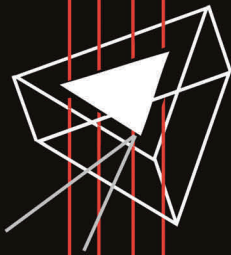


# BT 4

## E n g l i s h   M a n u a l

pdq Ovens



220 Merrimon Avenue  
Weaverville, North Carolina 28787  
800-221-4769 • 828-658-8330 • 828-658-8363 Fax



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**FOR YOUR SAFETY, PLEASE  
OBSERVE THESE  
WARNINGS!**



Caution, refer to  
accompanying  
documents



Dangerous  
Electrical  
Voltage



Caution  
Hot Surface

PDQ Ovens are designed specifically for heating plastics for vacuum forming and have features that make it then inappropriate for other uses. The design is such that heating other materials may be dangerous, or may damage the oven. Protection provided by the equipment may be impaired if the unit is not used in a manner specified by the manufacturer.

Do not install or operate the PDQ Oven on or near flammable materials or gasses. Be sure to allow sufficient ventilation around oven surfaces.

**Cleaning:** We recommend cleaning your PDQ Oven with either glass cleaner for water based stains, or a solvent such as acetone or mineral spirits for oil based stains. When using solvents, be sure the oven is turned off and cool to the touch.

**Moving the oven:** The BT 4 model PDQ Oven is light enough to be moved by 4 people. Let the oven cool, disconnect the electrical power and remove any loose items from inside the oven before moving.

## Oven Setup

To save you freight cost and prevent damage to your new PDQ Oven, we have shipped it to you partially disassembled. These assembly instructions and diagrams should make setup fairly simple. You will require 4 people, a 9/16" wrench and a 1/8" hex wrench, along with the included hardware kit, to complete the setup.

1. Unband and unpack the oven. Ensure the inside of the oven does not have any loose items such as the tray or bubble forming frame.
2. Lay down a blanket or cardboard to protect the back of the oven. Using 2 people, carefully lay the oven on its back. Attach the legs with the bolts provided. Using 4 people, stand the oven up onto its legs.
3. Put the oven in place and level it by turning the adjustable feet as necessary.



When the oven is in use, it must have a minimum of 6" clearance on all sides.



The oven is designed to have the tray and bubble forming frames roll in and out of the oven on the wheels mounted on the sides.



**Never place the tray or bubble forming frames in the bottom of the oven when it is in use.**

## Electrical Connections



**All electrical connections must be performed by a certified electrician following all national and local codes and regulations.**

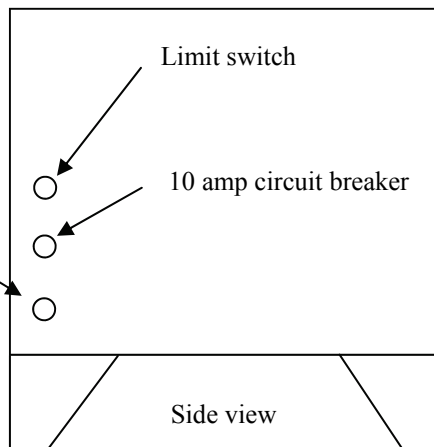
380-400 volt 3 phase units are provided with a 16A-6h plug and 8' of VDE rated cord. The oven must be connected to an external circuit breaker and shut off mounted as close as possible to the oven.

208-240 volt single phase units must be hardwired to your electrical system utilizing an external circuit breaker and shut off mounted as close as possible to the oven.

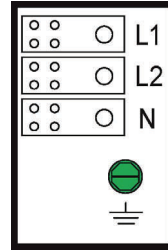
## Hardwiring Instructions

1. Remove the Back panel of the oven with a 1/8" hex wrench
2. Mark the main power supply entry point where indicated below.

Main power supply entry point must be 2 1/2" from the bottom of the oven and inline with the limit switch and circuit breaker



3. Attach conduit to the oven at the main power supply entry point.
4. Connect wires to the main terminal blocks and green ground screw.
5. Reinstall the back panel. The oven is ready for use.



### **BT 4 External Circuit Breaker and Shut Off Required**

**208-240 Volts 1 Phase:      60 Amp Circuit Breaker**

**380-400 Volts 3 Phase:      25 Amp Circuit Breaker**

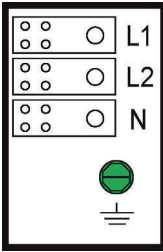
#### **Over Temperature Protection:**

The BT 4 PDQ Ovens have a maximum temperature setting of 450°F or 243°C. In addition an over temperature shut off device is supplied that will turn the emitters off if the temperature exceeds 500°F or 260°C. A reset button is located on the side of the oven above the main power supply entry point. Unscrew the cap and push the button firmly if an over temperature situation occurs.

