



The #1 Source for Donut and Bakery Equipment

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## OPERATOR'S MANUAL TECHNICAL SUPPLEMENT PARTS AND ELECTRICAL DIAGRAMS



2022



Electronic Controller

**618L**      Frying area  
18" x 26"

**624**      Frying area  
24" x 24"

# Donut Fryer — Electric

### ITEM NUMBERS

- |   |  |
|---|--|
| <input type="checkbox"/> <b>21254-10 R01</b> 618L, 208-240V/50-60Hz/1-Phase | <input type="checkbox"/> <b>21257-10 R01</b> 624, 208-240V/50-60Hz/1-Phase |
| <input type="checkbox"/> <b>21256-10 R01</b> 618L, 208-240V/50-60Hz/3-Phase | <input type="checkbox"/> <b>21259-10 R01</b> 624, 208-240V/50-60Hz/3-Phase |

### SERIAL NUMBER

Item Number and Serial Number are listed on a data tag attached to the equipment.  
This manual should only be used with the Item Number(s) shown above.



# SUPPORT

**USA/Canada** 1-800-BELSHAW  
**International** (+1) 206-322-5474

**Email** [service@belshaw.com](mailto:service@belshaw.com)  
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Electric Fryer

618L | 624

Operator's Manual

Part # MN-0019EN 043022

***Belshaw*** 814 44th Street NW, Suite 103, Auburn, WA 98001 USA  
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service@belshaw.com • www.belshaw.com

## EQUIPMENT RECORD

Please provide the information below when you correspond 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 the 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](mailto:service@belshaw.com). Include a Belshaw Order Number in your communications. Your Order Number will begin with "CO...", followed by 6 digits) and should be marked on the box or crate.

## 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.

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## **Technical Supplement      >    *Located after Operator's Manual***

- Printed separately for CE / European Union manuals

# Before you start

The 618L, 624, and 634 Electric Fryers are designed to fry cake and yeast-raised donut products. Each must be bolted to a flat, dry floor. The operator should stand opposite the heater head.

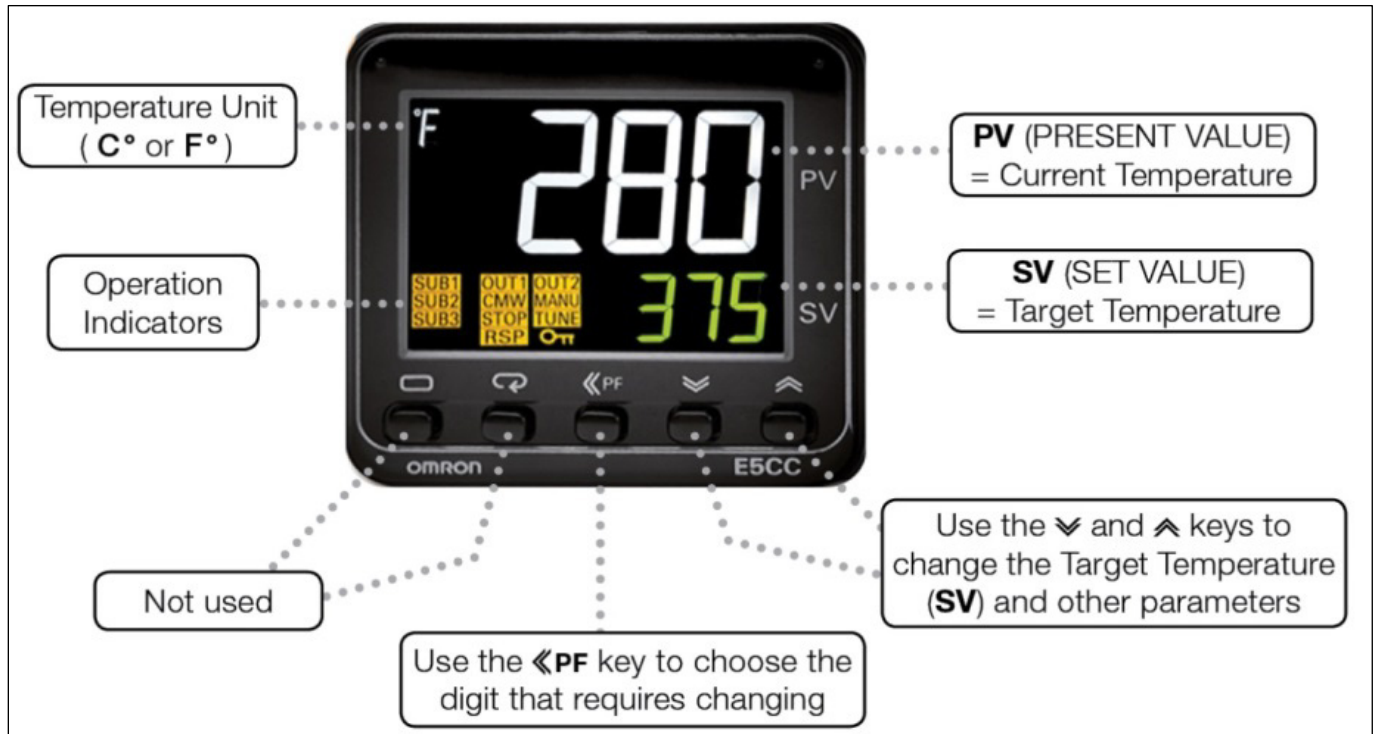
The operator must work safely at all times and read this manual and follow its instructions and warnings. A thorough understanding of how to install, maintain, and safely operate the fryer will prevent production delays and injuries.

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

- Make sure 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 the kettle, it could cause serious burns or could cause someone to slip on the floor and be seriously injured.
- Hot shortening can cause serious burns. Make sure that the system and the shortening are cool before attempting any cleaning, adjustment, disassembly, or repair.
- To avoid electrocution or other injury, unplug the machine before attempting any cleaning, adjustment, disassembly, or repair.
- Be careful never to get shortening, water, or other materials on the floor. If anything does get spilled on the floor, mop it up immediately. Materials on the floor can cause people to slip or fall, resulting in serious injury or loss of life.
- To prevent unintentional startup and possible fire, unplug the machine if there is a local power outage. When the power is restored, it is safe to plug the machine in again.
- To avoid electrocution, make sure that all electrical cords are not frayed or cracked and that they do not pass through any water or shortening.
- Make sure that all electrical cords are routed so that no one will trip over them.

# 1

# Operation



Above: OMRON Digital Temperature Controller

## READ EACH STEP COMPLETELY BEFORE DOING WHAT IT TELLS YOU TO DO.

1. Make sure the drain is closed. The drain handle is at the side of the fryer (usually the left side).
2. Put enough shortening in the kettle to **completely cover the heating elements**, thermocouple, and high-temperature limit control probe. Use one of these 3 methods:
3. If you have a Belshaw EZMelt shortening melter-filter, warm the shortening and then transfer it to the kettle. (Refer to the EZMelt operator's manual).

### WARNING

**Hot shortening causes severe burns.**

4. Melt shortening in a pan on the stove and pour it into the kettle.
5. Put solid shortening manually into the kettle. Pack it tightly around the heating elements, thermocouple, and high-temperature limit control probe.

### WARNING

**Cover the heating elements completely! If you put solid shortening, do not leave any air spaces. Any air can cause the shortening to overheat and catch on fire.**

6. When the elements have been completely covered with shortening, move the on/off switch to the ON position.
7. The “Power On” pilot light on the front of the fryer will light up.

**FOR THE NEXT STEPS, SEE THE  
DIAGRAM OF THE DIGITAL  
TEMPERATURE CONTROLLER ON THE  
PREVIOUS PAGE**

To adjust the target temperature (marked **SV** on the controller), push the up and down arrows at the bottom right.

1. Set the Digital Temperature Controller target temperature to 250°F/121°C.
2. The “Heating” pilot light on the front of the fryer will light up, indicating that the shortening has not yet reached the selected temperature.
3. Continue adding shortening to the kettle until it reaches the proper depth for frying. Use one of the 3 methods below. For safety reasons, we recommend the first method, and discourage you from using any other method.
4. Use a Belshaw EZMelt to melt shortening and transfer it to the kettle. See the EZMelt manual.
5. Melt shortening in a pan on the stove and pour it into the kettle.
6. Very carefully, put solid shortening into the kettle.

**WARNING**

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

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.

7. After all of the shortening has melted, set the digital temperature controller to the desired frying temperature.
8. The “Heating” pilot light will go out if the high temperature limit control breaks the circuit.
9. Wait for the shortening to reach the desired temperature.

**WARNING**

**To avoid serious burns, when the fryer is operating, do not any part of the fryer that is in contact with hot shortening.**

**Note: The fryer will automatically shut off the elements if temperature is too high. To restart, wait for the shortening to cool, then push the red reset button inside the door.**

10. If you are frying cake donuts, move the depositor into place over the fryer. Refer to the depositor manual for complete installation and operation instructions.

**CAUTION**

**To avoid damaging the machine, do not operate the conveyor until all the shortening has melted.**

11. Continue supplying shortening to the kettle as required. Keep the kettle filled up to the “Oil Level” marks on the side.
12. When you have finished using the fryer, move the on/off switch to the OFF position.



For your safety, 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 can cause serious injury or loss of life.**

### **WARNING**

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

### **WARNING**

**To avoid being burned in an explosion, never use any flammable materials for cleaning.**

## **Cleaning the Exterior Surfaces**

1. Clean the polished and painted surfaces of the fryer with a soft, damp cloth. Use a non-abrasive cleaner to remove any discoloration.
2. Polish these surfaces with a soft, dry cloth.

## **Cleaning the Frying Screen**

1. In a sink or a dishwasher, wash the frying screen using warm water and mild detergent. Do not use an abrasive cleaner or scraper.
2. Rinse the frying screen in clear water.
3. Dry the frying screen thoroughly, using a soft cloth, before using it again.

### **WARNING**

**Dry the frying screen thoroughly. Moisture causes hot shortening to spatter, which may cause serious injury.**

4. Check the frying screen to make sure no metal is flaking off of it. If the screen is flaking, replace it immediately, so you do not get metal particles in your product.

## **Cleaning the Kettle**

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

## **Removing the Shortening**

### **WARNING**

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

1. Disconnect the machine from the power source.
2. Let the shortening cool to 100°F/38°C.

3. Place a Belshaw Shortening Filter or a large metal container under the drain valve of the fryer.

### **WARNING**

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

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 Shortening Filter or metal container.
5. If you are using a metal container, watch it to make sure the shortening does not overflow. If the container becomes full, close the drain valve, put another metal container under the drain valve, and open the drain valve again.

### **WARNING**

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

### **WARNING**

**Thoroughly clean and dry the floor if shortening is spilled. Shortening on the floor can cause serious injury or loss of life.**

6. If you have drained the shortening into a metal container and you wish to re-use the shortening, set the container of shortening aside. Place another suitable container under the drain valve.
7. Brush accumulated crumbs from the heating elements. Accumulated crumbs causes corrosion and poor heat recovery.

8. Tilt the heater head assembly out of the fryer and lock it in place.
9. Using a non-abrasive, non-metallic spatula, scrape the sediment and any remaining shortening through the drain valve.
10. Close the drain valve.

## **Washing**

1. Carefully pour hot water into the kettle, up to the normal level of the shortening. Add trisodium phosphate (TSP) or another appropriate cleaner.
2. Scrub the inside of the kettle. Do not use any abrasive cleaners or scrapers.

### **WARNING**

**To avoid being 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 any solution splashes.**

3. Allow the cleaning solution to cool to 100°F/38°C.
4. Place a large metal container under the drain valve.

### **WARNING**

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

5. Open the drain valve and allow the cleaning solution to drain into the container.

6. Watch the container to make sure the cleaning solution does not overflow. If the container becomes full, close the drain valve, put another large metal container under the drain valve, and open the drain valve again.

### **WARNING**

**Do not allow the cleaning solution to overflow the container. Cleaning solution will get on the floor, and if the solution is not cool enough, you may be burned.**

7. When the draining is complete, close the drain valve.
8. Carefully carry the container(s) to the sink and slowly pour the solution into the sink.

### **WARNING**

**Thoroughly clean and dry the floor if cleaning solution is spilled. Liquid on the floor can cause serious injury or loss of life.**

## **Rinsing**

1. Carefully pour clean, hot water into the kettle, up to the normal level of the shortening. If the cleaner you have used requires that you add a neutralizer, do so now.
2. Allow the water to sit for 5-10 minutes. Then allow it to cool to 100°F/38°C.
3. Place a large metal container under the drain valve.

