



Big Buddy™ Conveyor Dryer

24 or 36 inches wide by 8 feet long conveyor dryer
(Original Instructions)



IMPORTANT INSTRUCTIONS

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

This manual covers assembly, operation and troubleshooting.

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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 pallet in 5 boxes. Be aware of the weights listed later in this manual.
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 Instructions

- Please review all these instructions prior to assembly.
- The *Big Buddy* is packaged in 5 cartons for shipment.
- Please make sure all pieces have been received before attempting assembly.
- Note that portions of assembly procedure require 2 people.
- Unpack, identify, and inspect all parts. Report any missing or damaged items.
- Cover a 4' x 9' area on the floor with towels, cardboard, carpet, etc. to protect the painted parts from being scratched during assembly.
- **Tools Required:** One ½-inch wrench & needle nose pliers.

Parts List:

Label on Box	Weight	Contents	Quantity
BB21-D / BB21-D-CE / BB24-36D BB21-T / BB24-36T	95 lbs (43.1 kg)	DRIVE CONVEYOR ASSEMBLY, with motor TENSIONING CONVEYOR ASSEMBLY	1 1
BB21-LK / BB24-36LK	27 lbs (12.3 kg)	CONVEYOR LEGS CASTER ASSEMBLIES CROSS MEMBER FOR LEGS 5/8-18 x 3/4L BOLTS	4 4 2 30
BB08-300 / 17-305	4 lbs (1.8 kg)	CONVEYOR BELT	1
BB17-CP-TC, BB17-CP-EH, BB17-CP-TC-CE, BB17-CP-200, or BB24-36CP-TC	14 lbs (6.4 kg)	CONTROL PANEL USER MANUAL	1 1
BB17-6500C-TC, BB17-6500C-TC-CE, BB17-6100CJ-TC, or BB24-9500C-TC	100 lbs (45.4 kg)	HEATING CHAMBER EXHAUST START COLLAR END SHIELDS	1 1 2

Electrical Specifications:

MODEL NUMBER	WATTS	VOLTS	AMPS
BB17-6500	6112	240	26.0
BB17-6500-EH	6112	240	26.0
BB17-6500-CE	5613	230	25.0
BB17-6100J	5229	200	26.5
BB17-9500	9610	240	40.0

DO NOT plug the equipment in (or apply power) until instructed to do so. Any attempt to operate Little Buddy without the cord/plug provided by the manufacturer will **void the warranty.**

Factory Available Accessories:

- BB08-HK Height Kit (Raises chamber 6")
- LB02-EX Exhaust Kit

Conveyor Assembly:

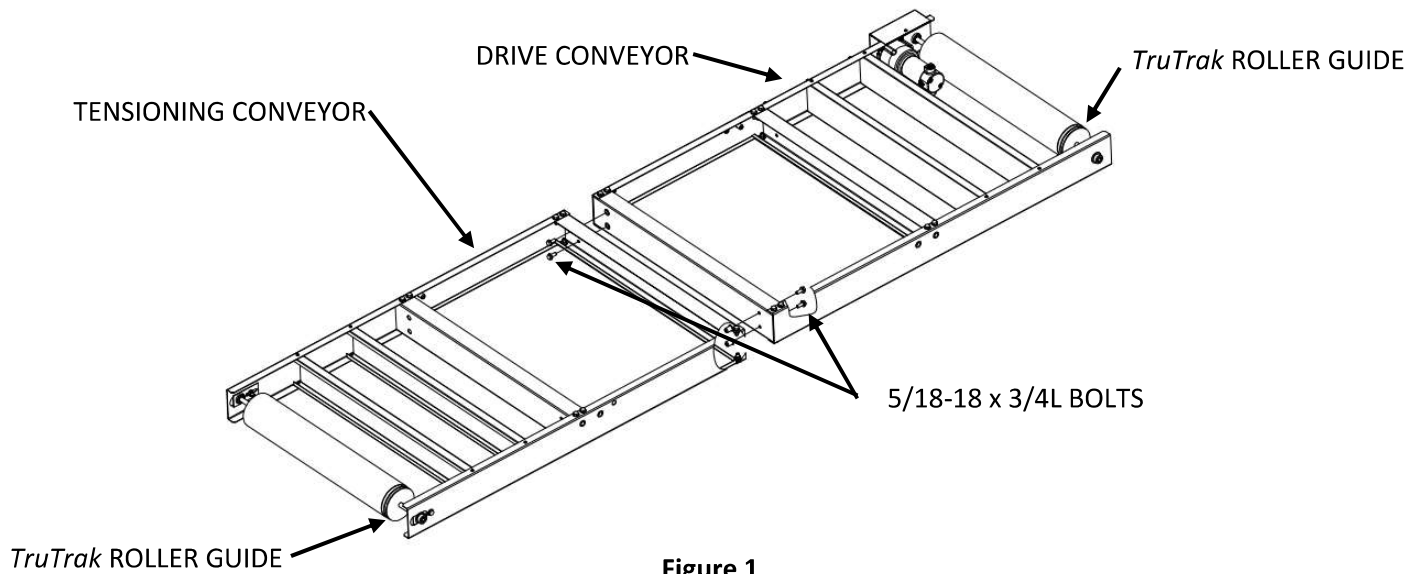


Figure 1

1. Place the **CONVEYOR DRIVE ASSEMBLY** on the covered floor (see **Figure 1**).
2. Set the **TENSIONING CONVEYOR ASSEMBLY** next to the **DRIVE ASSEMBLY**. Be sure that the **TruTrak ROLLER GUIDE** is on the same side of the **CONVEYOR**.
3. Bolt the **CONVEYOR** assembly together using four **5/16-18 x 3/4L BOLTS**.