#### **Over Temperature Protection Device Check:**

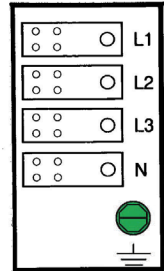
1. Disconnect electrical power to oven.
2. Ensure the oven is cool to the touch.
3. Remove the devices' temperature probe (short copper bulb and capillary tube not the long chrome probe) from the mount on the inside back panel above the fan blade covers.
4. Insert probe into a handheld dry-well calibrator (ex. Hart Scientific 9100S) and heat the probe.
5. The device should trip between 500°F and 525°F.
6. Allow the probe to cool to room temperature and reinstall in mount.
7. Reset the device by pressing the reset button on the device.

## Electrical and Warning Labels



Main Terminal Blocks  
and Ground Screw

208-240 volt  
1 phase  
50-60 cycles



380-400 volt  
3 phase  
50-60 cycles



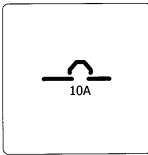
Caution, refer to  
accompanying  
documents



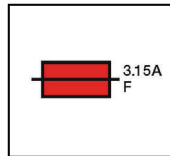
Dangerous  
Electrical  
Voltage



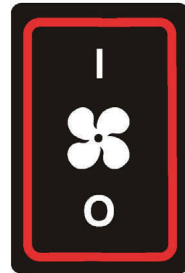
Caution  
Hot Surface



10 Amp  
Circuit  
Breaker



3.15 Amp  
Fuse