### **WARNING**

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

4. Open the drain valve and allow the water to drain into the container.

5. Watch the container to make sure the water does not overflow the container. If the container becomes full, close the drain valve, put another large metal container under the drain valve, and open the drain valve again.

### **WARNING**

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

6. When the draining is complete, close the drain valve.
7. Carefully carry the container(s) to the sink and slowly pour the water into the sink.

### **WARNING**

**Thoroughly clean and dry the floor if water is spilled. Water on the floor can cause serious injury or loss of life.**

## **Drying**

Dry the kettle, drain valve and burner tubes thoroughly, using a soft cloth. Make sure 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 the sides of the fryer and may result in fire, injury, or death.**

# 3

# Donut-Making Helps

## **Tips on Making Quality Cake Donuts**

- 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 temperature range 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.

- 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 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.

- 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, will form large rings, will tend to crack open, will be too light in appearance, and will absorb too much shortening.

- Maintain the proper shortening level. We recommend a distance of 1 1/4" between the depositor 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 depositor), the donuts may not drop flat, may turn over while submerging and surfacing, and may become irregular, cracked, or rough-crust.

- Ensure that the donuts absorb the right amount of shortening.

Donuts should absorb 1-1/2 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, follow tips 1-3, mix the batter a little longer than usual, turn the donuts as soon as they become golden brown, and turn the donuts only once.

## Calculating Correct Water Temperature

The following is an example of how to calculate the correct water temperature to use. You must

use your own 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
	x3	x3	x3	x3
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 temp. for cake donuts	83°F	28.4°C	98	36.8
			↓	↓
			98	36.8
Figure from above			-30	-17
Temperature increase during mixing (average: 30°F/17°C)			68°F	19.8°C
Desired water temperature for yeast-raised donuts				

## Ratios of Plunger Sizes to Donut Weights

The weights given are for donuts without icings 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,  $212^{\circ}\text{F} - 32 / 1.8 = 100^{\circ}\text{C}$ .

To convert temperatures from Celsius to Fahrenheit, multiply °C by 1.8 and add 32 to the result. For example,  $(100^{\circ}\text{C} \times 1.8) + 32 = 212^{\circ}\text{F}$ .

°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





Electric Fryer

618L | 624

Technical Supplement

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## **Operator's Manual                    > *Located before Technical Supplement***

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# Before you start

The 618L, 624, and 634 Electric Fryers are designed to fry cake and yeast-raised donut products. Each must be bolted to a flat, dry floor. The operator should stand opposite the heater head.

The operator must work safely at all times and 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:

- Make sure 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 the kettle, it could cause serious burns or could cause someone to slip on the floor and be seriously injured.
- Hot shortening can cause serious burns. Make sure that the system and the shortening are cool before attempting any cleaning, adjustment, disassembly, or repair.
- To avoid electrocution or other injury, unplug the machine before attempting any cleaning, adjustment, disassembly, or repair.
- Be careful never to get shortening, water, or other materials on the floor. If anything does get spilled on the floor, mop it up immediately. Materials on the floor can cause people to slip or fall, resulting in serious injury or loss of life.
- To prevent unintentional startup and possible fire, unplug the machine if there is a local power outage. When the power is restored, it is safe to plug the machine in again.
- To avoid electrocution, make sure that all electrical cords are not frayed or cracked and that they do not pass through any water or shortening.
- Make sure that all electrical cords are routed so that no one will trip over them.

## Unpacking the Fryer

1. Use a fork lift to transport the shipping crate to the work station.
2. Break down the shipping crate.
3. Remove all the 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 electrocuting yourself 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 with each other. Moisture causes hot shortening to spatter, which may cause serious injury. Prior to use, make sure the kettle and any other parts you have washed are dry.**

## Installing the Fryer

1. Make sure the power requirements of the machine, found on the data plate on the back of the heater head assembly, match your power source.
2. Using a fork lift or pallet jack, lift the fryer cabinet and screw each leg in as far as it will go.
3. Set the fryer cabinet on a flat, dry floor.
4. Level the fryer. Follow these steps:
  - a. Check to see if the fryer is level. To do so, place a level across the top of the fryer cabinet.
  - b. If the fryer is not level, lift the fryer using a fork lift or pallet jack, and turn the legs to adjust them.
  - c. Using the fork lift or pallet jack, lower the fryer to the floor. Be sure that all the 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, other injury, or death, make sure the fryer is securely fastened to the floor so it will not tip or fall over.**

9. Connect the fryer to a properly grounded power source.

## **Moving the Fryer**

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

1. Turn off the fryer and disconnect it from the power source.
2. Allow the machine and the shortening to cool.

### **WARNING**

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

3. Remove the shortening from the fryer as explained in “Removing the Shortening” in Section 3.

### **WARNING**

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

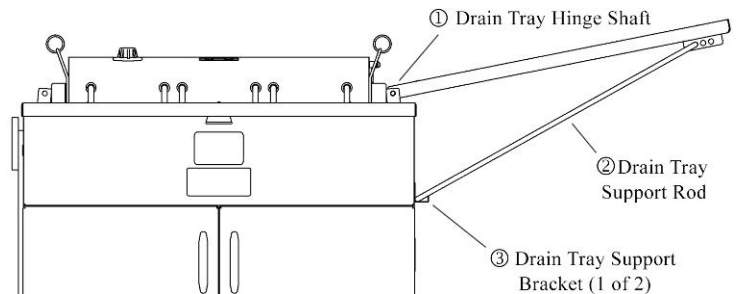
### **WARNING**

**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 loss of life.**

4. Remove the bolts that secure the fryer to the floor.
5. Using a fork lift, transport the machine to the new workstation.
6. Level the fryer, bolt it to the floor, and connect it to the power source, as explained in “Installing the Fryer” above.

## **Mounting the Drain Tray**

The drain tray is mounted on the right side of the fryer in the factory. To move the drain tray on 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 (Diagram ①)
2. Slide the drain tray hinge shaft out of the drain tray mounting brackets (Diagram 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 (Diagram 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 the drain tray hinge shaft through the holes in the mounting brackets and the 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 (Diagram ②) so it is held in place by the support brackets installed on the left side in Step 5.

## **Assembling the Frying Screen Handles**

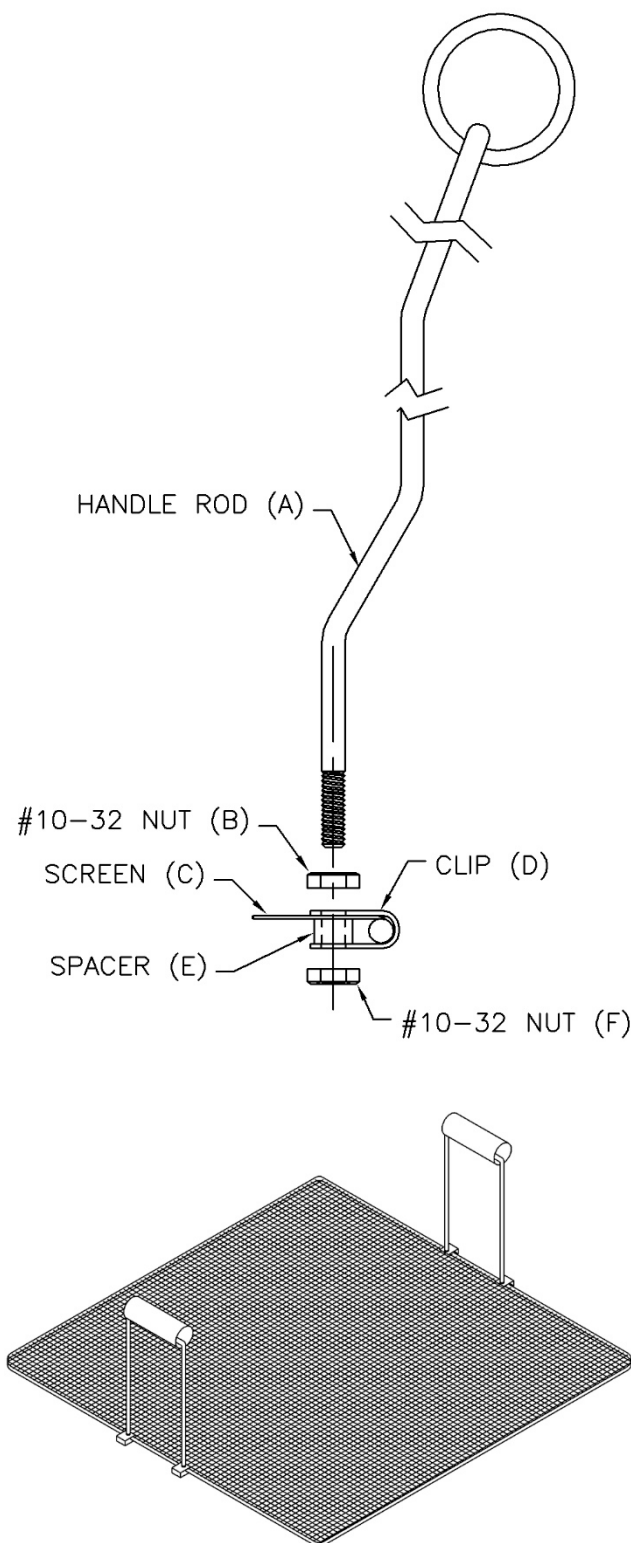
*(Be aware that you may be using detachable handles rather than fixed handles, particularly when making raised donuts using screens which are placed inside a proofer. In this case, your handles should NOT be attached to screens.)*

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

- For Model 618L and 718L Fryers, center the handles along the long sides of the screen.
- For Models 624 and 724, center the handles along any opposing sides of the screen.
- For Models 634 and 734, center the handles along the short sides of the screen.

To assemble Frying Screens, refer to Figure 1 opposite.

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 for each type of fryer.
3. Insert threaded end of handle (A) with handle to outside as shown, making sure 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.



(Above: Figure 1)

# 2

# Troubleshooting

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 Bros. at (206)322-5474. When you call, please specify the following:

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

## CAUTION

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

## WARNING

**Disconnect the machine from the power source before disassembling, repairing, or wiring**

THE FRYER WILL NOT TURN ON OR HEAT	
Possible Causes	What To Do
The on/off switch is not in the ON position.	Move the on/off switch to the ON position. The on/off switch is located inside the fryer cabinet, on the right hand side.
The thermostat is not turned on.	On the digital temperature controller, increase the target temperature to a setting that is high enough to make the “Heating” pilot light come on.
The high-temperature limit control switch has been tripped.	Press the red reset button on the back of the heater head.
	<b>WARNING</b>
	<b>Before doing any of the following, turn off the machine and allow the shortening to cool.</b>
The primary power distribution circuit breaker has been tripped.	Flip the circuit breaker. The circuit breaker is visible through an access cutout in the electrical box. (The electrical box is inside the cabinet, in the back.)
A fuse is blown.	Replace the fuse.
THE HEATING ELEMENTS FAIL TO MAINTAIN THE PROPER TEMPERATURE	
Possible Causes	What To Do
	<b>WARNING</b>
	<b>Before doing any of the following, turn off the machine and allow the shortening to cool.</b>
The thermostat is out of adjustment.	Adjust thermostat calibration. See “Temperature Controller Programming Procedure” in Appendix.
The thermostat is defective.	Replace the thermostat.
Sediment has accumulated around the thermostat bulb.	Remove the shortening from the fryer, as explained in Section 3, “Cleaning.” Remove the sediment from the thermostat bulb.

THE HEATING ELEMENTS WILL NOT HEAT	
Possible Causes	What To Do
The fryer's circuit breaker has been tripped.	Press the red reset button on the back of the heater head.
The high-temperature limit control switch has been tripped.	Press the red reset button on the back of the heater head.
	<b>WARNING</b>
	<b>Before doing any of the following, turn off the machine and allow the shortening to cool.</b>
The contactor is defective.	Replace the contactor.
A heating element is defective.	Replace the defective heating element.
The high-temperature limit control is defective.	Replace the high-temperature limit control.
The thermostat is out of adjustment.	Adjust thermostat calibration. See "Temperature Controller Programming Procedure" in Appendix.
The digital temperature controller is defective.	Replace the controller.



# 3

## Diagrams and Parts Lists

### RECORD YOUR ITEM NUMBER BELOW:

MARK FOR YOUR FRYER	ITEM NUMBER	MODEL	SIZE	VOLTS	HERTZ	PHASE
<input type="checkbox"/>	<b>21254-10</b>	618L	18" X 26"	208-240V	50/60 hz	1
<input type="checkbox"/>	<b>21256-10</b>	618L	18" X 26"	208-240V	50/60 hz	3
<input type="checkbox"/>	<b>21257-10</b>	624	24" X 24"	208-240V	50/60 hz	1
<input type="checkbox"/>	<b>21259-10</b>	624	24" X 24"	208-240V	50/60 hz	3

### ABOUT ITEM NUMBERS

All machines are identified by an Item Number. The Item Number is located on a data tag attached to the back of the electrical panel, or inside the right side door. You need to know your fryer's Item Number to identify parts diagrams for that fryer. Find out your item number, and mark it on the front cover of this manual, and also immediately above.

