



## Owner's Manual

### **CONVEYOR DRYER With Teflon™ Belt**

*ORIGINAL DOCUMENT*



### **IMPORTANT INSTRUCTIONS**

### **SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE**

This manual covers assembly, operation and troubleshooting.

800-654-4205 – 1100 Jefferson Street – Pacific, MO 63069 USA

[www.bbcind.com](http://www.bbcind.com)

## **WARNINGS**

The operator should familiarize themselves with this manual and all the **WARNINGS** before installing or working on this heater to avoid potentially hazardous conditions, severe property damage, personal injury, or death.

1. BBC Industries is interested in the safe operation of its equipment. All wiring to this equipment must be connected to the source in strict accordance with all local codes having jurisdiction.
2. A dedicated electrical (earth) ground is required for proper operation of the equipment.
3. This equipment is meant for the drying/curing of non-flammable Plastisol and water-based screen-printing inks and dies on textiles or the like. Use for any other purpose may cause fire, electric shock, or injury to persons.
4. This heater is for indoor, non-residential use.
5. Install unit in a location with adequate emergency exits.
6. Place unit in an area with adequate spacing and lighting for installation, operation, and maintenance.
7. The dryer has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable vapors or liquids are used or stored.
8. Use the dryer in a well-ventilated space. Refer to the Safety Data Sheet (SDS) for any inks or dies that you are curing.
9. The area around this equipment should be designated as a work zone with only trained and authorized personnel allowed in the work zone.
10. Keep the work zone clean and free of debris. A perimeter of at least 18 inches (.5 m) around the equipment is recommended.
11. Do Not use extension cords to power this equipment.
12. Recommended temperature range of 41°F (5°C) to 104°F (40°C) for operation with humidity levels between 40 – 70% to avoid static buildup and discharge.
13. This equipment is hot when in use. To avoid burns, do not touch hot surfaces. Do not set objects on the unit.
14. Check to see that no objects are on the conveyor and the dryer is free from obstructions before operating the dryer.
15. Puncture of the heating element face may result in a shock hazard. Do not operate if heater face is damaged.
16. Do not operate the heater after it malfunctions. Disconnect power at service panel and have the dryer inspected by a qualified technician before reusing.
17. To disconnect the dryer, turn off power to heater circuit at main disconnect panel.
18. Do not insert or allow foreign objects to enter any ventilation opening as this may cause an electric shock or fire, or damage to the dryer.
19. Do not leave the unit unintended while in use.
20. Do not wear loose or dangling clothing while operating this equipment.
21. If a blockage occurs along the conveyor, immediately turn off power to dryer and allow it to cool before removing blockage.
22. This conveyor dryer ships on a skid weighing upwards of 800 lbs. Be aware of the weight when handling.
23. Before storing this unit, allow the heater to fully cool and disconnect from the power source. Be aware of the weight of the unit and take precautions while handling these weights.
24. This dryer is designed to withstand all pressures and forces during shipment, assembly, dismantling, and all other reasonably foreseeable actions, so as long as instructions in this manual are followed.
25. This unit does not require lengthy concentration that would lead to discomfort, fatigue, or physical and psychological stress.
26. These units do not produce noise exceeding 70 dB(A).
27. Use this dryer only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
28. Handle unit in a safe manner.

## Assembly and Operating Instructions

Please review all these instructions prior to assembling, installing or operating the equipment. **Verify the proper tools, materials, and personnel are available for the safe and successful use of the dryer.**

The Conveyor Dryer is attached to a skid for shipping purposes.

The following **assembly** procedure is recommended for this equipment:

1. Unpack, inspect, and identify all the shipped equipment and parts. *Immediately report any suspected lost or damaged items to Customer Service (800) 654-4205*
2. Power may be connected to the disconnect switch by removing the small cover of the control panel (right side front). Power cable may be run thru the access hole provided in the bottom of the control panel.

### Electrical Specifications:

Model	Voltage	Amperage	Recommended Disconnect
36T08-4	208 / 240	45 / 52	70 amp
36T10-4	208 / 240	45 / 52	70 amp
36T08-5	208 / 240	65 / 75	100 amp
36T10-5	208 / 240	65 / 75	100 amp
36T12-5	208 / 240	65 / 75	100 amp
48T08-4	208 / 240	59 / 68	100 amp
48T10-4	208 / 240	59 / 68	100 amp
48T12X-4	208 / 240	59 / 68	100 amp
48T08-5	208/240 3-PH	52 / 60	80 amp
48T10-5	208/240 3-PH	52 / 60	80 amp

### Connecting The Unit to Power:



**AS WITH ANY ELECTRICAL EQUIPMENT A PROPERLY TRAINED AND LICENSED ELECTRICIAN SHOULD INSTALL POWER TO THE CONVEYOR IN ACCORDANCE WITH LOCAL CODES.**



Before servicing or cleaning, switch power **OFF** at service panel and lock service panel to prevent oven from being switched on accidentally. If service panel cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.