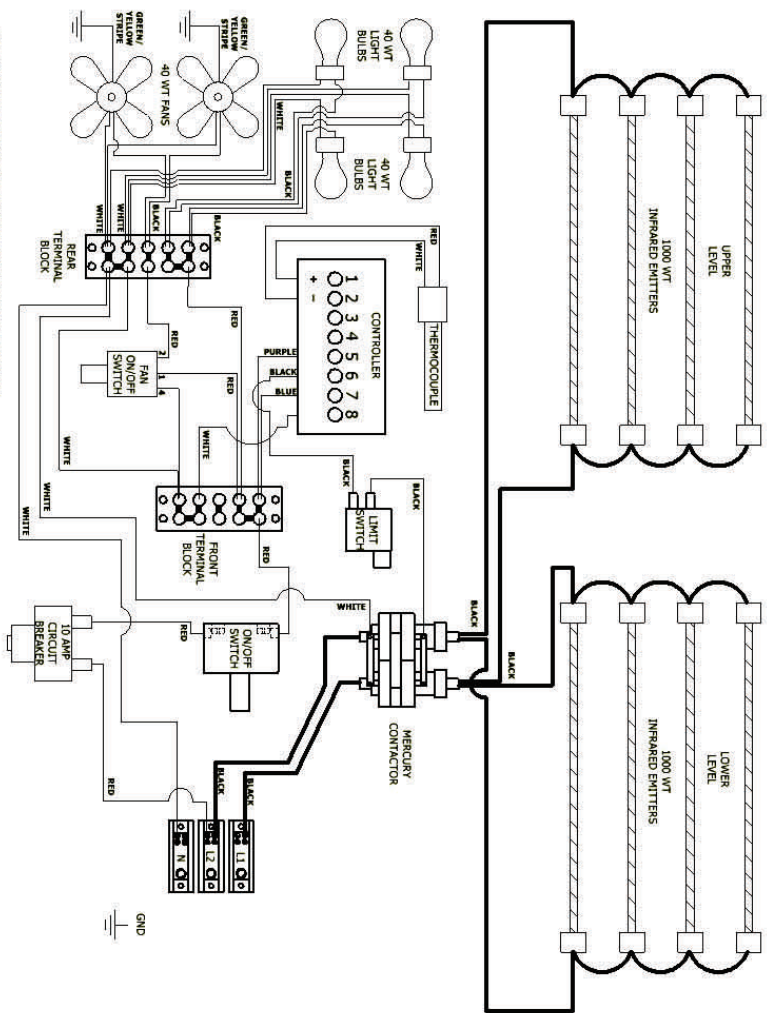
Fan Control



Main Switch  
Control

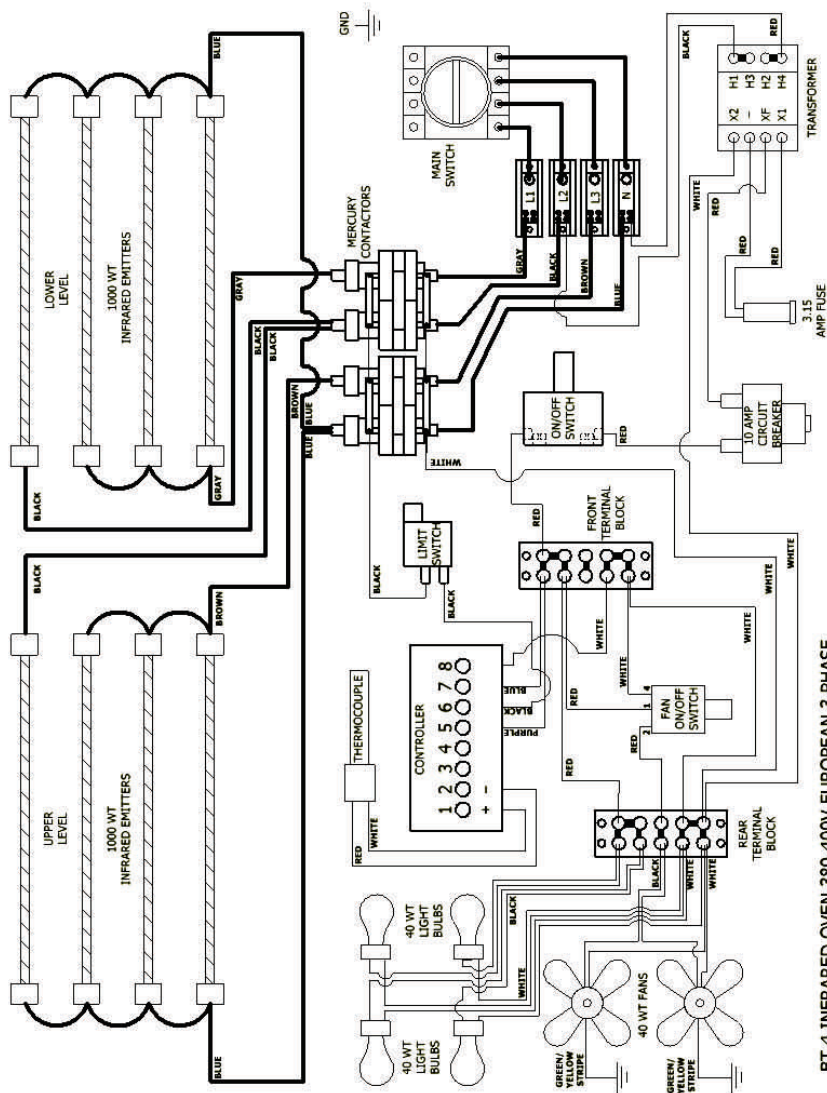


Oven Control



BT 4 INFRARED OVEN 208-240V SINGLE PHASE





BT 4 INFRARED OVEN 380-400V EUROPEAN 3 PHASE

## Oven Controls Operation

### 380-400 Volt ovens:

The **MAIN SWITCH** is located on the side of the oven, near the back, above the main power supply cord. Rotate the knob to the **ON** position to enable oven use.



### 208-240/380-400 Volt ovens:

The **OVEN CONTROL SWITCH** is located on the front panel below the door. Rotate the knob to the **ON** position to enable operation of the oven.



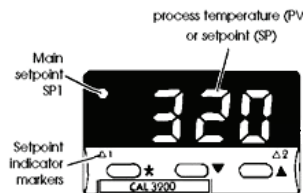
The **FAN CONTROL SWITCH** is located on the front panel below the door. Toggle the switch to the **ON** or **OFF** position to turn the fans on or off as needed.



The **TEMPERATURE CONTROLLER** is located on the front panel below the door. To set the temperature of the oven, press and hold the left hand (★) button and either increase the set point using the right hand (▲) button, or decrease the set point using the middle (▼) button.