### FOR OTHER ITEM NUMBERS NOT IN THIS BOOK

Contact Belshaw Service at [service@belshaw.com](mailto:service@belshaw.com) or call 1-800-578-2547 (US/Canada) or (+1)206-322-5474 (International).

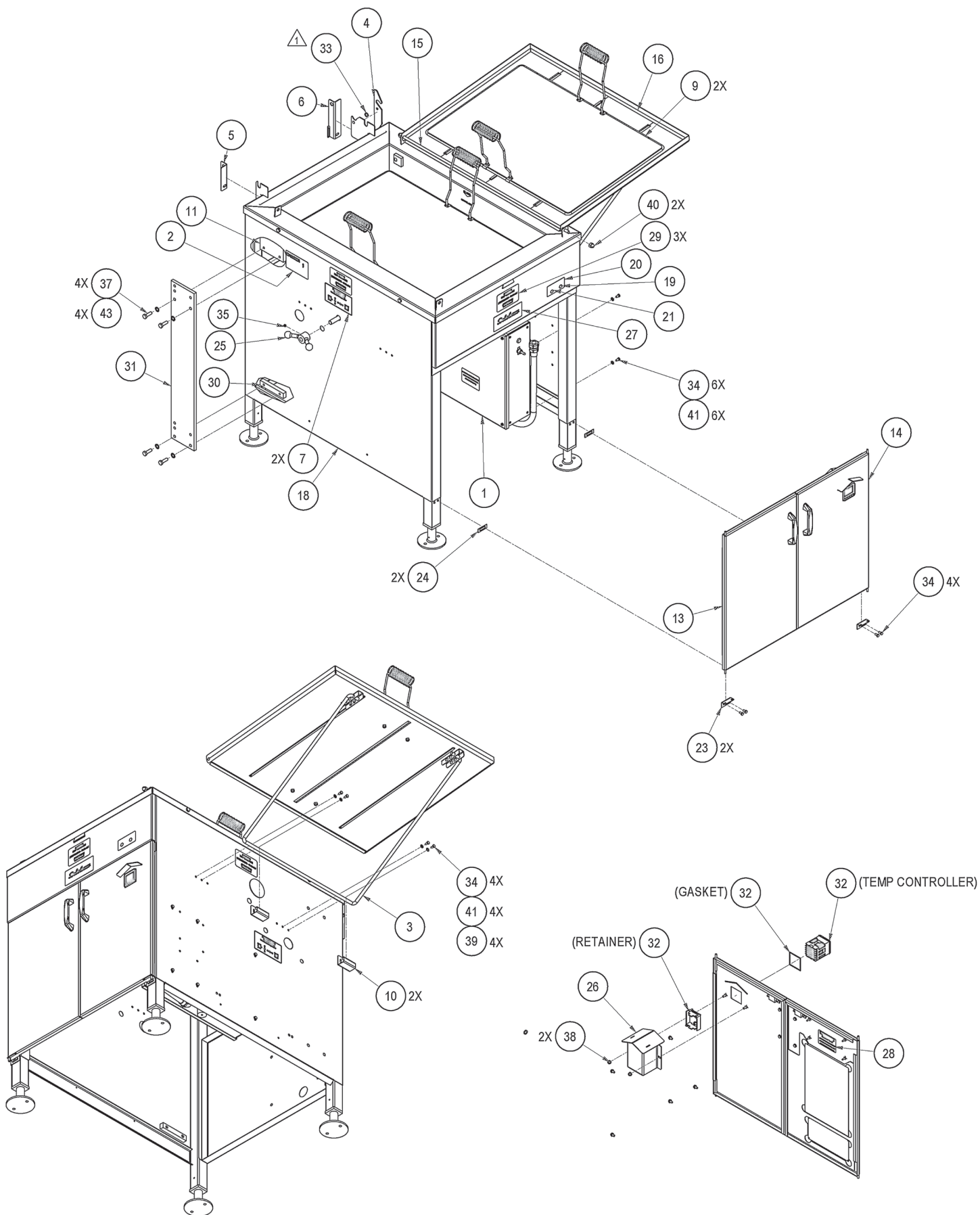


DIAGRAM: 618-1303 R02

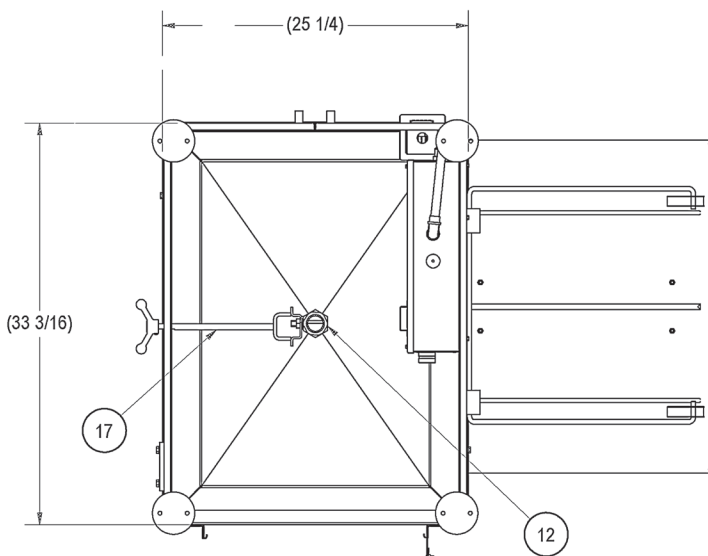
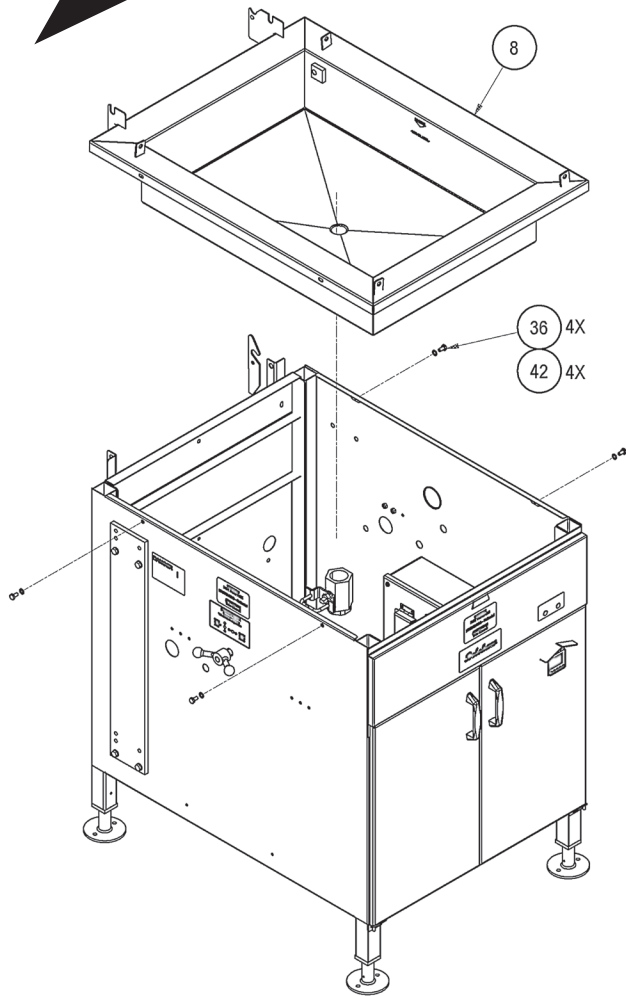
USE THIS PARTS LIST FOR

**MODEL: 618L**

**ITEM NUMBERS:**

**21254-10, 21256-10**

TO IDENTIFY MODEL AND ITEM  
NUMBER, SEE DATA TAG



**BILL OF MATERIAL**

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	618-1500	ELECTRIC BOX; ELEC. OPEN KETTLE
2	1	618L-0105	WARNING LABEL
3	1	618L-0124	DRAIN TRAY SUPPORT ROD
4	1	618L-0125	TILT LATCH
5	1	618L-0130	HEATER HEAD RETAINING BRACKET- LEFT
6	1	618L-0131	HEATER HEAD RETAINING BRACKET-RIGHT
7	2	618L-0143	LABEL, DRAIN VALVE
8	1	618L-1057	KETTLE ASSEMBLY
9	2	618L-1058	FRYING SCREEN ASSEMBLY
10	2	624-0039	SS DRAIN TRAY SUPPORT REST
11	1	624-0170	CUTTER MOUNT CLAMP BAR-UPPER
12	1	624-0174	DRAIN VALVE BALL 1-1/4 NSF
13	1	718G-1026	DOOR, LEFT HAND, ASSEMBLY
14	1	718G-1027	DOOR, RIGHT HAND, ASSEMBLY
15	1	718LG-0038	DRAIN TRAY HINGE SHAFT
16	1	718LG-0529	DRAIN TRAY ASSEMBLY
17	1	718LG-0530	EXTENSION ROD ASSEMBLY W/HANDLE
18	1	718LG-8002	ASSEMBLY; CABINET
19	1	724G-0146	PILOT LIGHT, 25V YELLOW
20	1	724G-0204-1	LABEL; TEMPERATURE CONTROL
21	1	724G-0205	PILOT LIGHT, RED, 25V
22	1	724G-0206	2" PLUG BUTTON, NICKEL PLATED
23	2	724G-0299	DOOR MOUNTING BRACKET-LOWER
24	2	724G-0313	HINGE SPACER
25	1	724G-6006	DRAIN VALVE KNOB
26	1	724G-8009	COVER, TEMP CONTROLLER, DOOR
27	1	EP18/24-0140	LABEL; BELSHAW LOGO
28	1	LBL-0014	LABEL; INSTALLATION WARNING
29	3	MK-0186	CAUTION HOT SURFACE LABEL
30	1	P-0001	FRYER BRACKET CLAMP
31	1	P-0002	BRACKET PLATE (CUTTER MOUNT)
32	1	TJ-0184C-2	TEMP CTRL, 1/16, 24V, OPK
33	1	U-0008	DIAL SCREW COLLAR
34	14	903-0501SS	10-24 X 3/8 SS HEX HD MACH SCREW
35	1	903-0951.CP	1/4-20X1/4 SKT SET SCR CP LP
36	4	903-0970SS	1/4-20X1/2 SS HEX CAP SCREW
37	4	903-1330	5/16-18X1 UNC SS HEX HEAD MACHINE SCREW
38	2	903-5101	#10-24 SS NYLON INSERT LOCKNUT
39	4	903-5102	10-24 SS HEX NUT
40	2	903-6455	5/16-18 SS ACORN NUT CAP
41	10	903-7514	#10 SS INTERNAL TOOTH LOCKWASR
42	4	903-7529	1/4 SS INT TOOTH LOCK WASHER
43	4	903-7542SS	WASHER, INTERNAL TOOTH LOCK, 5/16 SST

