Dri-Vault

Assembly, Operating, and Maintenance Instructions

Dri-Vault VDC-253610, VDC-253624, VDC-513610
VDC-253610-DHO & VDC513610-DHO

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Electrical Drawing #: ____________________________ Rev: ______
Serial Number: VTX ____________________________ Date: __/__/____

(Please log your machine’s serial number and date of purchase for future reference.)
Safety Instructions

The Instruction Manual and Safety Instructions must be read and understood by anyone operating the Vastex Screen Drying Cabinet.

- The operator should read and understand the instruction manual before operating this equipment. Store instruction manual and safety instructions near equipment for easy access to operators.
- VASTEX Screen Drying Cabinet is intended for the drying of emulsion on screen printing screens. Do not use for any other purpose unless authorized by Vastex International, Inc. Use of this equipment for any other purpose can be dangerous and may cause damage to this equipment voiding the warranty.
- It is recommended that the area around this equipment be designated as a work area and only authorized employees are allowed in this area.
- Children and pets must be kept clear from the work area.
- Never leave equipment unattended.
- DO NOT operate dry cabinet with any cover or guard removed.
- Operator must be familiar with controls of the dryer.
- Before starting production, the operator must check that all covers and guards are in place, no material has been left in the cabinet, and the exhaust duct is clear of any obstructions.
- Always turn off power at the main disconnect at the end of production.
- Do Not remove any cover or guard until power at the main disconnect is switched off and locked out. No unauthorized persons are to be allowed inside the control boxes.
- Turn off and lock out power at the main disconnect before cleaning and maintenance.
- Only qualified technicians should be allowed to make repairs on the VASTEX Screen Drying Cabinet.
- Noise and Vibration: This noise level produced by this equipment does not exceed 70 dB(A).

Machine Specifications

Drying times will vary. Humidity, thickness and type of emulsion used, and the size of screens are factors in Dri-Vault curing time.

<table>
<thead>
<tr>
<th>VDC-253610</th>
<th>VDC-513610</th>
<th>VDC-253624</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defect Warranty</td>
<td>3 Year</td>
<td>3 Year</td>
</tr>
<tr>
<td>Maximum # of Screens</td>
<td>10 @ maximum size</td>
<td>(10) @ 51&quot; x 36&quot; / (20) @ 25&quot; x 36&quot;</td>
</tr>
<tr>
<td>Maximum Screen Size</td>
<td>25&quot; x 36&quot; x 1.625&quot; (63.5 x 91.4 x 4.12 cm)</td>
<td>(10 screens) @ 51&quot; x 36&quot;</td>
</tr>
<tr>
<td>Smallest Screen Width</td>
<td>18&quot; (46 cm)</td>
<td>No minimum size</td>
</tr>
<tr>
<td>Blower (Free Air)</td>
<td>200 CFM (5.7 cmm) 120v or 290 CFM (8.2 cmm) 240volt</td>
<td>290 CFM (8.2 CMM)</td>
</tr>
<tr>
<td>Overall Depth x Width x Height</td>
<td>39.5&quot; x 34.75&quot; x 29&quot; (100 x 88 x 74 cm)</td>
<td>37.9&quot; x 62.5&quot; x 32.3&quot; (96.3 x 159.1 x 81.9 cm)</td>
</tr>
<tr>
<td>Heater Wattage</td>
<td>1,250 Watts 120 Volts or 1,550 Watts 240 Volts</td>
<td>1,550 Watts @ 240 Volts</td>
</tr>
<tr>
<td>Electrical Power</td>
<td>120V / 10A / 1 Ph. / 60 HZ / NEMA 5-15P plug or 240V / 6A / 1 Ph. / NEMA 6-15P plug</td>
<td>240V / 6A / 1 Ph. / NEMA 6-15P plug</td>
</tr>
<tr>
<td>Shipping Weight*</td>
<td>367 lbs (166.5 kg)</td>
<td>573 lbs (277 kg)</td>
</tr>
<tr>
<td>Shipping Dimensions*</td>
<td>43&quot; x 43&quot; x 48&quot; [109 x 109 x 122 cm]</td>
<td>69&quot; x 43&quot; x 35&quot; (175 x 109 x 89 cm)</td>
</tr>
</tbody>
</table>

Putting this Equipment into Service —

To put your drying cabinet into use:
1.) Follow the assembly instructions on page 4 of this manual.
2.) Familiarize yourself with the controls and features of your unit (see page 5 and 6).

Using this Equipment —

To use your drying cabinet, follow the operating and maintenance instructions on page 7.
1) Unpack your drying cabinet and remove the (4) lag screws (with a 7/16 socket) holding it down to the skid. Open the doors and remove the Shelves, the Center Tree (Wide Dri-Vault only), and any other items inside.