#### Routine adjustments

- ★ View set point
- ★▲ Increase set point
- ★▼ Decrease set point



## Operating Suggestions

### Flat Plastic:

1. Preheat the oven and tray to the desired cooking temperature.
2. Place the plastic in the center of the cooking tray and slide the tray into the oven on the rollers.
3. Your new PDQ Oven will work best if set at 400°F or 204°C for plastics such as Polypropylene, Copolymer and Polyethylene. Special plastics may require a different setting.
4. Plastics less than 1/8" or 3mm cook best when the tray is removed from the oven and the tray is allowed to cool to room temperature before placing the plastic on the tray and sliding it into the oven.
5. Colored plastics generally will require 2-3 minutes longer to cook than the same thickness natural color plastics.

**The Teflon sheeting on the tray is a durable nonstick material. However, it is not indestructible. It is wise to exercise care when using it. For example, avoid sliding hard objects across the surface. As with other materials, the surface will degrade over time.**

### Bubble Forming:

1. Preheat the oven to the desired cooking temperature. Normally between 375°F and 440°F or 190°C and 225°C
2. Select the appropriate size bubble forming frame and insert the plastic into the frame.
3. Slide the bubble forming frame and plastic on the rollers all the way to the back of the oven. Then pull it towards the front of the oven 1-2" or 25-50mm to allow some air circulation between the frame and the back of the oven.
4. The BT 4 PDQ Oven must be attended during the bubble forming process to avoid plastic drooping too far and sticking to the grate and lower emitters.

### Oven Fans:

1. The fans circulate the heated air in the oven. The fans do not draw external air into the oven or exhaust heated air out of the oven.
2. The fans are one speed electric and are controlled by the fan control switch on the front of the oven.
3. The oven operator shall determine the fan usage based on cooking requirements and preferences.

## PDQ OVEN 1 YEAR LIMITED WARRANTY

OTS Corporation ("Seller") warrants to the original purchaser ("Purchaser") that the PDQ Oven manufactured by Seller is free from defects in material and workmanship under normal use and service, but only if it has been properly installed and operated. Seller's obligation under this warranty shall be limited to the repair or exchange of any part or parts which may prove defective under normal use and service within one (1) year from the date of purchase by Purchaser. Any such defective parts must be returned to Seller's factory at Weaverville, North Carolina not later than one (1) year after purchase of the PDQ Oven. Parts not manufactured by Seller will carry only the warranty of their manufacturer. Transportation charges or duties shall be borne by Purchaser. Labor to replace the defective part will be by local, licensed electrician, obtained by the Purchaser with Seller approval, and shall be paid by Seller. The foregoing shall be the limit of Seller's liability for any breach of warranty within thirty (30) days after discovery thereof, but within the one (1) year guarantee period, otherwise, such claims shall be deemed waived. No allowance will be granted for any repairs or alterations made by Purchaser without Seller's prior written consent.

Seller does not warrant its PDQ Oven to meet the requirements of any safety code of any state, municipality, or other jurisdiction, and Purchaser assumes all risk and liability whatsoever resulting from the use thereof, whether used singly or in combination with other machines or apparatus.

This warranty shall not apply to any PDQ Oven or parts thereof, which has been repaired or altered, without Seller's written consent, or which has been damaged as a result of misuse, negligence, or accident, or which has not been operated in accordance with Seller's printed instructions, or has been operated under conditions more severe than, or otherwise exceeding, those set forth in any specifications.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE, FOR A PARTICULAR PURPOSE, AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF THE SELLER. SELLER NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THE PDQ OVEN. SELLER MAKES NO WARRANTY WHATSOEVER WITH RESPECT TO ACCESSORIES OR PARTS NOT SUPPLIED BY SELLER.

Seller shall not be liable for any loss or damage resulting, directly or indirectly, from the use or loss of use of the PDQ Oven. Without limiting the generality of the foregoing, this exclusion from liability embraces the Purchaser's expenses for down time or for making up down time, damages for which the Purchaser may be liable to other parties, damages to property, and injury or death of any persons. Seller neither assumes nor authorizes any person to assume for it, any other liability in connection with the sale or use of the PDQ Oven, and there are no oral agreements or warranties in connection therewith.

The warranty hereinabove set forth shall not be deemed to cover infrared tubes, for which Seller shall have no responsibility or liability whatsoever.

Under no circumstances shall the liability of Seller exceed the purchase price paid by Purchaser. Some states do not allow limitations on the length of any warranty or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to the Purchaser.

For Your Records:

Serial No. \_\_\_\_\_ Model No. \_\_\_\_\_

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



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