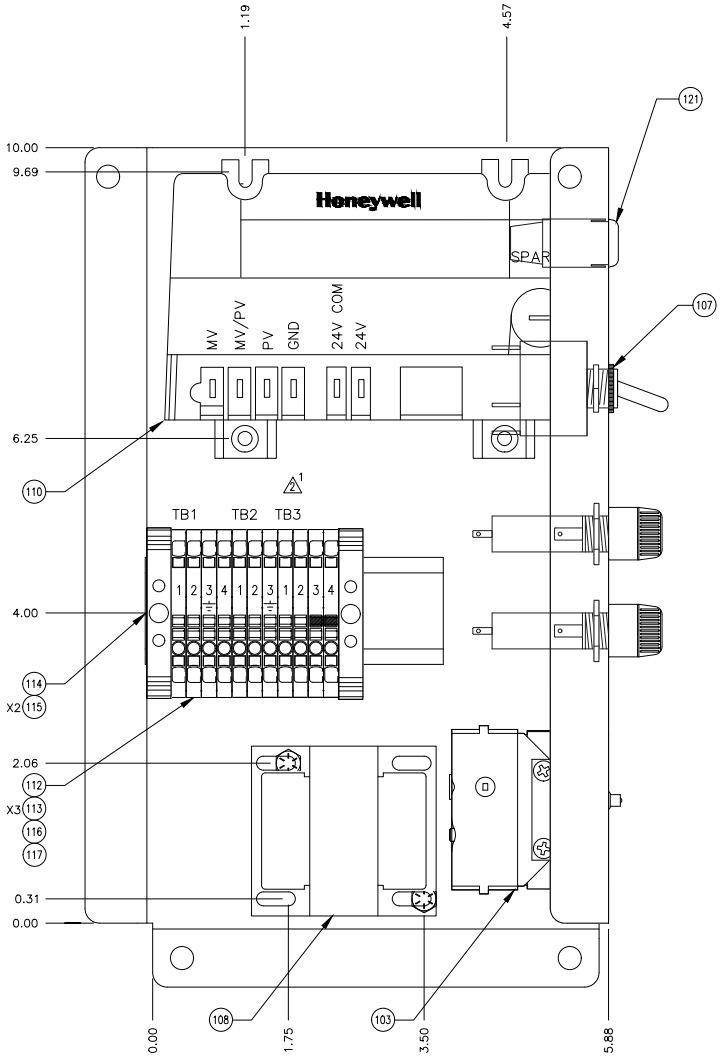


ENCLOSURE LAYOUT
(LEFT SIDE VIEW)