2) Slide the drying cabinet to the edge of the skid and install the (4) casters or levelers at each corner of the machine. Tighten the nut with a 3/4" wrench or a 3/4" socket.

3) Clean the inside thoroughly, first vacuuming then wiping down with a damp lint free cloth. This should be repeated several times after turning on the unit to allow any trapped dust to be removed.

**NOTE:** Debris left in the chamber will contaminate screens and cause the image area to develop pinholes.

4) Unwrap the shelves and wipe clean with a damp lint free rag. Install the shelves onto the Center Tree (Wide Dri-Vault only), and inside walls of the drying cabinet. Install the shelves as shown.

**NOTE:** Be sure all 3 tabs of each shelf are properly seated!

5) It is recommended that the exhaust be ducted outside to remove fumes and moisture from the work environment. Do not exceed (1) elbow (90 deg.), and/or 8 feet of straight duct. In the event this must be exceeded, a duct fan (booster) must be added to ensure proper airflow. If it is not exhausted to the outside, make sure the elbow provided is used and pointed to the ground to restrict light from entering the cabinet.

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**Power users:** For shops that want to have the fastest dry times with a full cabinet, it is highly recommended that you add a booster fan to the exhaust. This will draw the most amount of air through the cabinet and will decrease dry times. The booster should be sized to match or slightly exceed the machine’s rated CFM(CMM).

**Humidity is a big factor in dry times:** If your region is very humid, you should consider using your Dri-Vault in an air conditioned room. If that is not an option, adding a dehumidifier next to the intake of the Dri-Vault would decrease dry times and increase efficiency.
Controls

Models: VDC-253610 & VDC-513610

Red Pilot Light (Main Power) is located above the breaker/switch, when illuminated, it indicates the switch is in the “on” position, there is power to the unit, and the fan(s) will be on.

Breaker Switch is used to turn the machine on and off. In the event of a short or electrical failure, the switch will trip into the middle position. If the breaker will not reset, or it trips often, contact Vastex tech support or a licensed electrician.

Red Pilot Light (Heater) is located below the temperature controller, when illuminated it indicates the heat is turned on.

Variable Heat Control is used to control the temperature setting. The control has positions from LO to HI. The power to the heater(s) is cycled on and off to vary the temperature. The higher the number on the controller the longer the on cycle and shorter the off cycle time. The “HI” position keeps the power on constantly. Check the temp inside the cabinet with a laser temperature gun.

Models: VDC-253624, VDC-253610-DHO, & VDC-513610-DHO

Red Pilot Light (Main Power) is located above the breaker/switch, when illuminated, it indicates the switch is in the “on” position, there is power to the unit, and the fan(s) will be on.

Breaker Switch is used to turn the machine on and off. In the event of a short or electrical failure, the switch will trip into the middle position. If the breaker will not reset, or it trips often, contact Vastex tech support or a licensed electrician.

Green Pilot Light (Control Output), when illuminated, it indicates the controller is calling for heat.

Red Pilot Light (Heater) is located above the heat on/off switch, when illuminated it indicates the controller is receiving power.

Red Pilot Light (Relay Output), when illuminated it indicates the relay contacts are closed and heater should be receiving power.

Temperature Control: Microprocessor Based PID Controller. Two digital readouts, top digital readout is the “Process Value” (PV), temperature at the sensor, bottom readout is the “Set Value” (SV), the temperature you set. All values are in Fahrenheit degrees standard but can be changed to Celsius. Four buttons along the bottom of the control unit, the two outside oval shaped are for setting operating parameters. (Factory set! Do not attempt to alter without consulting a VASTEX factory rep.) The two buttons in the middle, the “up arrow” and the “down arrow,” are for adjusting the “Set Value” (SV). A green light (CON) will illuminate when the controller is calling for heat (output on). A red light (ALM) will illuminate when the actual temp is higher than the set value.
1) **Automatic Tuning** has been performed at factory for all 240v machines. Automatic Tuning must be performed by the customer for the following reasons. When equipment is other than 240v (e.g. 208v), replacing a controller, replacing a “J” sensor, and/or new heating elements. Controller set point value must be set to 100 Degrees Fahrenheit before beginning auto-tuning.

   Procedure: a) Press the return key for at least 6 seconds (maximum 16 seconds). This initializes the auto-tune function. (To abort auto-tuning procedure, press and release the return key.)

   b) The decimal point in the lower right hand corner of the PV display flashes to indicate that auto-tuning is in progress. Auto-tune is complete when flashing stops.

   c) Automatic Tuning may take up to ½ hour. Remember, while the display point flashes, the controller is auto-tuning.

   Note: If an AT error (AtEr) occurs, the automatic tuning process is aborted due to the system operating in ON-OFF control mode (PB=0). The process will also be aborted if the set point is set too close to the process temperature or if there is insufficient capacity in the system to reach the set point (e.g. inadequate heating power available). Upon completion of auto-tuning the new PID settings are automatically entered into the controller’s non-volatile memory.