## Recommended Initial Start-Up Procedure

1. Turn the Main Disconnect Switch on the control panel to the **ON** position. If the knob will not turn, be sure the red “Lock-Out” tab is pressed all the way in.
2. Adjust the conveyor speed control dial to 5.
3. Flip the illuminated rocker switch on the control panel to **ON** position to start belt. Listen for any unusual noises. Check to see if the rubber edge guide is riding in the *TruTrak* roller drum guides.

**Caution: DO NOT operate the Heating Chamber unless the belt is moving. Heat will damage an idle belt.**

4. Set the dryer temperature to 800°F on the controller. The display on the Temperature Controller shows the current element temperature.

**Note:** This is not the air temperature inside the oven, rather the temperature of the heating element itself.

Press the , , and  keys to show and change the Set-Point Temperature then  to enter.

5. Verify that the heating element is functioning. After about a minute of operation, briefly feel just inside both the entrance and exit ends of the chamber. The area should be warm.

**Caution: Heating element is exposed inside the chamber and is operating at very high temperatures. Keep your hand close to the moving belt.**

**Note:** Some smoke/vapor and odor may be noticed during initial start-up due to residual material from the manufacturing process burning off the elements.

6. Working temperature will be reached after a ten-minute warm-up.

Test articles may be run to determine the optimal production speed and heat setting for your environment and products.

Belt speed can be determined by placing a small item that will not melt, like a coin, on the conveyor belt and recording the time it takes to travel through the chamber.

The initial recommended setting for curing plastisol inks on garments is 825°F at 30 seconds through the dryer. This is only *suggested* initial settings. The user must determine the settings for their application.

**Note: Using lower curing temperatures with longer curing times result in better results ink adhesion, especially with thicker in layers.**

Process an item through the dryer. Evaluate the completed article according to your quality standards. We recommend washing the processed garment as the definitive test to determine the quality of the curing process.

The conveyor dryer is now ready for normal **Use and Operation**.

## Control Panel Maintenance

Perform at initial installation, 30 days after initial installation, and 120 days after initial installation.

**WARNING: FAILURE TO FOLLOW SAFETY INSTRUCTIONS**  
**COULD RESULT IN SERIOUS INJURY OR DEATH**

1. Turn **OFF** the power serving the main control panel where it is connected to the building electrical distribution system.

**Note:** Assure that appropriate “**Lock-Out / Tag-Out**” procedures are followed before conducting any of these activities.

2. Remove the control panel cover. Using a voltage meter, confirm that no dangerous voltages are present. If you do not have a meter or are not confident with any of these procedures, contact a qualified electrician.
3. Check for any wire/component damage or discoloration. Contact *BBC Industries* Technical Support with any concerns.
4. Tighten all electrical screw terminations inside the panel.

## Routine Maintenance

**Performed after the first week and every 100 hours of operation.**

The belt should be replaced if it has any tears, voids, separations, fraying, or no longer rides in the roller drum groove due to excessive wear.

Conveyor Belt tension: the belt should only have enough tension to prevent slipping on the conveyor rollers. The belt will relax over time and if needed, the tension can be adjusted.

1. Loosen the bolts on the adjustments brackets on Entrance end of the conveyor opposite the drive motor.
2. Pull the conveyor roller to increase the tension and retighten the bolts.

## Troubleshooting

Symptom	What to Check
No heat, belt not moving, & power light is off	<ul style="list-style-type: none"> <li>• Incoming power, correct voltage</li> <li>• Main power switch</li> <li>• Power cord plugged in</li> </ul>
No heat, belt moving, & power light is on	<ul style="list-style-type: none"> <li>• Chamber cord plugged into control panel</li> <li>• Heat control setting too low</li> </ul>
Oven temperature too low	<ul style="list-style-type: none"> <li>• Heat control setting too low</li> <li>• Incorrect power to heater</li> </ul>
Oven temperature too high	<ul style="list-style-type: none"> <li>• Heat control setting too high</li> </ul>
Temperature fluctuates	<ul style="list-style-type: none"> <li>• End Shields too high</li> <li>• Eliminate wind or draft through heater</li> </ul>
Belt stopped or is erratic	<ul style="list-style-type: none"> <li>• Motor power cord plugged in, twist &amp; locked into place</li> <li>• Fuses on control panel</li> <li>• Sprockets &amp; chain</li> <li>• Brushes in motor, contact BBC for replacements</li> </ul>
Excessive motor noise	<ul style="list-style-type: none"> <li>• Brushes in motor, contact BBC for replacements</li> </ul>

Please contact the service department at *BBC Industries* (800-654-4205) or [service@bbcind.com](mailto:service@bbcind.com) with any questions regarding these instructions.