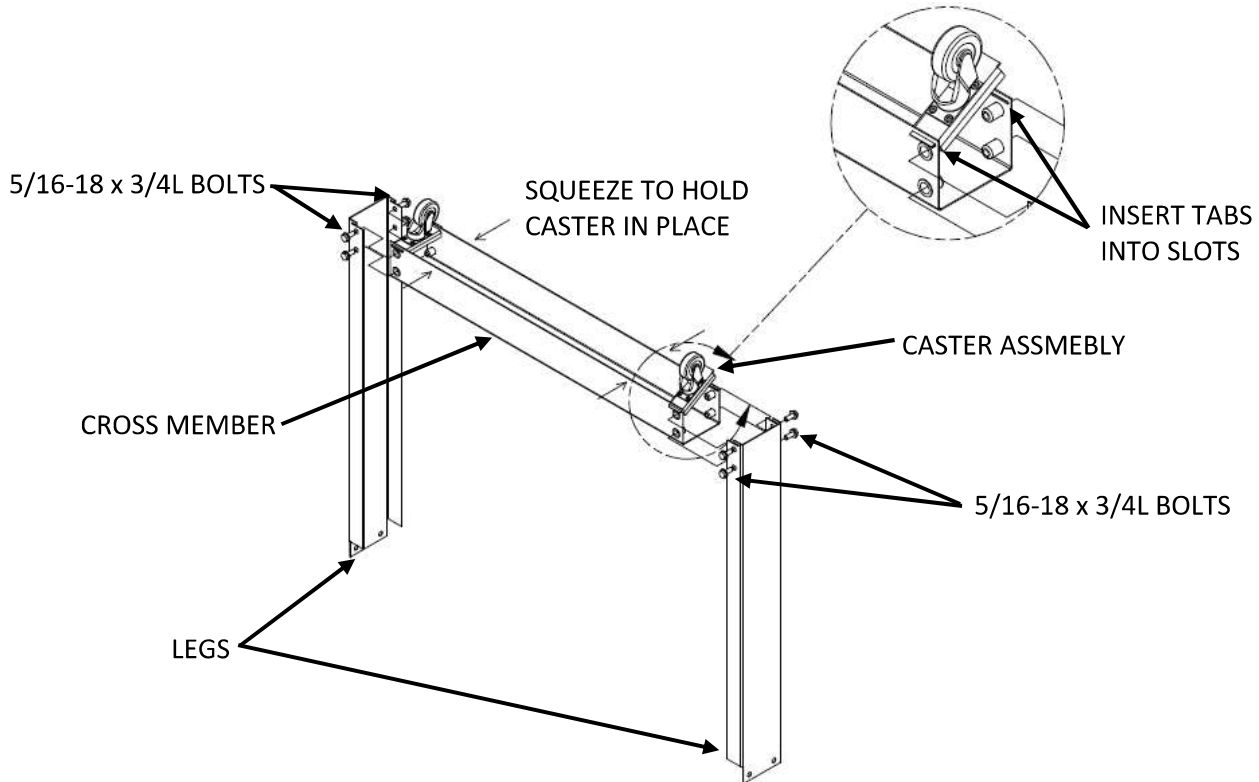


Figure 2

4. Insert the tabs on the **CASTER ASSEMBLY** into the slots on the **CROSS MEMBER FOR LEGS**, then squeeze the **CROSS MEMBER** to hold the **CASTER ASSEMBLIES** in place (see **Figure 2**).
5. Slide the **LEG** over the end of the **CROSS MEMBER** aligning the slot in the **LEG** with tab on the **CASTER ASSEMBLY**.
6. Use four **5/16-18 x 3/4L BOLTS** to attach each **LEG** to the **CROSS MEMBERS** (see **Figure 2**).

