



# *Enterra<sup>TM</sup>*

## *VLC Unit*

### **Owner & Operator's Manual**

<b>Model No.</b>	<b>Voltage</b>	<b>Frequency</b>
9495100	120V	50 – 60 Hz
9495101	230V	50 – 60 Hz

### **Table of Contents**

<b>DESCRIPTION</b>	<b>PAGE</b>
Safety	2
Technical Data	3
Installation Instructions	4
General Operation	5
Maintenance	8
Bulb Replacement	10
Fuse Replacement	12
Product Service	14
Declaration of Conformity	15
Warranty	16

## SAFETY

### FOR PROFESSIONAL USE ONLY.







Please read these operating instructions carefully before installing or operating this equipment.

- Use indoors only.
- Never operate the unit in close proximity to combustible materials or place materials on top of the unit.
- The unit must be electrically grounded to a three wire electrical outlet or receptacle. The electrical service provided must be a dedicated line of the proper size according to local electrical codes.
- Unit must be placed in a position that allows the power cord to be easily disconnected from the wall or inlet socket.
- Do not attempt to maintain the unit until you have read and understand this operation manual.
- Disconnect the line cord before attempting to service the unit.
- Do not operate the unit controls with tongs or other tools.
- Do not use solvents or liquid cleaners on the control panel.
- Do not cover the top of the unit or obstruct the rear fans in any other way.
- If the unit is not operated in the manner as specified in this manual, the protection provided by the unit may be impaired.



**CAUTION: RISK OF DANGER!**  
METAL SURFACES MAY BE HOT!

### SYMBOL TABLE

	- Alternating current	Courant alternatif
	- On (Supply)	Marche (alimentation)
	- Off (Supply)	Arrêt (alimentation)
	- Caution, Hot Surface	Attention, surface chaude
	- Protective Conductor	Terminal Borne de masse, châssis
	- Caution, Risk of Danger	Attention risque de DANGER

## TECHNICAL DATA

### ELECTRICAL RATINGS:

Model Number	Volts	Frequency	Watts
9495100	120V	50 - 60Hz	400W
9495101	230V	50 - 60Hz	400W

### DIMENSIONS:

Length: 343 mm (13.5 in)

Width: 330 mm (13.0 in)

Height: 305 mm (12.0 in)

### WEIGHT:

120V: 10.9 Kg (24 lbs)

230V: 13.6 Kg (30 lbs)

### TEMPERATURE:

Operating Temperature: 5°C - 40°C (41°F – 104°F)

Humidity: 80% non-condensing

### FUSE:

Mains: 2 x 5 A Fuse

PCB: T 250V 2.5A

### ACCESSORIES:

Set of bulbs (3) with Gloves 94-95-033

5.0A Fuse (Mains) 93-20-056

2.5A Fuse (Circuit Board) 93-20-119

## **INSTALLATION INSTRUCTIONS**

**Shipping damage should be reported to the carrier as soon as detected.**

The Unit Package contains the following:

- Owner & Operators Manual
- Power Cord
- Set of 3 Spare Bulbs with gloves
- Two - 5.0A Fuses
- One - 2.5A Fuse

### **UNPACKING:**

Save the box and other packing material for future use in transporting the unit.

- Open the box.
- Carefully lift the unit from the box by lifting on packaging supports. Support unit from the bottom to prevent slipping.
- Remove packaging supports.
- Remove plastic bag.
- Remove foam from inside door.

### **INSTALLATION:**

- Lift unit by metal base only. **DO NOT USE PLASTIC COVER TO LIFT UNIT.**
- The Curing Unit must be carefully placed on a solid flat surface. Position the unit at least 10cm (4 in) from the wall or other articles to allow for good airflow.
- Connect unit to a grounded power source.

### **WARNING:**

Never operate the Unit in close proximity to combustible materials or place materials on top of the unit.