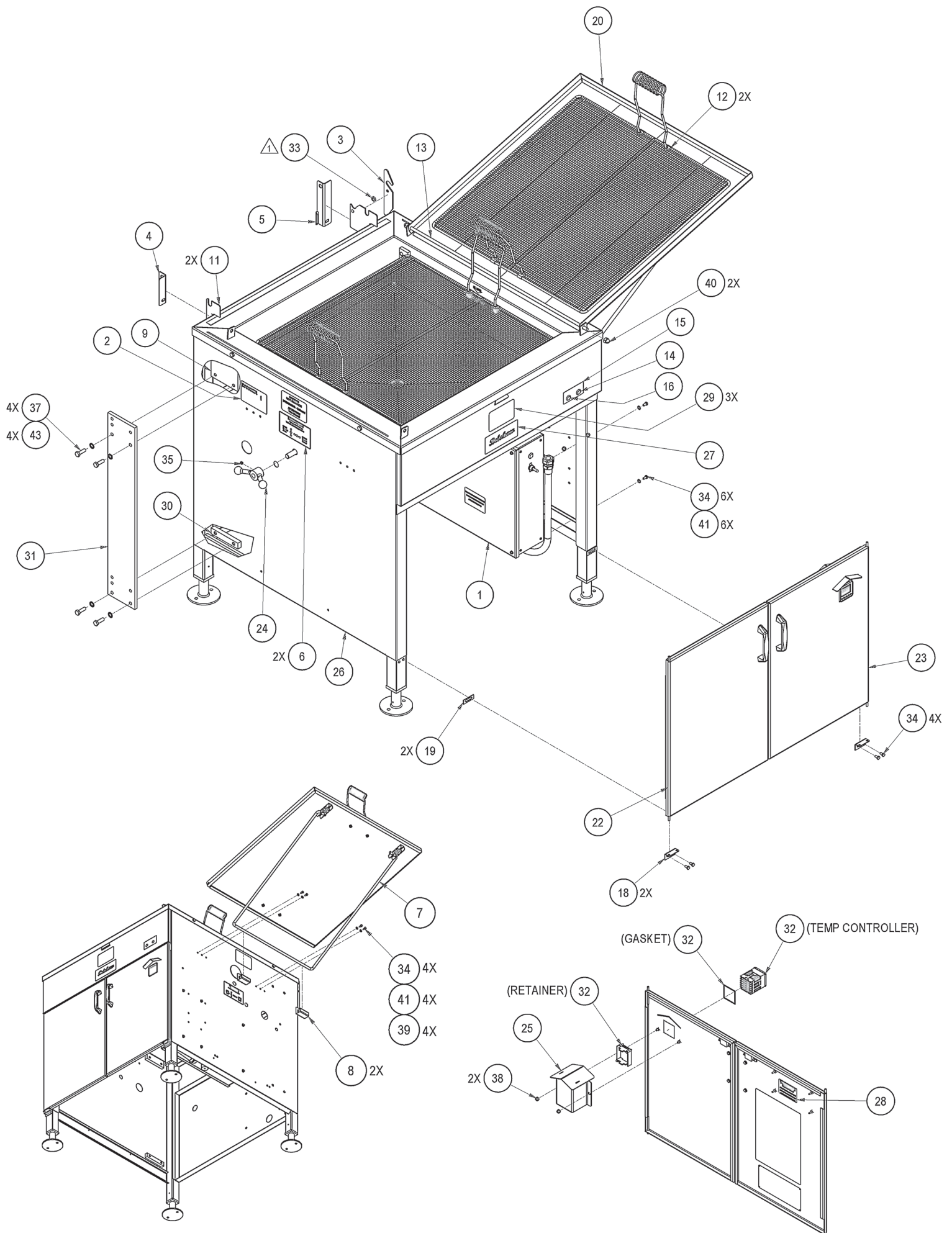


DIAGRAM: 624-1303 R02

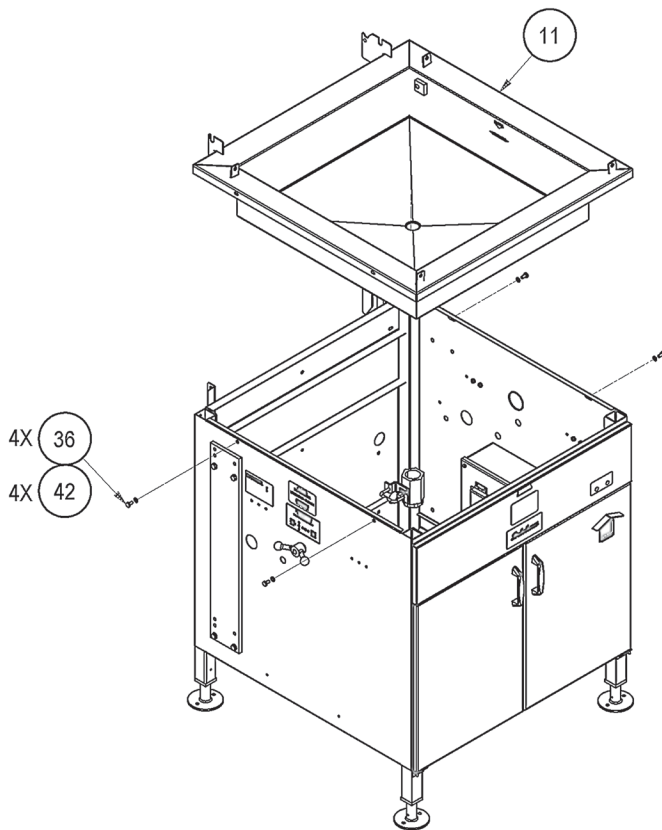
USE THIS PARTS LIST FOR

**MODEL: 618L**

**ITEM NUMBERS:**

**21257-10, 21259-10**

TO IDENTIFY MODEL AND ITEM  
NUMBER, SEE DATA TAG



BILL OF MATERIAL			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	618-1500	ELECTRIC BOX; ELEC. OPEN KETTLE
2	1	618L-0105	WARNING LABEL
3	1	618L-0125	TILT LATCH
4	1	618L-0130	HEATER HEAD RETAINING BRACKET- LEFT
5	1	618L-0131	HEATER HEAD RETAINING BRACKET-RIGHT
6	2	618L-0143	LABEL, DRAIN VALVE
7	1	624-0037	DRAIN TRAY SUPPORT ROD
8	2	624-0039	SS DRAIN TRAY SUPPORT REST
9	1	624-0170	CUTTER MOUNT CLAMP BAR-UPPER
10	1	624-0174	DRAIN VALVE BALL 1-1/4 NSF
11	1	624-1057	KETTLE ASSEMBLY
12	2	624-1058	FRYING SCREEN ASSEMBLY
13	1	724G-0088	DRAIN TRAY HINGE SHAFT
14	1	724G-0146	PILOT LIGHT,25V YELLOW
15	1	724G-0204-1	LABEL;TEMPERATURE CONTROL
16	1	724G-0205	PILOT LIGHT,RED, 25V
17	1	724G-0206	2" PLUG BUTTON, NICKEL PLATED
18	2	724G-0299	DOOR MOUNTING BRACKET-LOWER
19	2	724G-0313	HINGE SPACER
20	1	724G-0540	DRAIN TRAY ASSEMBLY
21	1	724G-0556	EXTENSION ROD ASSEMBLY W/HANDLE
22	1	724G-1026	DOOR, LEFT HAND, ASSEMBLY
23	1	724G-1027	DOOR, RIGHT HAND, ASSEMBLY
24	1	724G-6006	DRAIN VALVE KNOB
25	1	724G-8009	COVER, TEMP CONTROLLER, DOOR
26	1	724G-8010	CABINET WLDT
27	1	EP18/24-0140	LABEL; BELSHAW LOGO
28	1	LBL-0014	LABEL; INSTALLATION WARNING
29	3	MK-0186	CAUTION HOT SURFACE LABEL
30	1	P-0001	FRYER BRACKET CLAMP
31	1	P-0002	BRACKET PLATE (CUTTER MOUNT)
32	1	TJ-0184C-2	TEMP CTRL, 1/16, 24V, OPK
33	1	U-0008	DIAL SCREW COLLAR
34	14	903-0501SS	10-24 X 3/8 SS HEX HD MACH SCREW
35	1	903-0951.CP	1/4-20X1/4 SKT SET SCR CP LP
36	4	903-0970SS	1/4-20X1/2 SS HEX CAP SCREW
37	4	903-1330	5/16-18X1 UNC SS HEX HEAD MACHINE SCREW
38	2	903-5101	#10-24 SS NYLON INSERT LOCKNUT
39	4	903-5102	10-24 SS HEX NUT
40	2	903-6455	5/16-18 SS ACORN NUT CAP
41	10	903-7514	#10 SS INTERNAL TOOTH LOCKWASR
42	4	903-7529	1/4 SS INT TOOTH LOCK WASHER
43	4	903-7542SS	WASHER, INTERNAL TOOTH LOCK, 5/16 SST

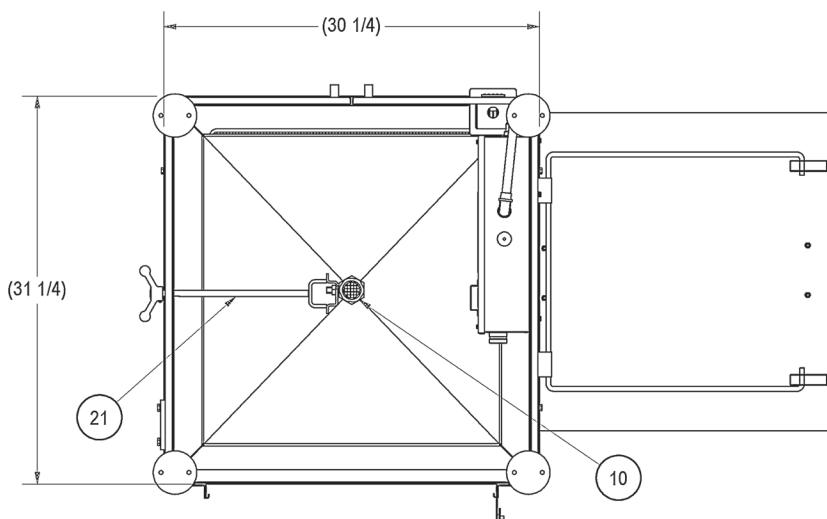




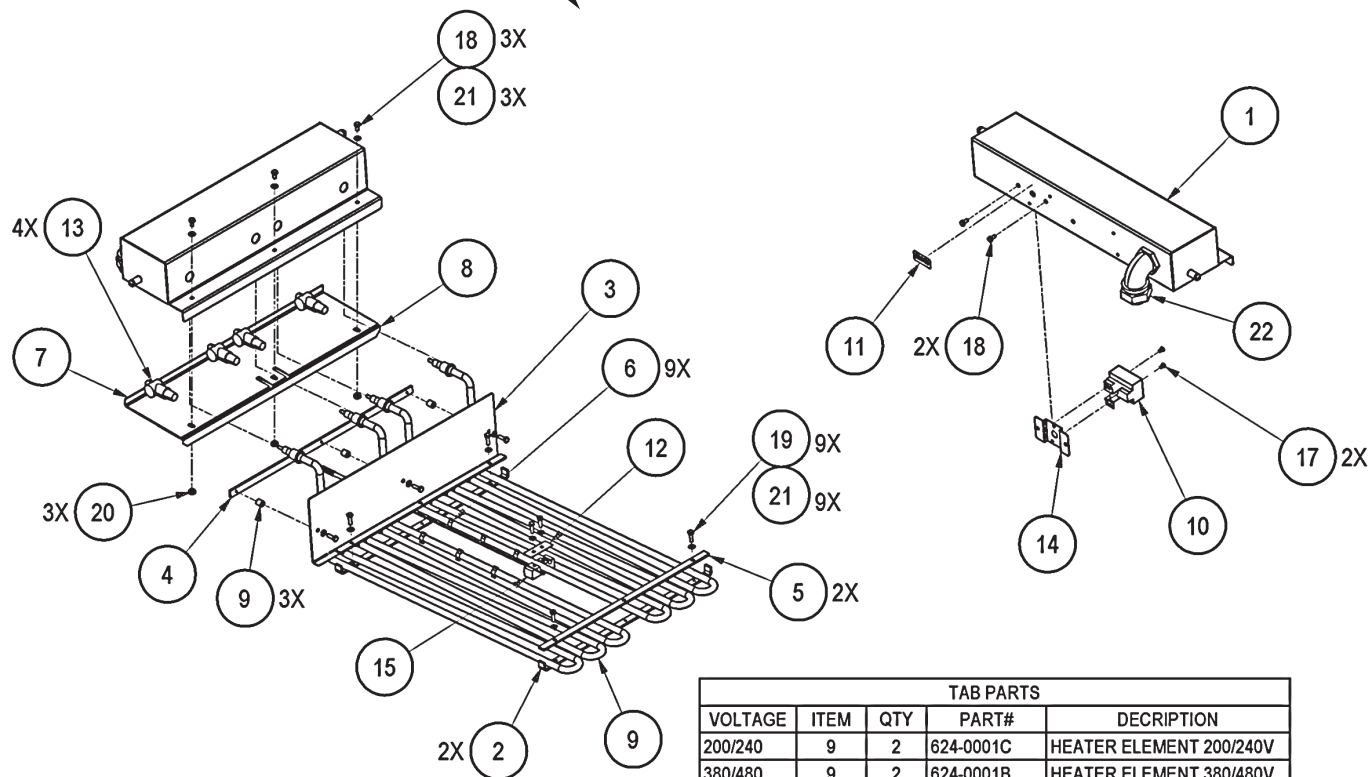
DIAGRAM: 618-1516-240TAB  
USE THIS DIAGRAM FOR