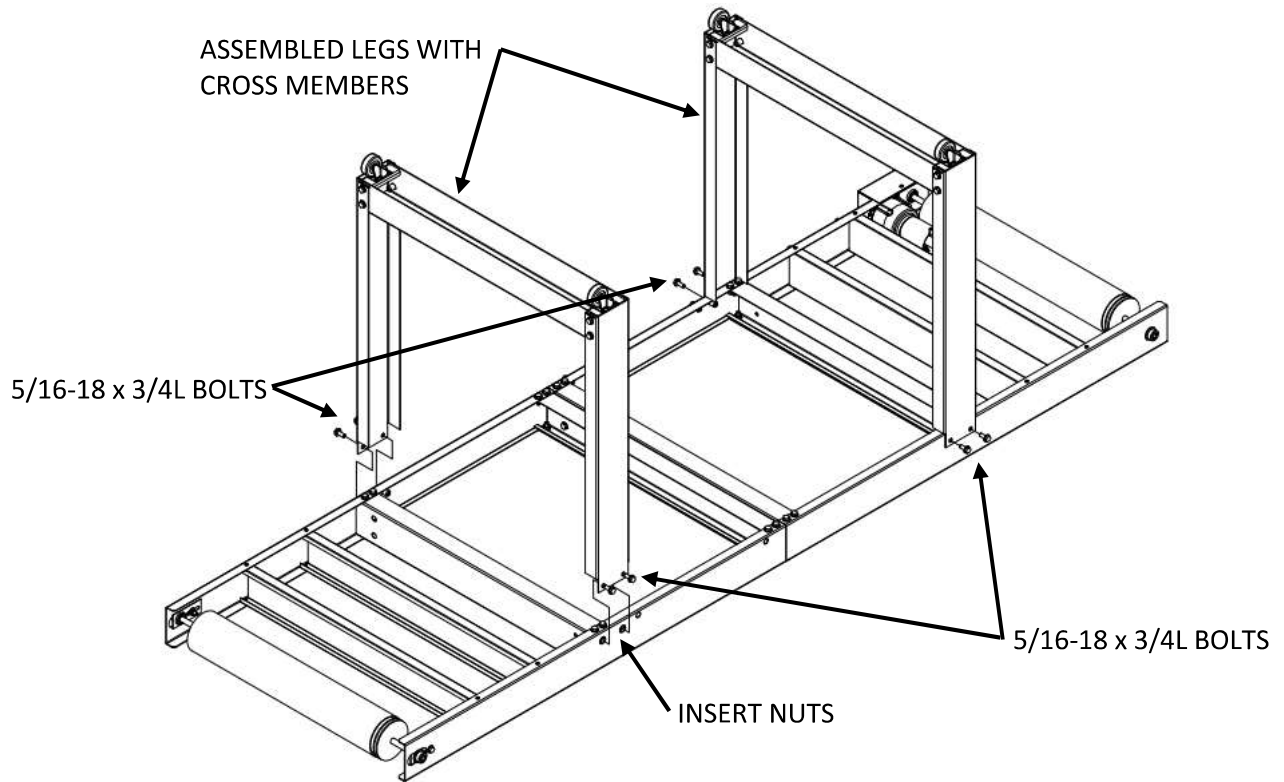


Figure 3

7. Place the assembled **LEGS** with **CROSS MEMBERS** over the **CONVEYOR**, aligning the holes of the **LEGS** with the **INSERT NUTS** of the **CONVEYOR** (see **Figure 3**).
8. Install the eight **5/16-18 x 3/4L BOLTS**.
9. Tighten all **BOLTS**.
10. Using two people, turn **CONVEYOR** over onto its **CASTERS**.

Conveyor Belt Installation:

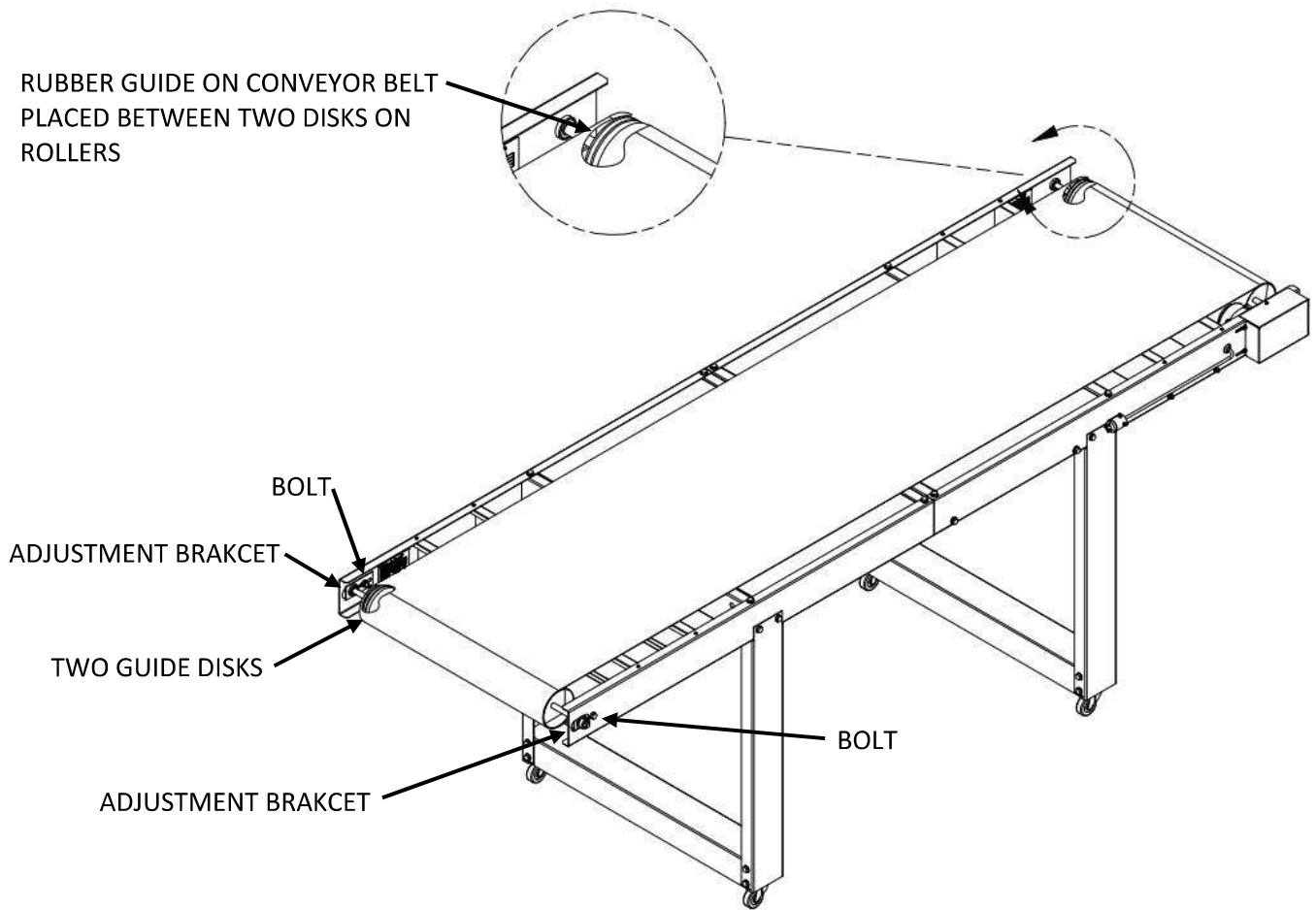


Figure 4

1. Locate the **CONVEYOR BELT**. A rubber guide is stitched onto one edge of the **BELT**. This guide is designed to ride between the two disks of the **TruTrak ROLLER GUIDE** on each end of the **CONVEYOR** to provide hassle free tracking.
2. Carefully remove the pin from the inside teeth of the splice connector of the **CONVEYOR BELT** by pulling gently with needle nose pliers. **DO NOT BEND** the pin. It will be reinserted later in these instructions.
3. Lay the **CONVEYOR BELT** onto the **CONVEYOR** aligning the rubber edge guide of **BELT** with the **TruTrak ROLLER GUIDES** on the **CONVEYOR** (see **Figure 4**).
4. Pull the ends of the **BELT** together meshing the teeth of the splice. Be sure that the opposite edges of the **CONVEYOR BELT** are exactly aligned when the teeth of the splice are brought together.
5. Have a second person reinsert the splice pin (removed earlier) into the channel formed by the interlocked metal teeth. Using needle nose pliers, fully insert the pin until it is centered.
6. Adjust belt tension: The **CONVEYOR BELT** only needs enough tension to not slip during operation. Too tight and the life of the belt will be decreased. Loosen the **BOLTS** of the **ADJUSTMENT BRACKET** on the **TENSIONING CONVEYOR**. Pull the conveyor roller to increase the tension of the **CONVEYOR BELT**, tighten the **BOLTS** to hold.

Control Panel Installation:

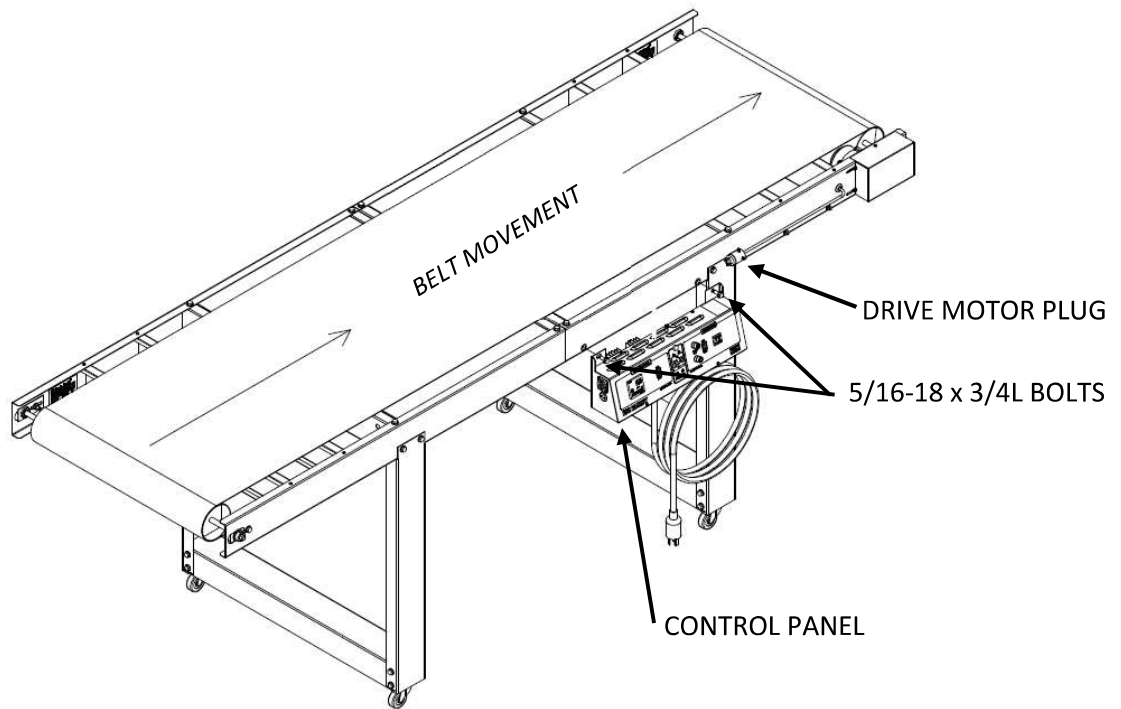


Figure 5

1. Use two **5/16-18 X 3/4L BOLTS** to fasten the **CONTROL PANEL** to the **CONVEYOR** (see **Figure 5**).
2. Insert **DRIVE MOTOR PLUG** into the **RECEPTACLE** on the **CONTROL PANEL**. Twist **PLUG** to lock in place (see **Figure 6**).

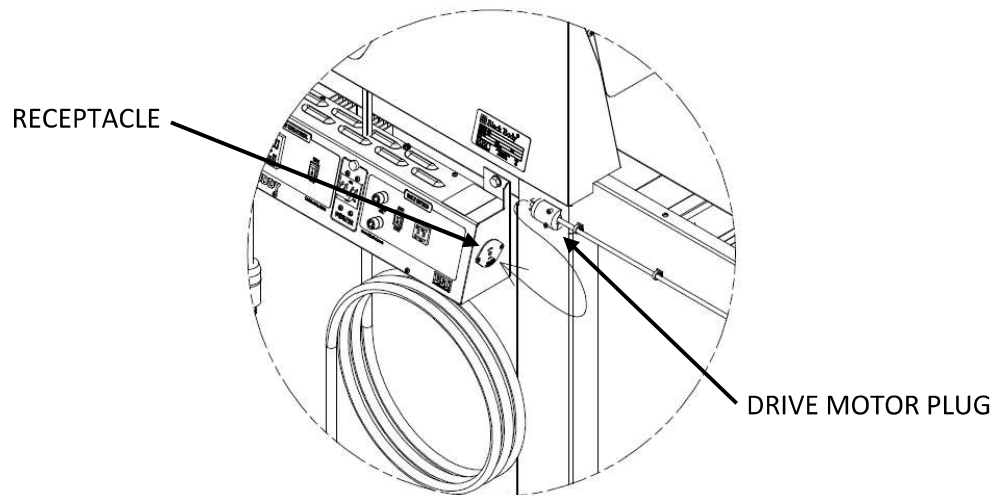


Figure 6

Heating Chamber Installation:

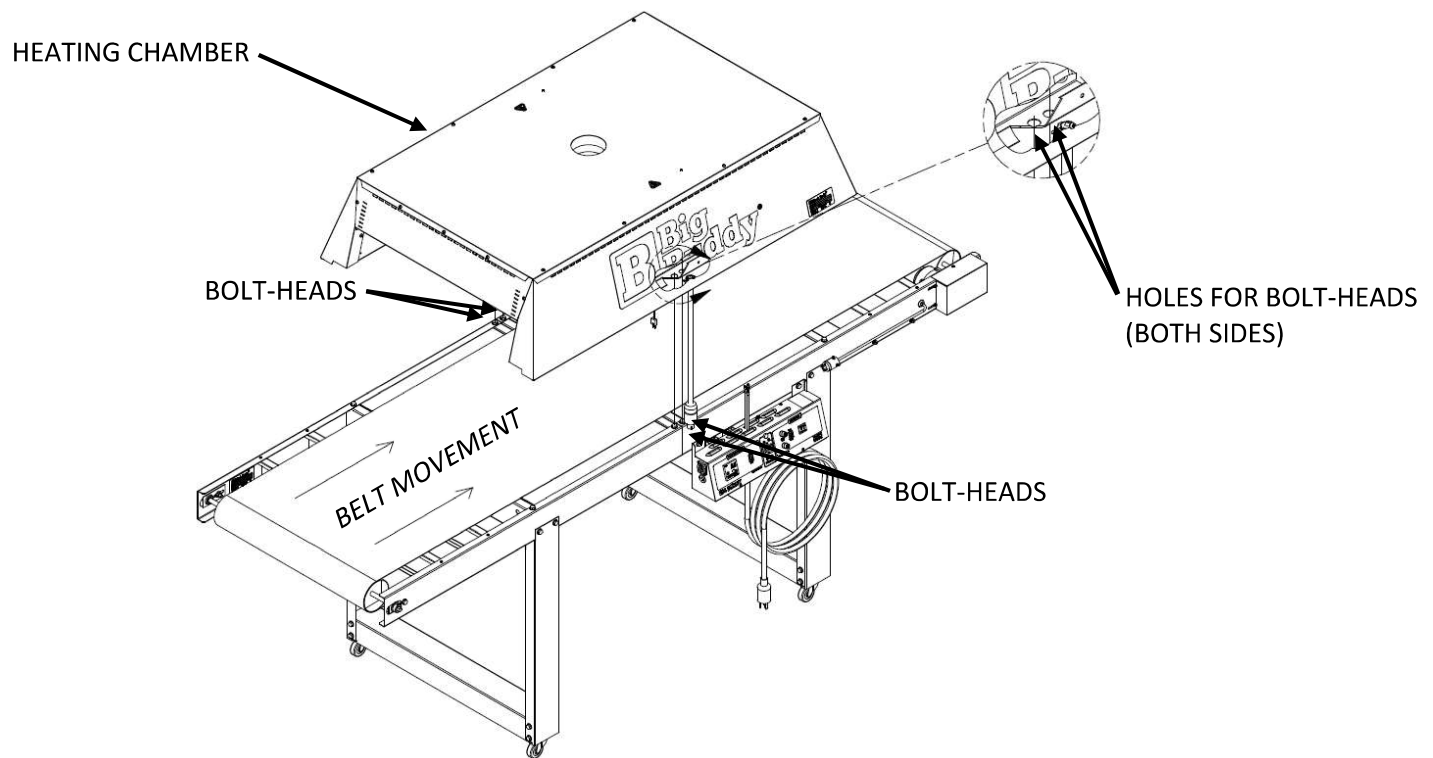


Figure 7

1. Using two people, set the **HEATING CHAMBER** onto the **CONVEYOR** (see **Figure 7**). The **HEATING CHAMBER CORD** must be on the same side of the **CONVEYOR** as the **CONTROL PANEL**.
2. The **HEATING CHAMBER** has **HOLES** on the underside rails that fit over the **BOLT-HEADS** (see Magnified View, **Figure 7**). The **CHAMBER** should rest flatly on the **CONVEYOR**.