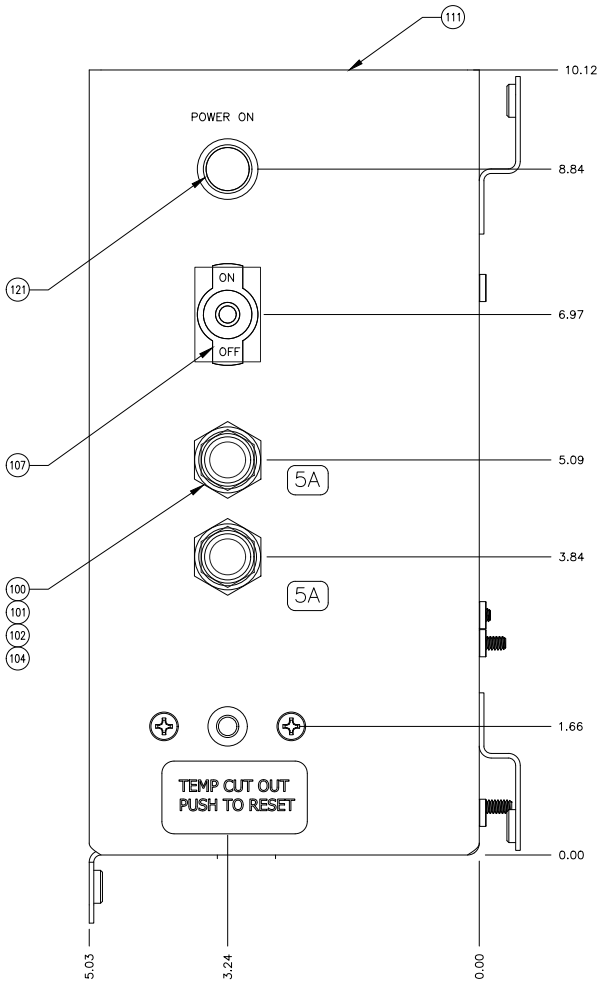
PAGE 4 OF 4



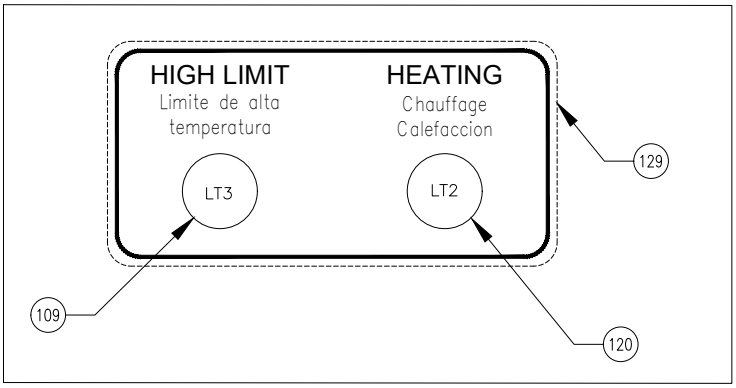
ENCLOSURE COVER
(NOT TO SCALE)



ENCLOSURE LAYOUT
(FRONT VIEW)



ENCLOSURE LAYOUT
(RIGHT SIDE VIEW)



CABINET FRONT PANEL
(NOT TO SCALE)

PAGE 4 OF 4

Belshaw Adamatic Bakery Group

Terms & Conditions of Sale

PLEASE READ THESE TERMS AND CONDITIONS VERY CAREFULLY:

THE TERMS AND CONDITIONS FOR ALL BELSHAW ADAMATIC BAKERY GROUP ("SELLER") EQUIPMENT, PARTS, AND SERVICE PROJECTS ARE LIMITED TO THOSE CONTAINED HEREIN. ANY LANGUAGE THAT IS IN ADDITION TO OR DIFFERENT FROM THAT WHICH IS WRITTEN IN THESE STANDARD TERMS AND CONDITIONS IN ANY FORM DELIVERED BY YOU ("BUYER") ARE HEREBY DEEMED TO BE MATERIAL ALTERATIONS WHICH SHALL BE OBJECTED TO AND REJECTED UNLESS AGREED TO BY THE SELLER PRIOR TO THE PURCHASE. NO CHANGES WILL BE PERMITTED AFTER THE PURCHASE PROCESS. BY ACCEPTING DELIVERY OF THE EQUIPMENT, PARTS OR SERVICES, THE BUYER AGREES TO AND ACCEPTS ALL THE STATED TERMS AND CONDITIONS OF SALE UNLESS THE SELLER AND THE BUYER HAS SIGNED A SEPARATE AGREEMENT, IN WHICH CASE THE SEPARATE AGREEMENT WILL GOVERN.

UNLESS OTHERWISE SPECIFIED, THESE TERMS AND CONDITIONS OF SALE APPLY TO ALL EQUIPMENT AND/OR PARTS SOLD BY THE SELLER. DUE TO THE COMPLEXITY OF EITHER BELSHAW OR ADAMATIC INDUSTRIAL EQUIPMENT, A SEPARATE TERMS AND CONDITIONS OF SALE DOCUMENT WILL BE WRITTEN SPECIFIC FOR THE PROJECT OR EQUIPMENT BEING SOLD AND WILL REQUIRE THE SIGNATURE OF THE BUYER.

TERMS AND CONDITIONS OF SALE FOR ANY SHIPMENT MADE OUTSIDE THE UNITED STATES WILL REQUIRE REVISION AS THESE STANDARD TERMS AND CONDITIONS WILL NOT APPLY IN MOST CASES. ANY EQUIPMENT SOLD IN THE UNITED STATES AND EXPORTED TO AN INTERNATIONAL COUNTRY WITHOUT THE WRITTEN CONSENT OF THE SELLER WILL BE CAUSE FOR ALL WARRANTY AND RETURN PROVISIONS TO BE DEEMED NULL AND VOID.

EXECUTION:

Upon execution of this Agreement or upon delivering of an order for products, services, or equipment identified in this Agreement (hereinafter collectively the "Equipment"), the Buyer agrees to the following applicable terms and conditions.

DELIVERY and STORAGE:

Unless otherwise agreed to, all shipments are made F.O.B. Seller's shipping point, Auburn, WA. Risk of loss, damage or shortage shall pass from the Seller to the Buyer upon delivery to and receipt by the freight carrier from the Seller. Although the Seller will use all reasonable efforts to meet quoted and acknowledged delivery date(s), they are approximate and not guaranteed. The Seller reserves the right to make partial shipments unless otherwise agreed to prior to the purchase. If the shipment is postponed or delayed for any reason by the Buyer, the Buyer agrees to reimburse the Seller for all storage costs and any other expenses resulting from this.