**MODEL: 618L**

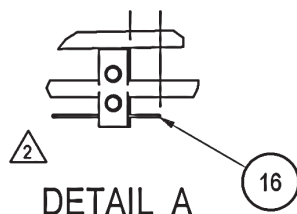
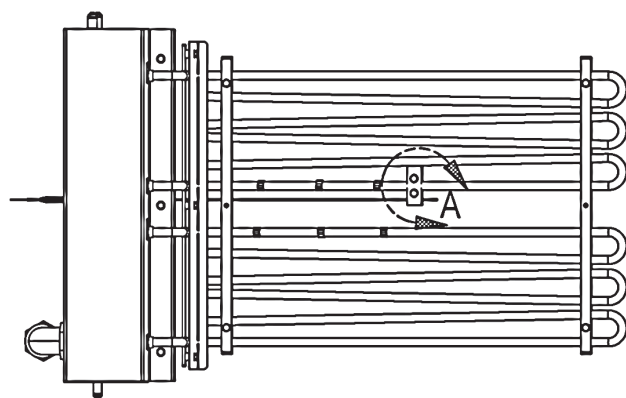
**ITEM NUMBER:**

**21254-10, 21256-10**

TO IDENTIFY MODEL AND ITEM NUMBER,  
SEE DATA TAG ON CONTROL PANEL



TAB PARTS				
VOLTAGE	ITEM	QTY	PART#	DESCRIPTION
200/240	9	2	624-0001C	HEATER ELEMENT 200/240V
380/480	9	2	624-0001B	HEATER ELEMENT 380/480V



BILL OF MATERIAL				
ITEM	QTY	PART NUMBER	DESCRIPTION	
1	1	618-8003	HEATER HEAD CASE ASSEMBLY	
2	2	618L-0001	ELEMENT TIE BAR - LOWER	
3	1	618L-0062	ELEMENT SHIELD	
4	1	618L-0063	ELEMENT SHIELD BAR	
5	2	618L-0095	ELEMENT TIE BAR- UPPER	
6	9	618L-0100	THERM BULB CLIP	
7	1	618L-0122	HEATER HEAD BOTTOM	
8	1	618L-0123	HEATER HEAD SKIRT	
9	3	634-0041	ELEMENT SHIELD SPACER	
10	1	FM200-0065M	SWT, HILIM(5.75) USE SK-1024.	
11	1	FM200-0066	LABEL; TEMPERATURE CUT OUT	
12	1	MK-0275	BULB CLAMP TOP	
13	4	MK-0282-2	INSULATOR, ELEMENT TERMINAL, 3PH	
14	1	MK-0283	HIGH LIMIT MOUNTING BRACKET	
15	1	MK-6001	BULB BRACKET CLAMP, UNIVERSAL	
16	(REF)	TCPL-0005	THERMOCOUPLE, TYPE J, .063X18	
17	2	903-0302	6-32X1/4 SS SLOT PAN M/S	
18	5	903-0501SS	10-24 X 3/8 SS HEX HD MACH SCREW	
19	9	903-0528	SST, #10-24 X 0.625 HEX HEAD MACHINE SCREW	
20	3	903-5102	10-24 SS HEX NUT	
21	12	903-7514	#10 SS INTERNAL TOOTH LOCKWASR	
22	1	990-0016	1 CONNECT 90 DEG LIQ-TITE FLEX	

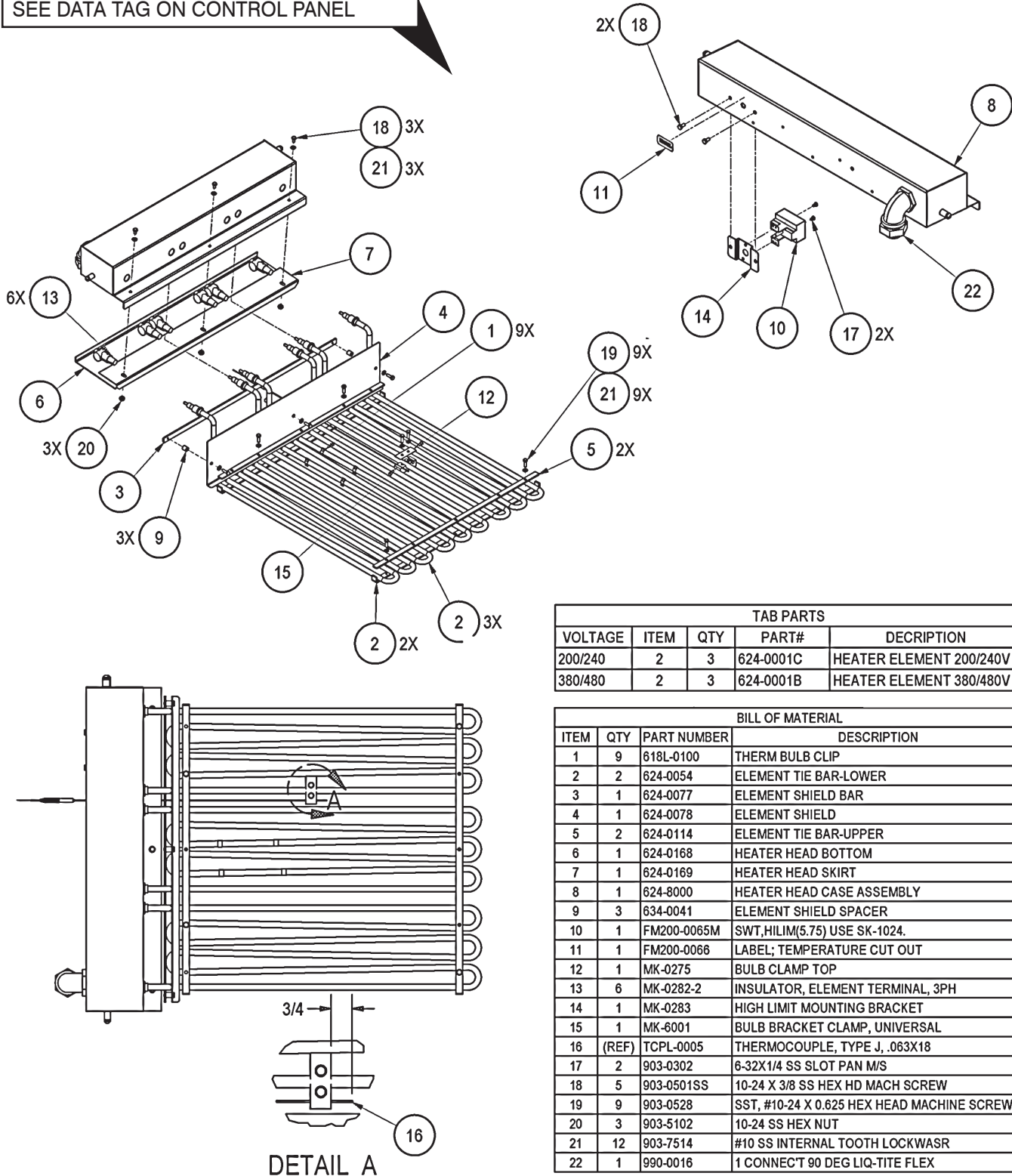
DIAGRAM: 624-1516-240TAB  
USE THIS DIAGRAM FOR

**MODEL: 624**

**ITEM NUMBER:**

**21257-10, 21259-10**

TO IDENTIFY MODEL AND ITEM NUMBER,  
SEE DATA TAG ON CONTROL PANEL



TAB PARTS				
VOLTAGE	ITEM	QTY	PART#	DESCRIPTION
200/240	2	3	624-0001C	HEATER ELEMENT 200/240V
380/480	2	3	624-0001B	HEATER ELEMENT 380/480V

BILL OF MATERIAL			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	9	618L-0100	THERM BULB CLIP
2	2	624-0054	ELEMENT TIE BAR-LOWER
3	1	624-0077	ELEMENT SHIELD BAR
4	1	624-0078	ELEMENT SHIELD
5	2	624-0114	ELEMENT TIE BAR-UPPER
6	1	624-0168	HEATER HEAD BOTTOM
7	1	624-0169	HEATER HEAD SKIRT
8	1	624-8000	HEATER HEAD CASE ASSEMBLY
9	3	634-0041	ELEMENT SHIELD SPACER
10	1	FM200-0065M	SWT, HILIM(5.75) USE SK-1024.
11	1	FM200-0066	LABEL; TEMPERATURE CUT OUT
12	1	MK-0275	BULB CLAMP TOP
13	6	MK-0282-2	INSULATOR, ELEMENT TERMINAL, 3PH
14	1	MK-0283	HIGH LIMIT MOUNTING BRACKET
15	1	MK-6001	BULB BRACKET CLAMP, UNIVERSAL
16	(REF)	TCPL-0005	THERMOCOUPLE, TYPE J, .063X18
17	2	903-0302	6-32X1/4 SS SLOT PAN M/S
18	5	903-0501SS	10-24 X 3/8 SS HEX HD MACH SCREW
19	9	903-0528	SST, #10-24 X 0.625 HEX HEAD MACHINE SCREW
20	3	903-5102	10-24 SS HEX NUT
21	12	903-7514	#10 SS INTERNAL TOOTH LOCKWASR
22	1	990-0016	1 CONNECT 90 DEG LIQ-TITE FLEX