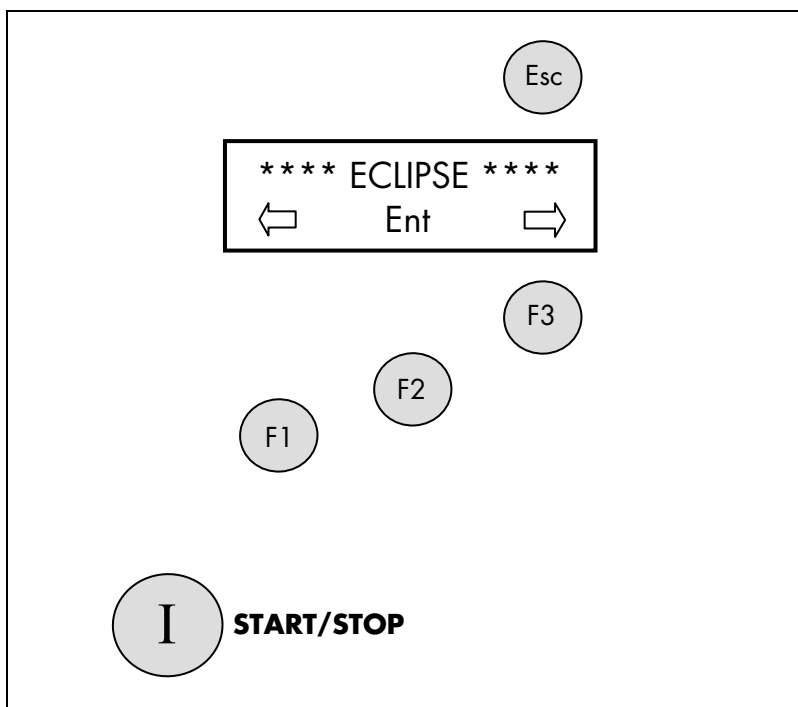
Do not use extension cords with this equipment.

Plug the power cord into a circuit rated a minimum of 15A.

Do not position the unit in a way that blocks access to the power cord inlet socket or the wall outlet.

## GENERAL OPERATION

### FUNCTION KEY DESCRIPTIONS:



**ESC:** Changes the current display to the previous display. From Material display to accumulated Lamp time, from Program display to Material display.

**F1, F3:** Select: - a new Material  
- a specific Program for the selected Material  
- one of 5 languages

**F2:** Accepts a new Material after selection.

**Start/Stop:** Starts a Program cycle

## GENERAL OPERATION Cont.

### FUNCTION KEY OPERATION:

#### Start-up:

- Plug the Curing Unit into a power outlet with a minimum rating of 15A. Turn on the power switch, located on the lower left side. The display will show the model name and software version for a few seconds. The second line displays the data version and the number of materials for this unit.

Enterra	V1.00
Data	V1.00 1

- The unit now goes into a test mode. The bulbs will be checked if the door is closed and other diagnostic functions are performed. If any faults are detected the display will notify the user. (Error messages can be found in the maintenance section of this manual.)

Testing	
60Hz	0

- The display then shows the total run time of all bulbs for a few seconds. When bulbs reach 55 hours they must be replaced, at 45 hours the unit emits warning beeps after each cycle but will continue to function until 55 hours have elapsed. After 55 hours the unit will fail to operate until the bulbs have been replaced. (See bulb replacement procedure in the maintenance section.)

0:10 hrs
Lamp Hours

- After the self test the unit is now ready for operation. The display shows the material

* * * * ECLIPSE * * * *		
←	Ent	→

#### Language Selection:

- Press the **Esc** key twice to obtain the language selection screen  
Use the F1 or F3 key to select **English, German, French, Italian or Spanish**. Press the F2 key to store the selection. The display then shows the first available Material.

English	
←	Ent

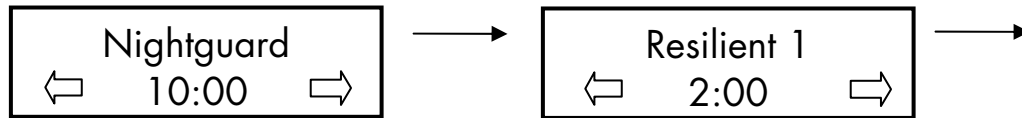
## GENERAL OPERATION Cont.