Damaged Shipment -- As a matter of customer service, the Seller will assist in filing damage or shortage claims, provided the equipment was shipped prepaid and add. If the shipment was sent "Freight Collect," the Buyer has the full responsibility of filing the claim against the freight company. In all cases, the Buyer has the responsibility to inspect the shipment for completeness and to assure it is free of any visible damage. If the order does not appear complete or there is visible damage, the Buyer must mark "shipment not complete" or "visible damage upon receipt" on the Bill of Lading and notify the Seller and freight carrier no later than one (1) day after the shipment was received. To make resolution of the claim easier, it is recommended that the Buyer photograph all visible damage and forward copies to the Seller and freight carrier. All concealed freight damage claims must be submitted to the freight carrier no later than fifteen (15) calendar days after receipt of the shipment.

INSTALLATION:

Where applicable, the Buyer at its own expense shall arrange for timely completion of all necessary preparations for installation, including permits and utilities (water, gas, electricity, HVAC, etc.) for the purchased equipment. All utilities must conform to equipment requirements as provided by Seller. The Buyer is responsible for the suitable construction of foundations or flooring under the equipment. The Buyer shall provide safe, suitable working conditions for the installation of the equipment. The Buyer is responsible for the cost of modifying equipment sold by the Seller in order to comply with federal, state and local codes. If installation, trial run or start-up cannot begin, continue or be accepted due to a cause for which the Seller has no control, the Buyer shall pay the Seller for any delays, waiting time or travel expenses incurred as a result of this.

SALES TAX:

It is the responsibility of the Buyer to collect and/or pay all Sales, Use or other applicable taxes to the local state taxing authority, as required by law. The Buyer must submit a signed Resale Certificate for equipment purchased for resale or a signed Manufacturer's Sales and Use Tax Exemption Certificate for equipment engaged in manufacturing product for resale. The manufacturing exemption regulations vary from State to State; please consult your tax consultant for your exemption qualification. Further, the Buyer shall indemnify and hold harmless Belshaw Adamatic Bakery Group for all costs, expenses and/or penalties for the failure to pay sales, use or other applicable taxes.

UCC FILINGS:

Where applicable, the Buyer understands and agrees that the Belshaw Adamatic Bakery Group retains title of all equipment until said equipment is paid for in full. Further, the Buyer agrees that as part of the sales contract they will be required to sign a Security Agreement. Further, the Buyer agrees that the Belshaw Adamatic Bakery Group may file any and all protective UCC filings in relation to the Equipment or this Agreement including, but are not limited to, financing statements, financing statement amendments, correction statements, information requests, and addendums to the full extent allowed by law (hereinafter collectively the "UCC Filings").

By executing this Agreement, the Buyer represents that the Buyer is fully authorized, as either a principal of the Buyer or a personal guarantor of the Buyer, to enter into all obligations related to the UCC filings

In states where permissible, the Buyer explicitly authorizes the filing and recording of UCC financing statements showing the Belshaw Adamatic Bakery Group's interest in the Equipment as a secured party and grants the Belshaw Adamatic Bakery Group the right to execute Buyer's name as debtor thereto. The Buyer further agrees to provide the Belshaw Adamatic Bakery Group any and all requested information necessary for any UCC Filings. This information includes but is not limited to all current address, contact information, organization identification number, and any other information as required.

CREDIT INFORMATION:

The Buyer further authorizes Belshaw Adamatic Bakery Group and its actual or potential affiliates, successors, designees, or assignees to obtain consumer credit reports relating to the Buyer's credit history and/or creditworthiness. The Buyer's authorization shall extend to obtaining a credit profile in considering this application and subsequently for the purposes of update, renewal or extension of such credit or additional credit and for reviewing or collecting the resulting account. The Buyer also authorizes the Belshaw Adamatic Bakery Group, trade references, and financial institutions the right to release credit information.

LIMITED WARRANTY:

Please reference the Seller's Limited Warranty document for complete details of our warranty program.

CANCELLATIONS, RETURNS and DELAY IN ACCEPTANCE:

Any cancellation by the Buyer after receipt of their order may result in a cancellation penalty equal to 30% of the order value or the calculated cost of materials, labor and overhead for the ordered equipment at the time of cancellation, whichever is greater. Buyer must give disposition of canceled equipment within 30 days of cancellation date. If Buyer fails to give disposition for canceled equipment within the period, Seller shall be authorized to dispose of canceled equipment as Seller sees fit.

ALL Special Orders and/or custom equipment will be identified as such and cannot be canceled or returned. NO EXCEPTIONS.

Unless otherwise specified, the Seller offers the Buyer a thirty (30) calendar day return policy on most equipment or parts sold based on the date of invoicing. All requests for cancellation or return requests must be submitted in writing and received at Seller's home office (Auburn, WA) within thirty (30) calendar days from the invoice date.

