



NeyFire™ T
Vacuum Porcelain Furnaces

Owner & Operator's Manual



Models:

9495610
9495611

Voltage:

100-120V
220-240V

Frequency:

50/60 Hz
50/60 Hz

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CERAMCO®

SAFETY:

FOR PROFESSIONAL USE ONLY.

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

- Use indoors only.
- Maximum operating altitude 2000m (6,561 Ft).
- 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.
- The end user is to only use an approved or certified power cord set if in a geographic region that uses a different power cord set other than what is provided.
- 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.
- The manufacturer is to be consulted if there is any doubt about the compatibility of cleaning agents with parts of this equipment or with material contained in it.
- Do not cover the top of the unit.
- 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!

BURN HAZARD IS PRESENT WHEN CHAMBER IS OPENED. USE CAUTION AFTER OPENING CHAMBER. SURFACES MAY BE HOT!

OSHA AND CALIFORNIA PROPOSITION 65: MUFFLE DUST EXPOSURE

In keeping with the policy of DENTSPLY Prosthetics to build safe products, comply with all National and State statutes and keep you, the valued customer informed; the services of a Certified Industrial Hygienist firm were employed to test and evaluate the lab operator's exposure to respirable refractory ceramic fiber (RCF) and crystobalite (a form of crystalline silica) present in the furnace muffle.

When it becomes necessary to replace the muffle, the person doing this work is recommended to wear a HEPA filter respirator and protective gloves as a precautionary matter.

Seal used muffle in a plastic bag and dispose of in accordance with local, state and Federal regulations.

Because this product and many similar products on the market today contain crystalline silica and ceramic fibers, it is necessary under the statutes of California Proposition 65 that DENTSPLY Prosthetics include the following statement: ***"This product contains substance(s) known to the State of California to cause cancer."***

Material Safety Data Sheets for RCF materials supplied upon request.

Pollution degree: 2

SYMBOL TABLE

| | |
|--|---------------------------------|
| | - Alternating current |
| | - On (Supply) |
| | - Off (Supply) |
| | - Caution, Hot Surface |
| | - Protective Conductor Terminal |
| | - Caution, Risk of Danger |

FEATURES:

DESCRIPTION OF FURNACE:

The NeyFire T is a dental ceramic vacuum furnace. A NeyFire may be programmed to produce a temperature of up to 1200°C (2192°F). All units have provisions for applying a vacuum during the firing cycle. Units are cord connected and intended for bench top use.

INTENDED USE OF FURNACE:

The intended use of the NeyFire T is for sintering (firing) and glazing dental crown and bridgework ceramics in professional dental laboratories.

INTERNATIONAL PROTECTION RATING:

IPXO

FEATURES:

- Small Footprint – saves bench space
 - 1620 User Programs for Ceramics (2-stage Selectable for Crystalization and Tempering Cycles)
 - USB Memory Stick Loading, Backup and Printing Programs
 - Large Color LCD Graphic Display Module with Touch Control
 - High Performance Quartz Fiber Muffle Produces Superior Porcelain with Long Life Characteristics.
 - Large Active Heat Zone for better Temperature Uniformity
 - 1200°C (2192°F) Maximum; 100°C (212°F) Minimum Temperature
 - Ultra Smooth Muffle Movement with Stationary Work Support
 - Programmable Muffle Dry Position
 - Programmable Dry Time
 - Independent Low, Medium and High Fusing Temperature Calibrations
 - Fast Cool Down for Short Times between Loads Gives Maximum Productivity
 - Vacuum Release Programmable in Temperature or Time
 - Fast Heat Rates of up to 120°C/minute (216°F/minute)
 - Full Program Flexibility; Parameters Changeable During Firing Cycle
 - Power Outage Return; After a short power outages the firing cycle will resume without loss of vacuum due to outage. In order to take affect the user would need to cycle power.
 - Programmable High Temperature Limit
 - Programmable Energy Saver "Idle Down Time"; Muffle closes but Maintains Lo Temp
 - NIGHT MODE: Muffle closes when Temperature reaches a Programmed Night Temp to prevent moisture absorption. Can also be activated during a Cycle.
- PURGE Cycles: Vac Purge – 10:00 min hold at 1095°C (2003°F) for Muffle Decontamination after the use of Silver Alloys
Air Purge – 10:00 min hold at 1095°C (2003°F)
- Three Point Temperature Calibration; Operator reads out and adjusts Calibrations from Control Panel
 - Agency Approvals: ETL, CE
 - Ultra Friendly Controls
 - 3–Year or 15,000 Cycles Limited Warranty
 - Save enable/Save disable
 - Vacuum check to verify muffle closure