### Program Selection:

- Use the F1 or F3 key to select **a curing family**.
- Press the **Ent** (F2) key to start program selection

\*\*\*\* ECLIPSE \*\*\*\*  
⬅ Ent ➡

- Use the F1 or F3 key to select **a cure cycle**.  
The display shows the selected program and its total cycle time in minutes and seconds.



### Starting a Selected Program:

- Press the **"Start/Stop"** key to begin the selected program.

Resilient 1  
24°C #1 1:59

- The display shows the program name, the chamber temperature, the current program step and the elapsed time.  
At the end of the cycle the display shows the program screen again. The cooling fan will stay active if the chamber temperature is above 35°C after the cycle has been completed



**CAUTION:** *Models may still be hot - Use caution when removing materials from chamber.*

## MAINTENANCE/ERROR MESSAGES

### WARNING:

This equipment contains dangerous voltages. Maintenance and repair work should only be performed by an authorized service technician of DENTSPLY Ceramco.

To keep the equipment in good working order you should follow the guidelines below.

- Examine the equipment regularly for mechanical damage.
- Make sure the door is not obstructed in any way.
- Do not overload the table (11lb. max), this can cause the motor to turn slower and cause wear on the bearings.
- All three bulbs must be replaced at the same time after the 55 hour usable lifetime or if one of the bulbs expires prematurely.
- Do not use solvents or liquid cleaners on the control panel; they could enter the panel and cause damage.

### CLEANING:

- Clean the unit at least once a week.
- Clean the metal surfaces and table of the unit with a soft clean cloth and denatured alcohol or glass cleaner.
- Clean exterior surfaces with a soft, damp cloth using a mild detergent and water.
- DO NOT IMMERSE IN WATER!
- Open the cover and clean the fan and exhaust vents once a month or as needed to prevent overheating.

### ERROR MESSAGE:

#### No Power:

The display will be blank and the unit will not respond to the function keys. There are several causes: Tripped circuit breaker, blown fuses, disconnected or loose power cord, faulty power cord or a faulty control board. Check the breaker, fuses and power cord. If problem persists, call DENTSPLY Ceramco Service Department at (909) 795-2461.

#### Power Loss:

If a power outage occurs during a cycle, the following message will be displayed to alert the user that the outage occurred.

Press F2 (OK) to acknowledge.

Power failure  
OK

Nightguard  
OK

Nightguard  
⬅ 10:00 ➡

#### Close Door:

The door must be closed before starting a curing program.

Nightguard  
Close door

#### Bulb Replacement Needed:

Once the life of the bulbs surpasses 55 hours the unit will not operate unless the bulbs are changed. Follow the bulb replacement procedure in this section.

Error - Lamps  
Step #1



## **MAINTENANCE/ERROR MESSAGES Cont.**

### **Thermistor:**

This error occurs if the circuit board receives a faulty signal from the temperature sensor which is located in the lower left corner inside the curing chamber. Check for a broken tip on the temperature sensor. Call the DENTSPLY Ceramco Service Department at (909) 795-2461.

Error  
Thermistor

### **HighTemperature, no Fan:**

When the curing chamber temperature exceeds its preset limit the controller aborts the present program cycle and alerts the operator. Check the thermistor mounting and for proper fan operation. If problem persists, call the DENTSPLY Ceramco Service Department at (909) 795-2461

Error  
Temperature/Fan

### **No Frequency:**

This error will only occur at the self test during power up.  
Call DENTSPLY Ceramco Service Department at (909) 795-2461

Error  
No Frequency

## BULB REPLACEMENT

**THE FOLLOWING INSTRUCTIONS MUST BE FOLLOWED COMPLETELY FOR THE UNIT TO FUNCTION PROPERLY AFTER BULB REPLACEMENT. COMPLETE ALL STEPS.**

**⚠ CAUTION: RISK OF DANGER! BURN HAZARD IS PRESENT WHEN COVER IS OPENED. USE CAUTION AFTER OPENING COVER, BULBS AND METAL SURFACES MAY BE HOT! USE HEAT RESISTANT GLOVES WHEN REMOVING BULBS!**

After 45 hours of bulb operation the unit will give an audible warning after each cycle to indicate a change of the bulbs is imminent. Once the bulbs surpass 55 hours of operation the unit will not operate anymore and the bulbs must be changed. This designed as to assure consistent curing. **WARNING:** Only use bulbs supplied from DENTSPLY. Use of other bulbs will result in inconsistent curing.