USE THE DIAGRAMS  
ON PAGES 8-11 FOR

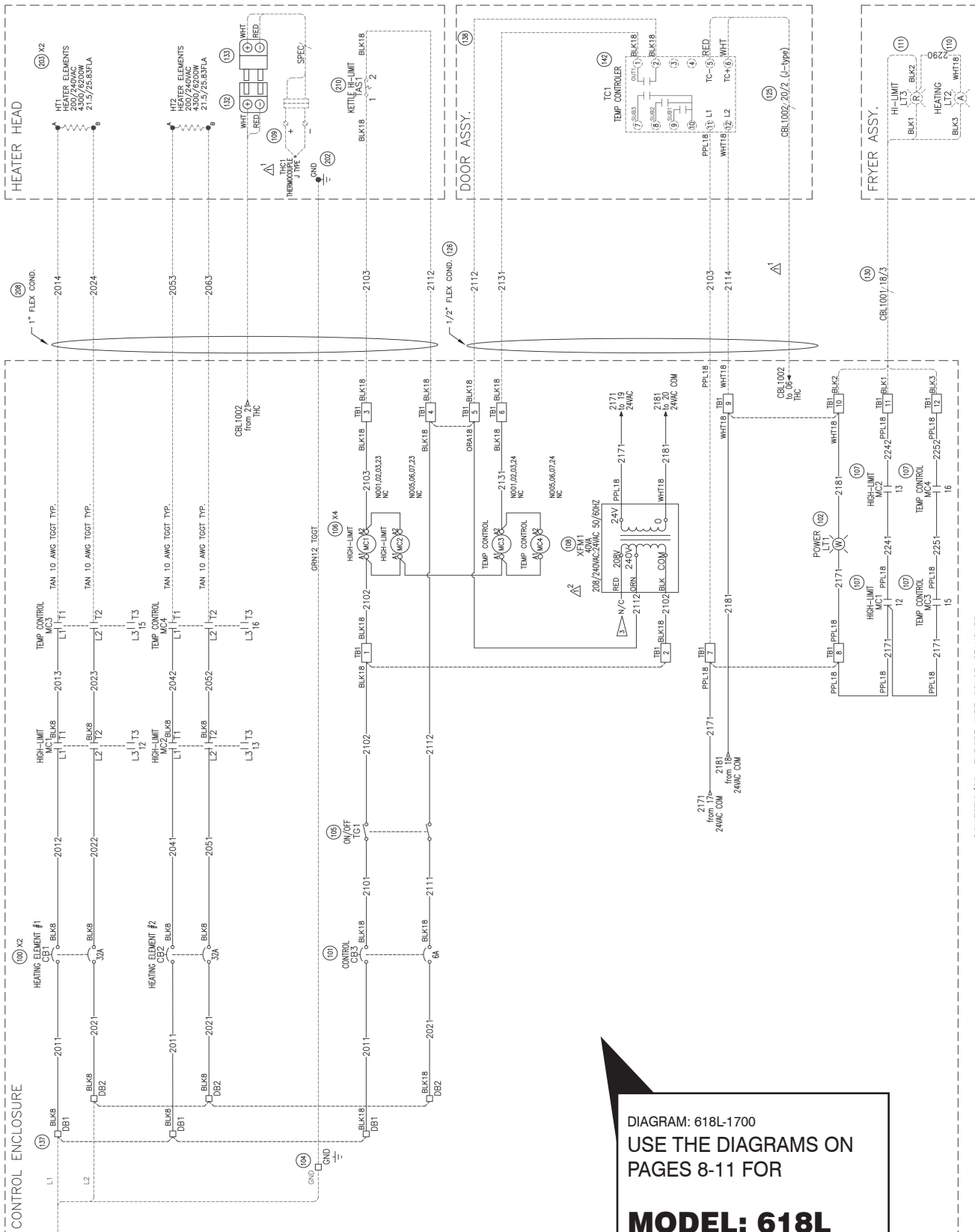
TO IDENTIFY MODEL  
AND ITEM NUMBER,  
SEE DATA TAG ON  
CONTROL PANEL

618L-1700-3: WIRE HARNESS & CABLE SET									
WIRE/CABLE NO.	WIRE COLORS	PART NO.	WIRE INCHES	OMP1	PIN1	OMP2	PIN2	END1 P/N	END2 P/N
2011	BLK18	995-0450	13	DB1		CB3		908-0800.R	908-0800.R
2021	BLK18	995-0450	11	DB2		CB3		908-0800.R	908-0800.R
2022	BLK18	995-0450	4	CB1		MC1	L2	908-0800.R	990-0560TR
2051	BLK18	995-0450	5	CB2		MC2	L2	908-0800.R	990-0560TR
2101	BLK18	995-0450	20	CB3		TC1		908-0800.R	990-0560TR
2102	BLK18	995-0450	8	TB1	1	MC1	A1	908-0800.R	990-0560TR
2102	BLK18	995-0450	5	MC1	A1	MC2	A1	990-0560TR	990-0560TR
2102	BLK18	995-0450	9	MC2	A1	MC3	A1	990-0560TR	990-0560TR
2102	BLK18	995-0450	5	MC3	A1	MC4	A1	990-0560TR	990-0560TR
2102	BLK18	995-0450	20	TC1		TB1	1	990-0560TR	908-0800.R
2104	BLK18	995-0450	80	TB1	3	TAS1	1	908-0800.R	990-0504
2104	BLK18	995-0450	5	MC1	A2	MC2	A2	990-0560TR	990-0560TR
2104	BLK18	995-0450	9	MC1	A2	TB1	3	990-0560TR	908-0800.R
2111	BLK18	995-0450	20	CB3		TC1		908-0800.R	990-0560TR
2112	BLK18	995-0450	20	TC1		TB1	4	990-0560TR	908-0800.R
2112	BLK18	995-0450	80	TB1	4	TAS1	2	908-0800.R	990-0504
2112	BLK18	995-0450	33	TB1	5	TC1	2	908-0800.R	908-0800.R
2131	BLK18	995-0450	4.5	MC3	A2	MC4	A2	990-0560TR	990-0560TR
2131	BLK18	995-0450	14	MC3	A2	TB1	6	990-0560TR	908-0800.R
2131	BLK18	995-0450	33	TB1	6	TC1	1	908-0800.R	908-0800.R
2011	BLK8	995-0392	13	DB1		CB1		908-0800.R	908-0800.R
2011	BLK8	995-0392	11	DB1		CB2		908-0800.R	908-0800.R
2012	BLK8	995-0392	4	CB1		MC1	L1	908-0800.R	990-0560TR
2013	BLK8	995-0392	2	MC1	T1	MC3	L1	990-0560TR	990-0560TR
2021	BLK8	995-0392	13	DB2		CB1		908-0800.R	908-0800.R
2021	BLK8	995-0392	13	DB2		CB2		908-0800.R	908-0800.R
2023	BLK8	995-0392	2	MC1	T2	MC3	L2	990-0560TR	990-0560TR
2041	BLK8	995-0392	5	CB2		MC2	L1	908-0800.R	990-0560TR
2042	BLK8	995-0392	2	MC2	T1	MC4	L1	990-0560TR	990-0560TR
2052	BLK8	995-0392	2	MC2	T2	MC4	L2	990-0560TR	990-0560TR
	GRN12 TGGT	995-0227	80	LUG		LUG		-	-
2171	PPL18	995-0453	33	TB1	7	TC1	11	908-0800.R	908-0800.R
2171	PPL18	995-0453	18	TB1	8	LT1		908-0800.R	990-0552
2171	PPL18	995-0453	12	TB1	8	MC1		908-0800.R	990-0560TR
2171	PPL18	995-0453	10	MC1		MC2		990-0560TR	990-0560TR
2241	PPL18	995-0453	9	MC1		TB1		990-0560TR	990-0560TR
2242	PPL18	995-0453	3	MC2		TB1	11	990-0560TR	908-0800.R
2251	PPL18	995-0453	7	MC3		MC4		990-0560TR	990-0560TR
2252	PPL18	995-0453	7	MC4		TB1	12	990-0560TR	908-0800.R
2014	TAN10 TGGT	995-0239	80	MC3	T1	HT1	A	908-0800.R	990-0580
2024	TAN10 TGGT	995-0239	80	MC3	T2	HT1	B	908-0800.R	990-0580
2053	TAN10 TGGT	995-0239	80	MC4	T1	HT2	A	908-0800.R	990-0580
2063	TAN10 TGGT	995-0239	80	MC4	T2	HT2	B	908-0800.R	990-0580
2181	WHT18	995-0455	18	LT1		TB1	10	990-0552	908-0800.R
2181	WHT18	995-0455	33	TB1	9	TC1	12	908-0800.R	908-0800.R
2290	WHT18	995-0455	3	LT3	-	LT2	-	990-0552	990-0552
				TB1	10	LT3	+	908-0800.R	990-0552
				TB1	11	LT3	-	908-0800.R	990-0552
				TB1	12	LT2	+	908-0800.R	990-0552
				TC1	5	PLG	-	908-0800.R	-
				TC1	6	PLG	-	908-0800.R	-
CBL1001	18/3	995-0043	60						
CBL1002	SPEC	990-1006	33						

ITEM	DESCRIPTION	QTY	BELSHAW PART NO.
100	CIRCUIT BREAKER D CURVE 2P 32A	2	#CBR-0012-32
101	CIRCUIT BREAKER D CURVE 2P 6A	1	#CBR-0012-6
102	CLEAR PILOT LIGHT 24V AC/DC	1	#PLT-0020
103	LABEL GROUND, BLK ON GREEN	1	618-0128
104	LUG, AL, SET SCREW 6-2/0 1/4" STUD, VMI	1	618-0131
105	TOGGLE SWITCH DPST 20A SLIP ON	1	624-0003A
106	MAGN CONTACTR 40A 208/240 COIL 50A AC-1	4	624-0144
107	CTR, AUX 1N0/1NC, 120/240/480V - 3/1.5/0.75A	4	624-0144-1
108	XFM, 40VA, 208/240X24VAC, 50/60HZ	1	724G-0037B
109	THERMOCOUPLE, TYPE J, W/ 1' LEADS	REF	#TCPL-0005
110	PILOT LIGHT 25V YELLOW	REF	724G-0146
111	PILOT LIGHT RED 25V	REF	724G-0205
112	8-32X3/8 SS PHILIPS HD M/S PAN HEAD	4	903-0410A
113	1/4-20 SS ESNA LOCK NUT(NYLON)	4	903-5201SS
114	#10X1/2 SS HEX WASHER HD TEK	4	903-7516
115	CONNECT, 1/2 STR LIQ-TITE FLX, VMI	REF	990-0006
116	1 CONNECT STR LIQ-TITE FLX T&B	1	990-0008
117	CONNECT, 1/2 90DEG LIQ-TITE FLX	REF	990-0014
118	DIN RAIL 35MMX7.5MMX9.25" LONG	1	990-0280-9.25
119	TB, IEC, END ANCHOR	2	990-0315
120	TB, MINI, 2.5MM, 24A, GRAY	12	990-0329
121	DIN RAIL 15MMX5.5MMX1M	1	990-0344
122	TB, MINI, END ANCHOR	2	990-0345
123	TB, JUMPERS, 10 POLE, MINI	1	990-0346
124	TB, MINI, END BARRIER	1	990-0348
126	CND, 1/2 FLEX LA GRAY	REF	991-0006
127	CORD CLAMP, AL, .250-.375", 1/2" NPT, WHT	1	992-0001
129	CORD CLAMP, AL, .625-.750", 3/4" NPT, YEL	1	992-0015
132	THERMOPILE JACK (F)	1	C200G-0101
133	THERMOCLE PLUG (M)	1	C600G-0226
134	SWITCH PLATE ON/OFF	1	DR42-0050A
135	LABEL, WARNING HAZ VOLTAGE	1	MDD-0459
137	PWR DIST BLK, 3P, 175A, 2/0-14 IN, (4)-14 OUT	1	TM634-0233
138	ELECTRIC BOX, ELEC. OPEN KETTLE	REF	618-1500 R00
139	ELECTRICAL BOX W/DT	1	618-8000 R00
140	PRE-WIRE PANEL SUB-ASSY	1	618-8001 R00
141	COVER, ELECTRICAL BOX, W/DT	1	618-8002 R00
142	TEMP CRT'L, 1/16, 24V, OPK	REF	TJ-0184C-2
143	COVER, POWER DIST. BLK	1	#ACS-0002
144	HOE SEAL, 1/2" NEMA 3R	1	#ACS-0035-1

ITEM	DESCRIPTION	QTY	BELSHAW PART NO.
200	LABEL, DATA PLATE	REF	0160
201	LABEL, GROUND, BLK ON GREEN	REF	618-0128
202	LUC, AL SET SCREW 6-2/0 1/4" STUD, VMI	REF	618-0131
203	ELEMNT 200/240V 4296/6185W	REF	624-0001C
204	LABEL,ETL LISTED,NSF STD 4	REF	904-0035
205	LABEL; ETL LISTED, UL STD 197 STD C22.2	REF	904-0040
206	1 CONNECT 90DEG LUO-TITE FLEX	REF	990-0016
207	TERM HITEMP ON RING, #10 16-14	REF	990-0582
208	1 FLEXIBLE CONDUIT UA GRAY UA1-GRY	REF	991-0014
210	SWT, HILUM, 125VA, 2HP@250VAC, 450F	REF	FN200-0065W
211	LABEL,TEMP CUTOUT	REF	FN200-0086
212	ELEM TERMINAL INSULATOR,3 PH	REF	MK-0282-2
213	HIGH LIMIT MOUNTING BRACKET	REF	MK-0283-A R01
213	HEATER HEAD ASSY 240V	REF	618-1516-240





618L ELECTRICAL DATA			
MODEL	618L-1700		
VOLTS	208	240	
PHASE	1	1	
KWATTS	8.88	12.69	
AMPS	42.68	52.89	

DOMESTIC/CSA EXPORT WIRE COLOR STANDARD	
AC POWER (UNGROUND) AT SUPPLY VOLTAGE	BLACK
AC POWER (UNGROUND) AT LESS THAN SUPPLY VOLTAGE	RED
GROUND AC CONTROL CIRCUIT REGARDLESS OF VOLTAGE	WHITE
DC CONTROL (UNGROUND) CIRCUIT	BLUE
GROUND DC CONTROL CIRCUIT	WHITE/BLEU*
AC LOW VOLTAGE (<30VAC) CONTROL CIRCUIT	PURPLE/VIOLET
CONTROL VOLTAGE (<30V) FROM SEPARATE SOURCE	ORANGE/WHITE
GROUND	GREEN/YELLOW

NOTES:

- Wires to be UL listed or equivalent.
- All wires to be numbered per rung position.
- All wires with the same electrical potential shall have the same wire number.