- Return Restrictions:
  - Defective "Non-Usable" Equipment – The Buyer may return most defective "non-usable" equipment or parts directly to Seller within thirty (30) calendar days from the date of invoicing. The Seller has the sole discretion on which option applies -- credit, repair, replacement or exchange. After this thirty (30) calendar day period only the Seller's warranty applies
  - Non-Defective Equipment – The Buyer may return most non-defective equipment or parts, unless they are specified as special order or custom, directly to the Seller within thirty (30) calendar days from the date of invoicing. In this situation the Seller will impose a mandatory restocking fee which will reduce the value of any credit or exchange by 35% of original invoice amount or $50, whichever is greater.
- Shipment of Returned Equipment or Parts:
  - Return Goods Authorization (RGA) Number -- No return of any type will be accepted by the Seller unless accompanied by a unique RGA number, which the Buyer must obtain by providing the following information to Seller's Customer Service Agent. The required information is your customer number, applicable invoice number, equipment serial number, and details of the Buyer's reason for the return. The Buyer has thirty (30) calendar days to return the equipment and/or part from the date that the applicable RGA is issued. After such date, the RGA issued is invalid and the Seller reserves the right to refuse the return. The Seller will not accept the return of any equipment or part that has not been assigned an RGA number.
  - Returned Equipments Must Be Complete, Clean and Free of Damage -- All equipment or parts MUST be returned 100% complete, including all original boxes, packing materials, manuals, blank warranty cards and other accessories provided by Seller. The equipment MUST be clean, free of any damage and in the same condition as delivered to the Buyer. The Seller reserves the right to refuse the return of any equipment or part that does not conform to this provision. If accepted, the cost of reconditioning and the aforementioned restocking fee will be charged.
  - Responsibility for Shipping Costs and Risk -- The Buyer is responsible for the cost of shipping all returned items; the Seller is responsible for the cost of shipping replacements or exchanges of returned items and will match Buyer's shipping method provided the returned items are not due to the Seller's fault. Buyer must adequately pack or crate the returned equipment to protect from damage in transit.
  - Buyer Shipping Insurance -- The Buyer is strongly advised to purchase full insurance to cover loss and damage in transit for shipments of returned equipment or parts and to always use a carrier or shipping method that provides proof of delivery. The Seller is not responsible for damage or loss during shipment.

LIMITATION OF LIABILITY:

UNDER NO CIRCUMSTANCES AND NOTWITHSTANDING THE FAILURE OF ESSENTIAL PURPOSE OF ANY REMEDY SET FORTH HEREIN, WILL THE SELLER, ITS AFFILIATES OR ITS OR THEIR SUPPLIERS, SUBCONTRACTORS OR AGENTS BE LIABLE FOR: (A) ANY INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES INCLUDING BUT NOT LIMITED TO, LOSS OF PROFITS, BUSINESS, REVENUES OR SAVINGS , EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITIES OF SUCH DAMAGES OR IF SUCH DAMAGES ARE OTHERWISE FORESEEABLE, IN EACH CASE, WHETHER A CLAIM FOR ANY SUCH LIABILITY IS PREMISED UPON BREACH OF CONTRACT, WARRANTY, NEGLIGENCE, STRICT LIABILITY OR OTHER THEORY OF LIABILITY; (B) ANY CLAIMS, DEMANDS OR ACTIONS AGAINST BUYER BY ANY THIRD PARTY; (C) ANY LOSS OR CLAIM ARISING OUT OF OR IN CONNECTION WITH BUYER'S IMPLEMENTATION OF ANY CONCLUSIONS OR RECOMMENDATIONS BY SELLER OR ITS AFFILIATES BASED ON, RESULTING FROM, ARISING OUT OF OR OTHERWISE RELATED TO THE EQUIPMENTS OR SERVICES; OR (D) ANY UNAVAILABILITY OF THE EQUIPMENT FOR USE. IN THE EVENT OF ANY LIABILITY INCURRED BY SELLER OR ANY OF ITS AFFILIATES, THE ENTIRE LIABILITY OF SELLER AND ITS AFFILIATES FOR DAMAGES FROM ANY CAUSE WHATSOEVER WILL NOT EXCEED THE LESSER OF: (A) THE DOLLAR AMOUNT PAID BY BUYER FOR THE EQUIPMENT(S) GIVING RISE TO THE CLAIM OR THE SPECIFIC SERVICES GIVING RISE TO THE CLAIM; OR (B) $50,000.00.

Belshaw®

www.belshaw.com

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ALI GROUP

WELBILT
an Ali Group Company