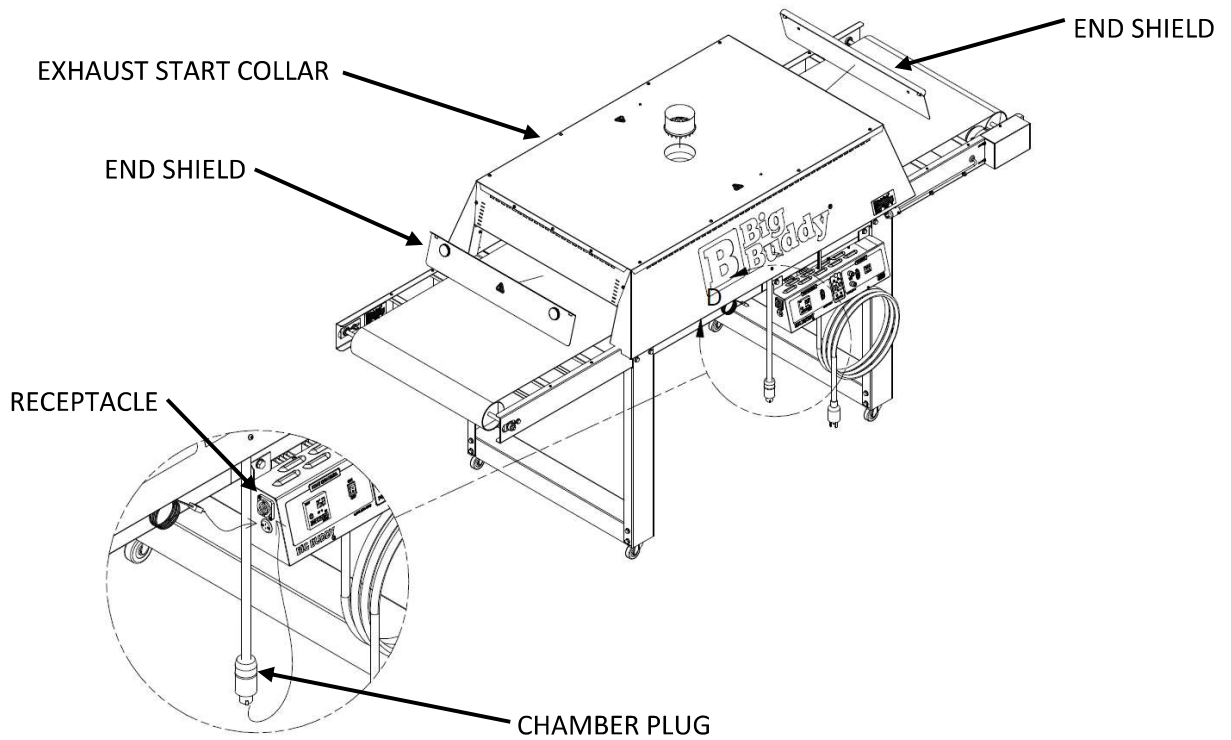


Figure 8

3. Insert the **EXHAUST START COLLAR** into the hole in the top of the **HEATING CHAMBER** (see **Figure 8**). Once in position, bend the tabs at the base of the **COLLAR** outward to secure it in place. Optional Exhaust Kit (LB02-EX) available.
4. Place **END SHIELDS** at the desired height on the entrance and exit of the **HEATING CHAMBER**.
5. Plug the **HEATING CHAMBER CORD** into the **RECEPTACLE** on the **CONTROL PANEL** (see Magnified View, **Figure 8**, image of plug/receptacle may be different).





Recommended Initial Start-Up Procedure

1. Plug the Control Panel into a suitable power source.
2. Turn the Main Power Switch to ON position. The green indicator light will illuminate.
3. Set Belt Speed to "50". Belt speed is adjustable by the push buttons on the Control Panel (00 - 99). (The higher the number, the faster the belt will move). Flip rocker switch for Belt Speed 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.
4. Flip rocker switch for Heat Control to ON position.

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

5. 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.

6. 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.

7. 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.

Note: The speed and temperature of the unit may vary slightly with fluctuations in power/voltage servicing the equipment.

The table below shows *suggested* start settings for Plastisol Ink.

Chamber Time	Belt Speed	Heat Setting	BB17-9500
60 seconds	10	1025-1075	675-725
50 seconds	15	1150-1200	750-800
40 seconds	20	1225-1275	850-900

Note: These are only *suggested* initial settings. The user must determine the settings for their application.

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**.

Routine Maintenance

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

1. 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.
2. Belt tension: the belt will relax over time and tension may have to be adjusted by the instructions above.

Troubleshooting

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

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