\*BLUE/WHIT ACCEPTABLE

DIAGRAM: 618L-1700

USE THE DIAGRAMS ON PAGES 8-11 FOR

**MODEL: 618L**

**ITEM NBR:**

**21254-10,**

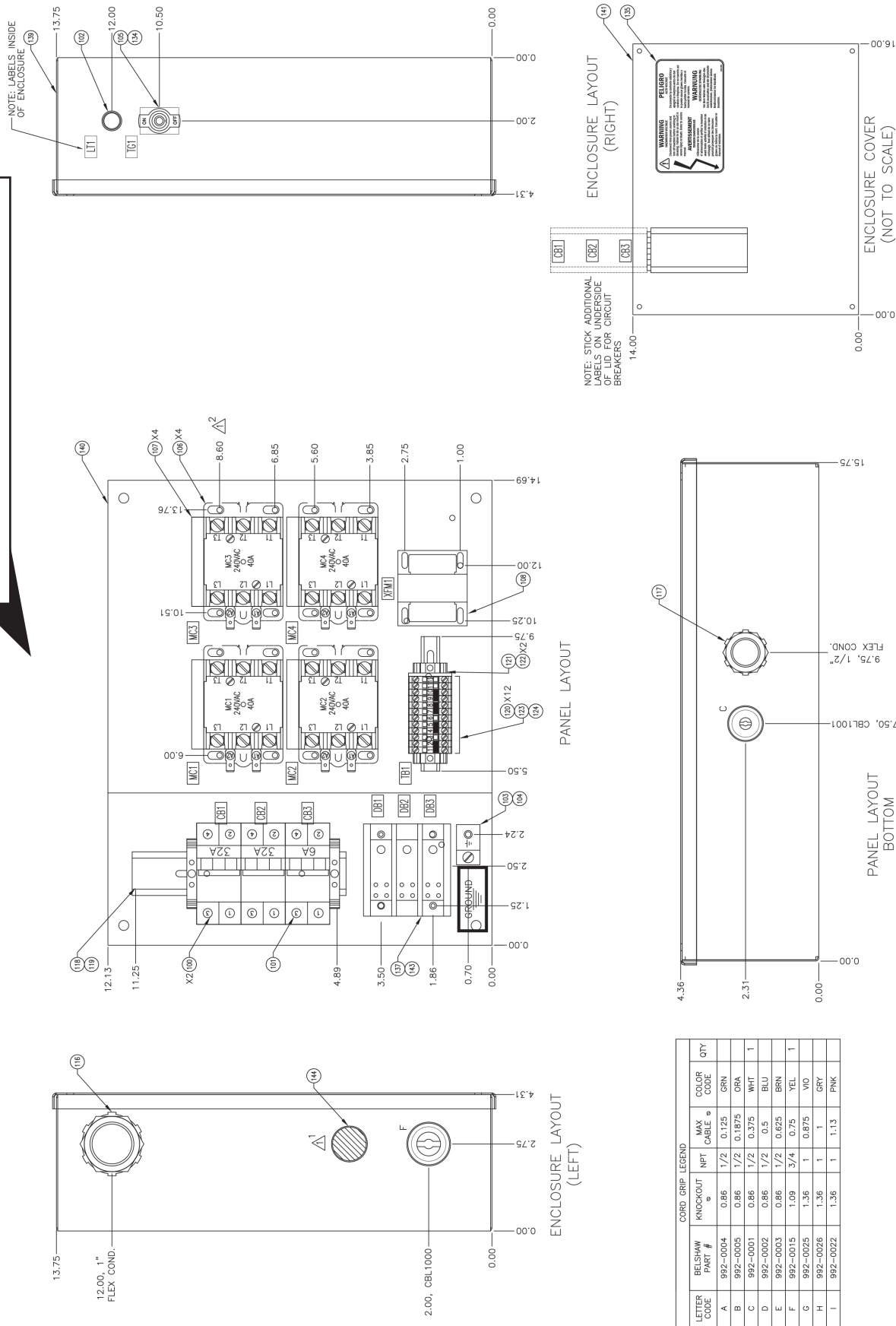
**21256-10**

TO IDENTIFY MODEL AND ITEM NUMBER, SEE DATA TAG ON CONTROL PANEL

DIAGRAM: 618L-1700  
USE THE DIAGRAMS  
ON PAGES 8-11 FOR

**MODEL:**  
**618L**  
**ITEM NBR:**  
**21254-10,**  
**21256-10**

TO IDENTIFY MODEL  
AND ITEM NUMBER,  
SEE DATA TAG ON  
CONTROL PANEL



LETTER CODE	BELSHAW PART #	CORD GRIP	LEGEND	MAX CABLE	COLOR CODE	QTY
A	992-0004	0.86	1/2	0.125	GRN	
B	992-0005	0.86	1/2	0.1875	ORA	
C	992-0001	0.86	1/2	0.375	WHT	1
D	992-0002	0.86	1/2	0.5	BLU	
E	992-0003	0.86	1/2	0.625	BRN	1
F	992-0015	1.09	3/4	0.75	YEL	
G	992-0025	1.36	1	0.875	VIO	
H	992-0026	1.36	1	1	GRY	
I	992-0022	1.36	1	1.13	PNK	



DIAGRAM: 624-1700

USE THE DIAGRAMS ON PAGES 12-15 FOR

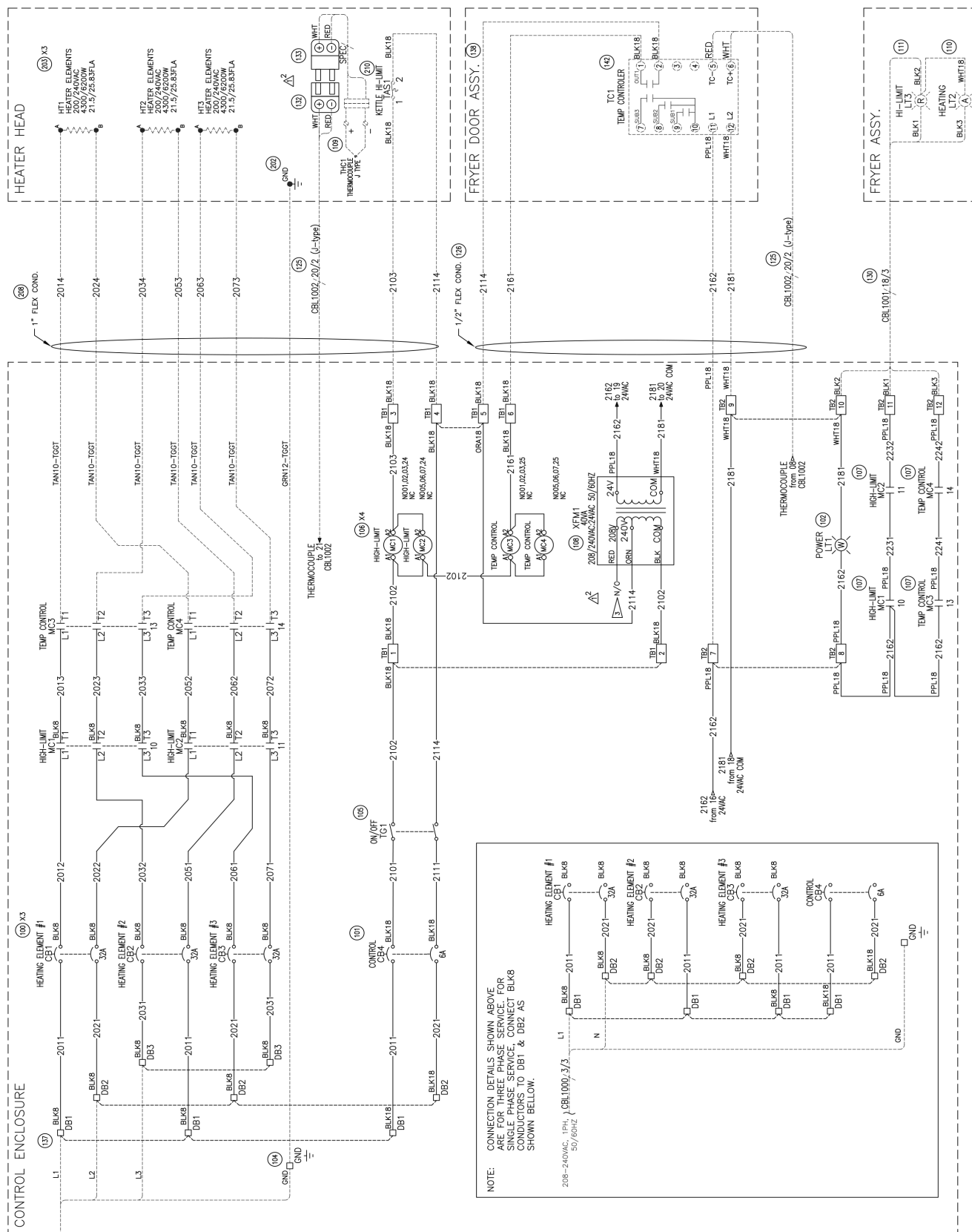
**MODEL: 624**

**ITEM NBR: 21257-10, 21259-10**

TO IDENTIFY MODEL  
AND ITEM NUMBER,  
SEE DATA TAG ON  
CONTROL PANEL

624-1700-1: 624 FRYER CONTROL ENCL. P1 208-240V			QTY	BELSHAW PART NO.
100	DESCRIPTION		3	#CGR-0012-32
101	CIRCUIT BREAKER D CURVE 2P 32A		1	#CGR-0012-6
102	CLEAR PILOT LIGHT 24V AC/DC		1	#PLT-0020
103	LABEL GROUND, BLK ON GREEN		1	618-0128
104	LUG, AL.SET SCREW 6-2/0 1/4" STUD, VMI		1	618-0131
105	TOGGLE SWITCH DPST 20A SLIP ON		1	624-0003A
106	MAGN CONTACTOR 40A 208/240 COIL 50A AC-1		4	624-0144
107	CTR, AUX 1NO/1NC, 120/240/480V - 3/15/0/75A		4	624-0144-1
108	XFM 40VA 208/240V 240V 50/60HZ		1	724G-0037B
109	THERMOCOUPLE, TYPE J, W/ 1' LEADS		REF	#TCPL-0005
110	PILOT LIGHT 25V YELLOW		REF	724G-0146
111	PILOT LIGHT RED 25V		REF	724G-0205
112	8-32X3/8 SS PHILIPS HD M/S PAN HEAD		4	903-0410A
113	1/4-20 SS ESMA LOCK NUT(NYLON)		4	903-5201SS
114	#10X1/2 SS HEX WASHER HD TEK		4	903-7516
115	CONNECT, 1/2 STR LIQ-TITE FLX 1&B		1	990-0006
116	1 CONNECT STR LIQ-TITE FLX 1&B		1	990-0008
117	CONNECT, 1/2 90DEG LIQ-TITE FLX		REF	990-0014
118	DIN RAIL 35MMX7.5MMX9.25" LONG		1	990-0280-9.25
119	TB, IEC, END ANCHOR		2	990-0315
120	TB, MINI, 2.5MM, 24A, GRAY		12	990-0329
121	DIN RAIL 15MMX5.5MMX1M		1	990-0344
122	TB, MINI, END ANCHOR		2	990-0345
123	TB, JUMPERS, 10 POLE, MINI		1	990-0346
124	TB, MINI, END BARRIER		1	990-0348
125				
126	OND, 1/2 FLEX LA GRAY		REF	991-0006
127	CORD CLAMP, AL, .250-.375", 1/2" NPT, WHIT		1	992-0001
128				
129	CORD CLAMP, AL, .625-.750", 3/4" NPT, YEL		1	992-0015
130				
131				
132	THERMOCOUPLE JACK (F)		1	C200G-0101
133	THERMOCLE PLUG (M)		1	C600G-0226
134	SWITCH PLATE ON/OFF		1	D42-0050A
135	LABEL WARNING HAZ VOLTAGE		1	MDD-0459
137	PWR DIST BLK, 3P, 175A, 2/0-14 IN, (4)4-14 OUT		1	TM634-0233
138	ELECTRIC BOX, ELEC. OPEN KETTLE		REF	618-1500 R00
139	ELECTRICAL BOX W/DT		1	618-8000 R00
140	PRE-WIRE PANEL SUB-ASSY		1	618-8001 R00
141	COVER, ELECTRICAL BOX, W/DT		1	618-8002 R00
142	TEMP ORTL, 1/16, 24V, OPK		REF	TJ-0184C-2
143	COVER, POWER DIST, BLK		1	#ACS-0002
144	HOLE SEAL, 1/2" NEMA 3R		1	#ENG-0035-1

624-1700-2: HEATER HEAD ASSY, UL 240V			QTY	BELSHAW PART NO.
200	DESCRIPTION		REF	160
201	LABEL DATA PLATE		REF	618-0128
202	LUG, AL.SET SCREW 6-2/0 1/4" STUD, VMI		REF	618-0131
203	ELEVMT 200/240V 4296/6185W		REF	624-0001C
204	LABEL, LTL LISTED, NSF STD 4		REF	904-0035
205	LABEL, ETL LISTED, UL STD 197 STD C22.2		REF	904-0040
206	1 CONECT 90DEG LIQ-TITE FLEX		REF	990-0016
207	TERM HITEMP UN RING, #10 16-14		REF	990-0582
208	1 FLEXIBLE CONDUIT UA GRAY UA1-GRY		REF	991-0014
210	SWT, HLUM, 125VA, 2HP@250MAC, 450F		REF	
211	LABEL, TEMP CUTOFF		REF	FM200-0065M
212	ELEM TERMINAL INSULATOR, 3 PH		REF	FK-0282-2
213	HIGH LIMIT MOUNTING BRACKET		REF	MK-0283-A R01



624 ELECTRICAL DATA

MODEL	624-1700
VOLTS	200 240 200 240
PHASE	3 3 1 1
KWATS	13.18 18.88 13.18 18.88
AMPS	38.67 45.96 65.89 78.66
Min. CP	50 60 80 100