The following screen will be shown to indicate a bulb change is needed:

Error - Lamps  
Step #1

### Step #1:

1. Unplug the Curing Unit.



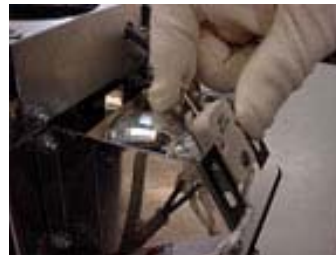
2. Open. Using a screwdriver, turn top cover screws ¼ turn counter-clockwise to loosen,



3. Open cover.



4. Each bulb socket has a release handle.



5. Pull each bulb release handle to push bulb out of socket.



6. Remove each bulb and dispose of bulbs properly.



## **BULB REPLACEMENT Cont.**

**IMPORTANT: DO NOT INSTALL BULBS AT THIS TIME.**

**The unit will test to make sure all bulbs are removed.**

- Close Cover.
- Close Door
- Reconnect power to the unit.
- After a self-test, the display will prompt user to complete step #2.

Error - Lamps  
Step #2

### **Step #2:**

1. Unplug the Curing Unit.



2. Open the cover.



**Use supplied gloves to protect the new bulb from skin oils, which can cause premature burn out of the bulbs.**

3. Place release handle into forward position.



4. Insert three NEW bulbs into the bulb sockets.



5. Make sure they are seated properly by pushing them all the way into the socket.



6. Close and secure cover. Using a large flat blade screwdriver, push down and turn two top cover screws ¼ clockwise.



7. Reconnect power to the unit. The bulb hours are now set to 0:00 hrs.

## **FUSE REPLACEMENT**

**Note: Mains Fuses are located in the rear of the unit inside the inlet socket.**

1. Unplug the Curing Unit.



2. Remove fuse drawer from inlet socket (2 fuses).  
Use a small screwdriver to push on the locking clip.



3. Remove fuse drawer.



4. Replace fuse(s) with the F 250V 5.0A fuse(s) (supplied).

5. Push fuse drawer into inlet socket until the clip locks.

## **FUSE REPLACEMENT Cont.**

**NOTE: Circuit Board fuse is located inside the unit and can be difficult to replace. Consult a DENTSPLY technician at (909) 795-2461, if needed.**

1. Unplug the Curing Unit.



2. Using a screwdriver, turn top cover screws ¼ turn counter-clockwise to loosen,



3. Open Back Cover and remove 2 screws from the electrical cover and slide back.



4. Fuse is located under the door on the PCB. Remove with a small screwdriver. Replace fuse with T 250V 2.5A fuse



5. Replace electrical cover. Make sure electrical cover is inserted into slots in front panel before securing.

6. Close and secure cover.



## **PRODUCT SERVICE**

### **WARNING:**

This equipment is designed with safety features to protect the operator and must not be modified in any form. Only qualified individuals should repair this piece of equipment. Failure to observe these precautions may result in burns or electrical shock.

Three methods of product service are available:

- Telephone assistance available at the number listed below,
- Return the unit for servicing using the instructions below,
- Call DENTSPLY Ceramco at the phone number below and obtain a service manual for a nominal fee

### **BEFORE RETURNING THE UNIT:**

- Call DENTSPLY Ceramco for an RMA (Return Material Authorization) number. This is used to track and identify your unit. Equipment received without this number may not be identifiable.
- Equipment damaged in shipment as a result of improper packing may not be paid by the carrier.

DENTSPLY Ceramco will not be responsible for damages resulting from improper packing.