2) **Manual Mode** - Press and hold both the scroll and return key for 6 seconds to enter manual mode. Display on controller will show H000. Press the up or down arrow to set percentage of time the heater will cycle on and off. (i.e. Setting of 80.0 will cycle heater on 80% of time and off 20%). Controller can remain in this mode while resuming production. Replace malfunctioning “J” Sensor and proceed with Auto Tuning.
Operation

1) Before using the dry cabinet, make sure the inside is thoroughly clean and dust free. Never operate with dirty or missing intake filter.

2) Adjust the Center Tree to accommodate the size, and number, of screens you will be drying (Wide Dri-Vault Only). Insert the screens mesh-side (shirt-side) down onto the shelves. Screens should be free of dripping emulsion or water. Close and latch the door.

3) Turn on the power switch, set the temperature control, and allow the unit to run until the screens are dry. The unit should be run between 85°F and 95°F (29°C to 35°C) to properly dry the emulsion. It will take approximately 40 minutes to dry a fully loaded cabinet of coated screens at this temperature. Actual drying time will depend on your shop humidity and temperature. On digitally controlled units, set temperature to 90°F (32°C). On dial units, start on #6. Check temperature of a test screen with a laser temperature gun. Make adjustments up or down in order to get between 85°F and 95°F (29°C to 35°C). The cabinet can be operated with the heat and blower or the blower only.

4) Once the screens are dry, turn the temperature controller to the off position. Allow the blower to run for 5 minutes after the heating element is shut off. This will cool down the heater to avoid damage to the controls. The screens can be stored in the cabinet until needed.

Maintenance

1) Every week, the intake filter should be checked and cleaned as needed. A dirty filter reduces air flow thru the cabinet and will alter the drying process. The filter should be replaced as necessary. Filter material can be ordered through Vastex.

2) It is important that the inside of the dry cabinet is keep clean. Periodic cleaning of the inside of the cabinet is recommended.

3) Check the exhaust duct for debris and clogging. Any restriction in the exhaust ducting will alter the drying process.

To prevent over curing the emulsion, which can cause premature exposure, screen temperature should not exceed 95°F (35°C).
Troubleshooting

Machine controls operate normally, but drying inadequate

<table>
<thead>
<tr>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor airflow</td>
<td>Clean / replace filter</td>
</tr>
<tr>
<td>Poor airflow</td>
<td>Remove restriction</td>
</tr>
<tr>
<td>Poor airflow</td>
<td>Reduce length, number of fittings, or install booster fan</td>
</tr>
<tr>
<td>High ambient humidity</td>
<td>Move unit to air-conditioned room, or place dehumidifier near unit</td>
</tr>
</tbody>
</table>

No Heat

<table>
<thead>
<tr>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Power Pilot Light out</td>
<td>Switch Main Power ON</td>
</tr>
<tr>
<td>Machine unplugged</td>
<td>Plug machine into outlet</td>
</tr>
<tr>
<td>Loose connections / internal electrical fault</td>
<td>Check connections</td>
</tr>
<tr>
<td>Customer power failed or outlet failed</td>
<td>Check power at main disconnect</td>
</tr>
<tr>
<td>Circuit breaker switch trips to center position</td>
<td>Internal fault - contact Vastex</td>
</tr>
<tr>
<td>Main Power Pilot Light lit: VDC-253610 &amp; VDC-513610</td>
<td>Temperature control knob set to “OFF”</td>
</tr>
<tr>
<td>All other models</td>
<td>Is “HEATER” switch ON?</td>
</tr>
<tr>
<td>Main Power Pilot Light lit: All Models</td>
<td>Set temperature control knob</td>
</tr>
<tr>
<td></td>
<td>Set “HEATER” switch ON.</td>
</tr>
<tr>
<td>Main Power Pilot Light lit: All Models</td>
<td>Possible bad heating element.</td>
</tr>
<tr>
<td></td>
<td>Possible bad controller/thermostat</td>
</tr>
</tbody>
</table>

Pinholes / flaws in screen

<table>
<thead>
<tr>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chamber contaminated</td>
<td>Wipe inside of chamber with lint-free cloth, then vacuum.</td>
</tr>
</tbody>
</table>

Safety during maintenance and troubleshooting: ensure that your equipment is de-energized and the line cord (if machine has a plug) or branch circuit breaker (if machine is hardwired) is locked out before removing any panels or performing any troubleshooting or maintenance on internal parts. Only a qualified electrician or technician should perform testing on any internal components while equipment is powered. Allow time for heating elements to cool before removing any covers or panels. De-energize equipment before servicing filters or cleaning drying chambers.