DOMESTIC/CSA EXPORT WIRE COLOR STANDARD

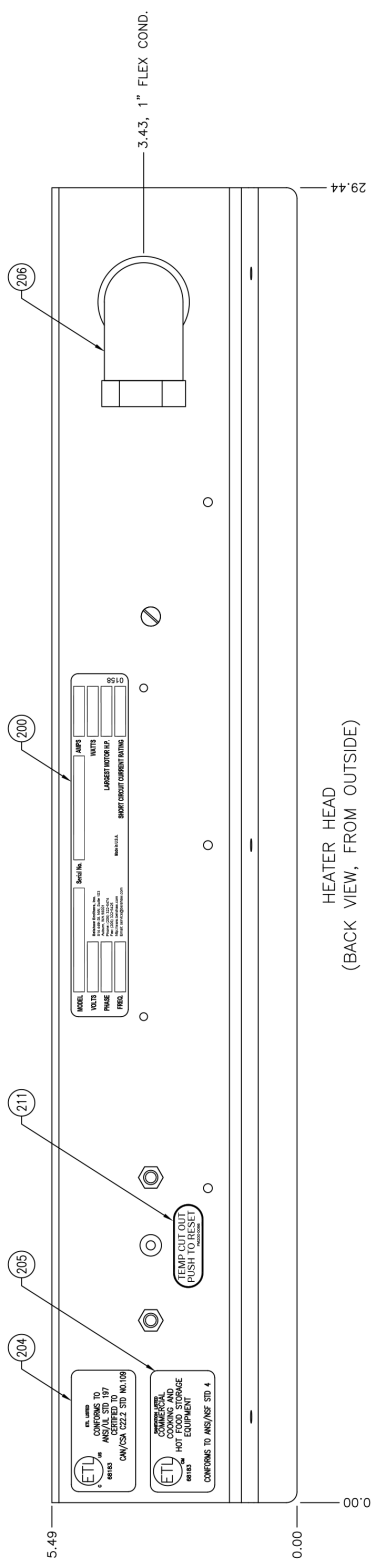
WIRE COLOR	WIRE COLOR
BLACK	BLACK
RED	RED
WHITE	WHITE
BLUE	BLUE
DC CONTROL (UNGROUNDING) CIRCUIT	WHITE/BLUE*
GROUNDING DC CONTROL CIRCUIT	PURPLE (VIOLET)
AC LOW VOLTAGE (<30VAC) CONTROL CIRCUIT	ORANGE/WHITE
GROUNDING AC LOW VOLTAGE (<30V) FROM SEPARATE SOURCE	GREEN/YELLOW

NOTES:  
 1. ALL WIRES TO BE UL LISTED OR EQUIVALENT.  
 2. ALL WIRES TO BE NUMBERED PER RUN POSITION\*.  
 \* ALL WIRES WITH THE SAME ELECTRICAL POTENTIAL SHALL HAVE THE SAME WIRE NUMBER.

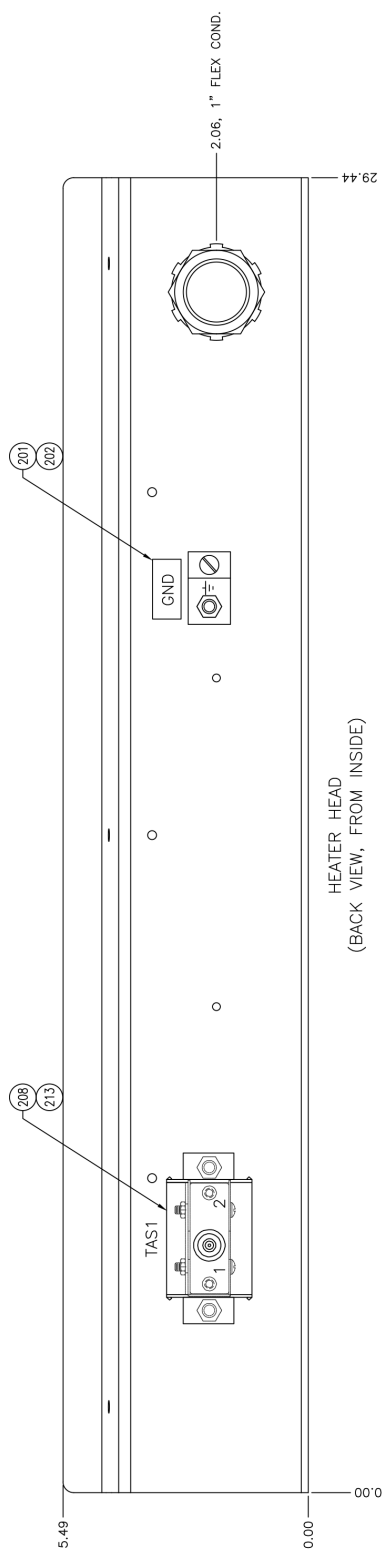
DIAGRAM: 624-1700  
 USE THE DIAGRAMS ON PAGES 12-15 FOR  
**MODEL: 624**  
**ITEM NBR: 21257-10, 21259-10**

TO IDENTIFY MODEL  
 AND ITEM NUMBER,  
 SEE DATA TAG ON  
 CONTROL PANEL





HEATER HEAD  
(BACK VIEW, FROM OUTSIDE)



HEATER HEAD  
(BACK VIEW, FROM INSIDE)

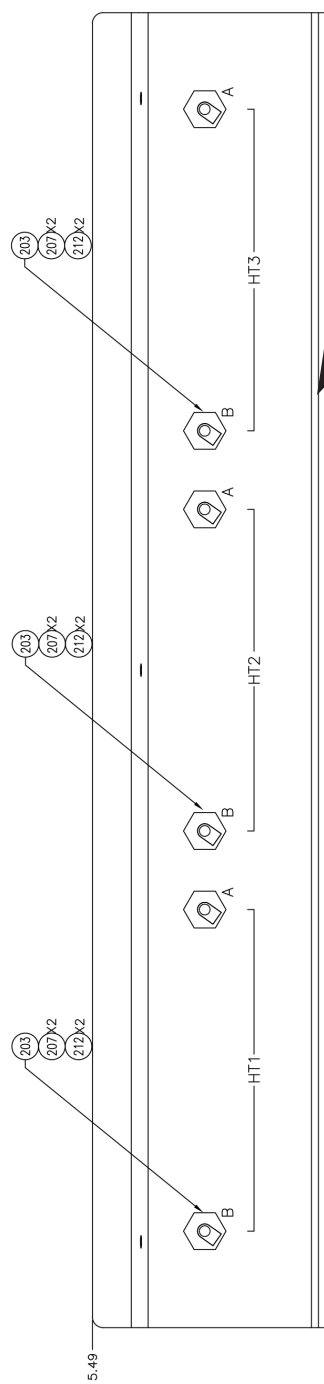


DIAGRAM: 624-1700  
USE THE DIAGRAMS  
ON PAGES 12-15 FOR

**MODEL: 624**  
**ITEM NBR:**  
**21257-10,**  
**21259-10**

TO IDENTIFY MODEL  
AND ITEM NUMBER,  
SEE DATA TAG ON  
CONTROL PANEL



## Belshaw Adamatic Bakery Group

## Limited Warranty / Return Policy

Subject to the terms and limitations set forth in this limited warranty ("Limited Warranty"), Belshaw Adamatic Bakery Group (also referred to as "the Manufacturer") warrants to the original purchaser ("Purchaser") of Manufacturer's equipment and parts ("Products"), Belshaw Adamatic Bakery Group's manufacture and assembly of Products to be free from defects in workmanship and material which would result in product failure under normal use and service. Belshaw Adamatic Bakery Group's entire liability under this Limited Warranty is limited to either repairing or replacing at Manufacturer's factory or on Purchaser's premises, at Belshaw Adamatic Bakery Group's option, any Products purchased by Purchaser which shall be determined by the Manufacturer to be defective. If necessary to return Products to Manufacturer's factory, Products must be shipped by Purchaser with transportation charges prepaid by Purchaser.

Belshaw Adamatic Bakery Group reserves the right to make changes in design or add any improvement to its Products at any time without incurring any obligations to install the same on Products previously sold.

Possession, use or operation of Products sold hereunder for any other than their designed purpose, or use of Products which are in poor repair, modified, improperly operated, or neglected, is done at the Purchaser's risk. Belshaw Adamatic Bakery Group hereby disclaims any liability for these actions and shall not be liable for defects in or for any damages or loss to any property which is attributable to such actions.

**Under no circumstances shall Belshaw Adamatic Bakery Group be liable for any indirect, special, incidental, or consequential damages arising out of, or from the use of its Products by Purchaser, its assignees, employees, agents or customers.**

**THIS LIMITED WARRANTY SHALL BE PURCHASER'S SOLE AND EXCLUSIVE REMEDY WITH RESPECT TO DEFECTIVE PRODUCTS.**

### Warranty Period

This Limited Warranty covers Products manufactured by Belshaw Adamatic Bakery Group and sold by Belshaw Adamatic Bakery Group or its authorized distributor ("Distributor") or authorized dealer ("Dealer"), and this Limited Warranty shall extend for a period of one (1) year from date of shipment to Purchaser, and to the original Purchaser only.

### Limited Warranty

With respect to products not manufactured by Belshaw Adamatic Bakery Group, warranty coverage shall be limited to the warranty of the original manufacturer of the product, or the Belshaw Adamatic Bakery Group Limited Warranty, whichever is the lesser coverage period.

Replacement Products provided under the terms of this Limited Warranty are warranted for the remainder of the original warranty period applicable to the Product.

### Exclusions

This Limited Warranty excludes from its coverage and does not apply to: (a) solenoid and relay coils; (b) lamps; (c) "O" rings; (d) belts; and (e) impellers. This Limited Warranty also excludes the cost of labor for removing and replacing Products subject to a warranty claim, other than the labor incurred directly by the Manufacturer when, in Belshaw Adamatic Bakery Group's opinion, a repair of the Product by the Manufacturer is justified.

### Warranty Claims

In case of warranty claims relating to your Product, you must follow the instructions below.

### Report Claims to Your Authorized Distributor or Dealer or to Belshaw Adamatic Bakery Group

As soon as you discover a problem, contact the Distributor or Dealer from whom you purchased the Product or Belshaw Adamatic Bakery Group. Your Distributor or Dealer will notify Belshaw Adamatic Bakery Group for you. **Only Belshaw Adamatic Customer Service can approve or authorize warranty claims.**

You must state the following:

1. Your name, company name, and telephone number
2. The location, phone number, and contact name where the Product is located
3. The invoice number and date of purchase of the Product
4. The Model and Serial Number of the Product, as written on the data tag attached to the Product
5. A description of the problem and how it occurred

### Shipping Damage and Missing Items

**Damage to the Packaging or Crate.** On delivery, promptly check all packages thoroughly for any sign of damage. In cases of visible damage, **always note the damage on the Delivery Receipt.** Failure to note damage is taken by the Freight Carrier to mean that the package is in good condition at time of receipt, and can result in denial of a Freight Claim. Take photographs that clearly show the damage.

**Damage to Products.** If you find any damaged Product inside the shipment, photograph the damage both inside and outside of the package. Do not throw the packaging away. Photos of the package and contents are needed to show the condition of the Product at the time it was received.

**Missing Items.** As soon as you believe any items to be missing from a shipment, promptly report this to the Distributor or Dealer from whom the Product was purchased or to Belshaw Adamatic Bakery Group. If possible, photograph the entire contents of the delivery and email this to your Distributor or Dealer, or to Belshaw Adamatic Customer Service at [service@belshaw.com](mailto:service@belshaw.com).

### Returning Products to Belshaw Adamatic Bakery Group

Under the terms of the Limited Warranty, you may be asked to return to Belshaw Adamatic Bakery Group any Product that is the subject of a warranty claim. These Products must be clearly labeled with a Return Goods Authorization Number ("RGA Number") given to you by your Distributor or Dealer, or by Belshaw Adamatic Customer Service. Products received without an RGA Number will not be processed. All Products must be shipped freight prepaid by the Purchaser to Belshaw Adamatic Bakery Group at the address below.

### Contacting Belshaw Adamatic Bakery Group

At any time, you can contact Belshaw Adamatic Bakery Group customer service for assistance:

Belshaw Adamatic Bakery Group Customer Service  
814 44th St. NW, Suite 103,  
Auburn WA 98001, USA  
Phone: 800-578-2547 (USA/ Canada) or (+1)253-886-5340  
(Worldwide)  
Email: [service@belshaw.com](mailto:service@belshaw.com)  
Office Hours: Monday – Friday, 6am to 4pm, USA Pacific Time