Ship prepaid to:

DENTSPLY Ceramco

DENTSPLY International

RMA Number \_\_\_\_\_

13553 Calimesa Blvd.

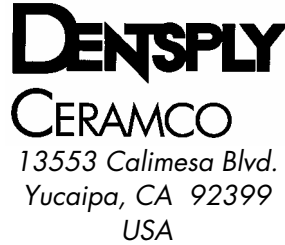
Yucaipa, CA 92399-1203 USA

Phone: 909.795.2461

Fax: 909.795.5268

equipmentrepair.ca@dentsply.com

## DECLARATION OF CONFORMITY



DENTSPLY Ceramco certifies that the following product:

Name: **Austenal<sup>(R)</sup> Enterra<sup>TM</sup> VLC Curing Unit**

Serial Number: HAS or HSE xxxx-xxx (Where x is a number from 0-9)

Conforms with the basic requirements of the following EC guidelines:

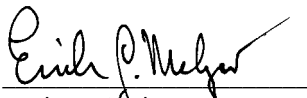
- Low Voltage Directive 73/23/EEC  
with 1. Modification 93/68/EEC
- Machinery Directive 98/37/EC Safety of Machinery – Basic concepts, general principles for design
- EMC - Electromagnetic Compatibility 89/336/EEC  
with 1. Modification 92/31/EEC  
2. Modification 93/68/EEC

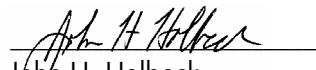
The following Harmonized Standards were applied:

- EN61326:1997 Electrical equipment for measurement, control and laboratory use
- EN 12100 – 1:2003, - 2:2003
- EMC requirements (includes amendment A1: 1998 and A2: 2001) (IEC61326: 1997 +A1: 1998 +A2:2001)

DENTSPLY Ceramco's quality system meets these requirements:

- ISO 13485:2003 (Quality)

  
Erich G. Melzer  
Electronic Project Engineer

  
John H. Holbeck  
Mechanical Project Engineer

  
Richard D. Roy  
Plant Manager

## **WARRANTY**

**WARRANTY:** Except with respect to those components parts and uses which are hereinafter described, DENTSPLY Ceramco warrants this furnace to be free from defects in material and workmanship for a period of two years from the date of sale. DENTSPLY Ceramco 's liability under this warranty is limited solely to repairing or, at DENTSPLY Ceramco 's option, replacing those products included within the warranty which are returned to DENTSPLY Ceramco within the applicable warranty period (with shipping charges prepaid), and which are determined by DENTSPLY Ceramco to be defective. This warranty shall not apply to any product which has been subject to misuse; negligence; or accident; or misapplied; or modified; or repaired by unauthorized persons; or improperly installed.

**INSPECTION:** Buyer shall inspect the product upon receipt. The buyer shall notify DENTSPLY Ceramco in writing of any claims of defects in material and workmanship within thirty days after the buyer discovers or should have discovered the facts upon which such a claim is based. Failure of the buyer to give written notice of such a claim within this time period shall be deemed to be a waiver of such claim.

**DISCLAIMER:** The provisions here-in stated DENTSPLY Ceramco sole obligation and exclude all other remedies or warranties, expressed or implied, including those related to *MERCHANTABILITY* and *FITNESS FOR A PARTICULAR PURPOSE*.

**LIMITATION OF LIABILITY:** Under no circumstances shall DENTSPLY Ceramco be liable to the buyer for any incidental, consequential or special damages, losses or expenses.

**LIMITATION OF ACTIONS:** The buyer must initiate any action with respect to claims under the warranty described in the first paragraph within one year after the cause of action has accrued.

### **Corporate and Sales Office:**

DENTSPLY Austenal  
DENTSPLY International  
570 West College Avenue  
York, PA 17404-0872 USA  
PH: 800.621.0341  
FAX: 717.849.4712

### **Product Service Office:**

DENTSPLY Ceramco  
DENTSPLY International  
13553 Calimesa Blvd.  
Yucaipa, CA 92399 USA  
PH: 909.795.2461  
FAX: 909.795.5268  
equipmentrepair.ca@dentsply.com

DENTSPLY Canada  
161 Vinyl Ct.  
Woodbridge, Ontario L4L  
4A3  
905.851.5374

PC 9363189  
0648 and D  
© DENTSPLY Ceramco  
All Rights Reserved  
Printed in USA