TECHNICAL DATA:

ELECTRICAL RATINGS:

Volts: 100-120VAC, 50/60 Hz, Watts: 1800W

220-240VAC, 50/60 Hz Watts: 2000W

DIMENSIONS NEYFIRE T:

Width: 310mm (12.2")

Depth: 392mm (15.4")

Height Closed: 376mm (14.8")

Height Open: 510mm (20.1")

WEIGHT NEYFIRE T:

Furnace: 21kg (47lb)

Shipping: 25kg (55lb)

OPERATING CONDITIONS:

Allow the furnace to warm to room temperature before starting operation. Starting the NeyFire at cold temperature may cause a false thermocouple error.

Relative Humidity: maximum 80%

PERFORMANCE:

Temperature Accuracy: $\pm 3^{\circ}\text{C}$ from 400 to 1200 $^{\circ}\text{C}$ ($\pm 5.5^{\circ}\text{F}$ from 752 to 2192 $^{\circ}\text{F}$)

Temperature Uniformity: $\pm 5^{\circ}\text{C}$ ($\pm 9^{\circ}\text{F}$) at steady state.

TECHNICAL DATA (CONTINUED):

RANGE OF FIRING PARAMETERS:

CERAMIC CYCLES:

| <u>Programmable</u> | <u>Display</u> | <u>Min</u> | <u>Max</u> |
|------------------------|----------------|---------------|----------------------|
| Night Temperature | (Night) | 100°C (212°F) | 400°C (752°F) |
| Start Temperature | (Lo T) | 100°C (212°F) | 800°C (1472°F) |
| Pre Dry Time | (Pre Dry) | 0:00min | 60:59 Min |
| Dry Time | (Dry) | 0:00min | 60:59 Min |
| Preheat Time | (Pre Heat) | 0:00min | 60:59 Min |
| Heat Rate | (Rate) | 1°C/min (2°F) | 120°C/min (216°F) |
| Final Temperature | (Hi T) | 400°C (752°F) | 1200°C (2192°F) |
| Hold with Vac | (Hold V) | 0:00min | 60:59 Min |
| Hold Time "Air" | (Hold) | 0:00min | 60:59 Min |
| Vacuum Level | (Vac %) | 0, 50% | 100,101% (always on) |
| Vacuum On Temperature | (V start) | 100°C (212°F) | 1200°C (2192°F) |
| Vacuum Off Temperature | (V stop) | 100°C (212°F) | 1200°C (2192°F) |
| Cool Time | (Cool) | 0:00min | 60:59 Min |

2ND STAGE CERAMIC CYCLES:

| <u>Programmable</u> | <u>Display</u> | <u>Min</u> | <u>Max</u> |
|------------------------|----------------|---------------|-------------------|
| Heat Rate | (Rate2) | 1°C/min (2°F) | 120°C/min (216°F) |
| Final Temperature | (Hi T2) | 400°C (752°F) | 1200°C (2192°F) |
| Hold with Vac | (Hold V2) | 0:00min | 60:59 Min |
| Hold Time "Air" | (Hold2) | 0:00min | 60:59 Min |
| Vacuum On Temperature | (V start2) | 100°C (212°F) | 1200°C (2192°F) |
| Vacuum Off Temperature | (V stop2) | 100°C (212°F) | 1200°C (2192°F) |

INSTALLATION INSTRUCTIONS:

ATTENTION:

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

UNIT PACKAGE CONTENTS:

- One furnace complete with power cord
- Vacuum tubing
- Display with Stand
- Shelf Cover Plate Assembly
- USB Stick
- Firing Platform
- Large Quick Cool Sagger Tray
- 10pk Tapered Top Firing Pins
- NeyFire T Quick Start (090978)

Neyfire™T Owner/Operators manual updates and additional furnace accessories are available on the DENTSPLY Prosthetics website; www.prosthetics.dentsply.com

UNPACKING:

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

- Open the box.
- Remove packaging supports.
- Remove plastic bag.
- Remove all packaging material from in and around the furnace. The furnace should be located at least 15cm (6") away from walls, shelves and heat sensitive materials. (See page 4 for overall furnace dimensions)