Safety during transport, handling, and storage: This equipment does not present any special safety risks. When moving the equipment, be aware of the following weights:

- **VDC-253610**: 367 lbs (166.5 kg)
- **VDC-513610**: 573 lbs (277 kg)
- **VDC-253624**: 670 lbs (303 kg)

Essential characteristics of tools which may be fitted to this machinery: This equipment is not designed to be used with any additional attachments or tools, other than as specifically listed in this manual.
1. Buyer’s order will constitute an offer in accordance with the terms hereof and such offer, upon acknowledgment of Seller, will constitute the agreement between Buyer and Seller. Buyer’s order after such acknowledgment by Seller will not be subject to cancellation, change or reduction in amount, or suspension by Buyer of deliveries, unless prior to such action Buyer has obtained Seller’s written consent. Notwithstanding anything to the contrary in Buyer’s Purchase Order or other communications, the parties agree to be bound by these Terms and Conditions of Sale (b) Notwithstanding anything to the contrary in Buyer’s Purchase Order or other communications, the parties agree to be bound by these Terms and Conditions of Sale.

2. Any of these terms, conditions and provisions of Buyer’s order which are inconsistent with Seller’s acknowledgment and these Terms and Conditions of Sale shall not be binding on the Seller and shall be considered not applicable to any such sale. No waiver, alteration or modification of any of the provisions on either side of the document shall be binding on Seller unless agreed to in writing by Seller.

3. (a) All prices are F.O.B. Seller’s Plant and method of delivery and routing shall be at Seller’s discretion, unless specifically otherwise stated herein. Notwithstanding any agreement to pay freight, delivery of products purchased hereunder to a common carrier or licensed trucker shall constitute delivery to Buyer and be determinative of the date and time of shipment and all risk of loss or damage in transit shall be borne by Buyer. If the Buyer fails to accept the goods from the common carrier or licensed trucker, the Seller shall be entitled to claim payment from the Buyer. Buyer shall arrange for storage, the risk and the cost, including insurance costs, to be borne by the Buyer (and Buyer agrees to pay such amounts upon demand) except if the failure to accept delivery is due to any of the exceptions noted in Paragraph 4.

(b) Terms of payment in writing.

4. It is understood that deliveries will be made in accordance with Seller’s regular production schedule. Every reasonable effort will be made to meet the Buyer’s required delivery dates but Seller will not be liable for damages or be entitled to claim payment from the Buyer. Buyer’s order after such acknowledgment by Seller will not be subject to change or reduction in amount, or suspension by Buyer of deliveries, unless prior to such action Buyer has obtained Seller’s written consent. Notwithstanding anything to the contrary in Buyer’s Purchase Order or other communications, the parties agree to be bound by these Terms and Conditions of Sale.

5. Seller reserves the right to increase the prices prior to Seller’s acceptance of order and/or after expiration of any price quoted by Seller.

6. Unless otherwise stated in writing, Seller’s prices do not include sales or excise, value-added or other taxes. Consequently, in addition to the price specified herein, the amount of any present or future sales, use, excise, value-added or other taxes shall be borne by the Buyer (and Buyer agrees to pay such amounts upon demand) except if the failure to accept delivery is due to any of the exceptions noted in Paragraph 4.

7. Buyer shall be liable for consequential damages.

8. Buyer’s order shall be limited to Buyer’s stated selling price per unit of any defective goods and shall in no event include Buyer’s manufacturing costs, lost profits, goodwill, or any other special, indirect, incidental or consequential damages, arising out of the agreement, this contract, the sale of the products to the buyer or the use or the performance of the products. Seller may at its discretion repair, replace or give the Buyer credit (pro-rated) for such defective products.

9. The remedies herein provided by Seller shall be cumulative and in addition to any other legal remedies. No waiver of a breach of any portion of this contract shall constitute a waiver of continuing or future breach of such provision or of any other provisions hereof.

10. These Terms and Conditions constitute the entire agreement of the parties. No amendments, changes, revisions or discharges hereof in whole or in part shall have any force or effect unless set forth in writing and signed by the parties hereto. This contract shall not be assignable by Buyer voluntarily by operation of law or otherwise without Seller’s written consent.

11. This contract shall be governed and shall be construed according to the domestic laws of the Commonwealth of Pennsylvania.

12. Any action in the ordinary course of business by Seller of the contract between the parties, including but not limited to any action for breach of the warranty under this Agreement, shall be governed by the laws of the Commonwealth of Pennsylvania.

13. This agreement shall inure to the benefit of and be binding upon the parties hereto, their respective successors and permitted assigns.

14. All notices required by this contract to be given by either party shall be sent in writing or by facsimile and shall be addressed to the last known address of such other party.

VASTEX INTERNATIONAL 7 EMERY ST
BETHLEHEM, PA. 18015 USA

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