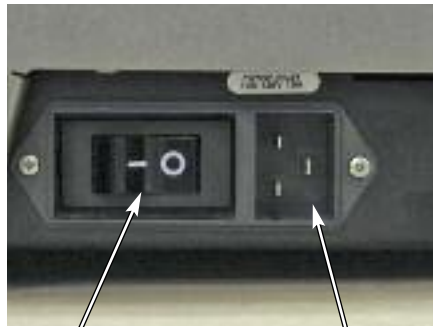
WARNING:

Never operate the furnace in close proximity to combustible materials or place materials on top of the unit.
Do not use extension cords with this equipment.
Do not position the unit in a way that blocks access to the power cord inlet socket or the wall outlet.

NEYFIRE T INSTALLATION:



S video cable connection



On/Off

Main Power / Cord Inlet



Vacuum Power Cord

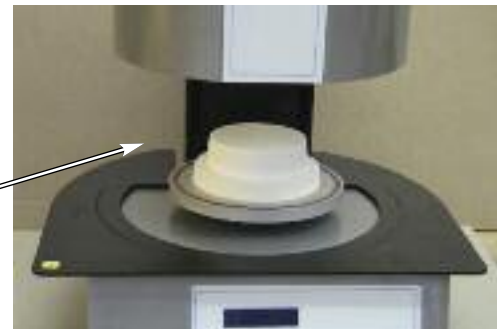
Vacuum Hose

NEYFIRE T FIRST POWER UP:

Note: Power Failure screen will appear at start up. Clear by pressing either OK or cancel.

- Connect the S video cable to the display and the furnace. The display label should point to the display.
- Turn on the Power Switch located on the right side panel.
- After the muffle reaches the up position remove additional packaging.
- **Place firing platform in center of firing table.**
Failure to do so will damage the furnace!
- Turn the Power Switch OFF.
- Read the General Operations on the following pages before turning the NeyFire T ON again,

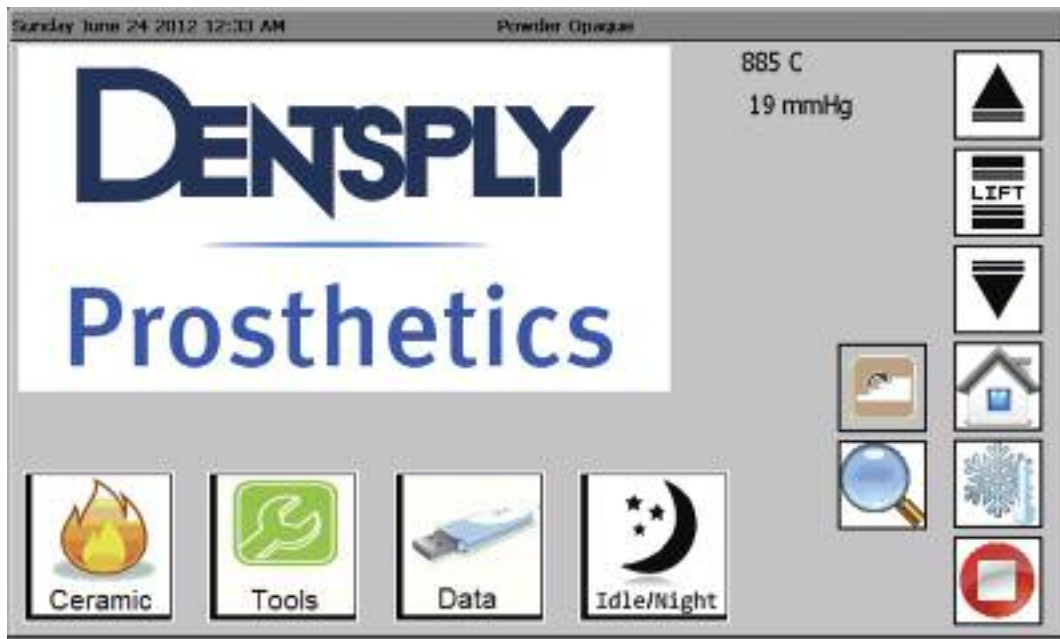
Firing Platform



OVERVIEW:

FUNCTION DESCRIPTION:

- Turn on the power switch located on the right side panel
- A number of tests (calibration, motor lift, etc.) are performed before operation begins that takes approximately 80 seconds.
- The NeyFire T will go into Night Mode with the display shown below. This is the home screen.

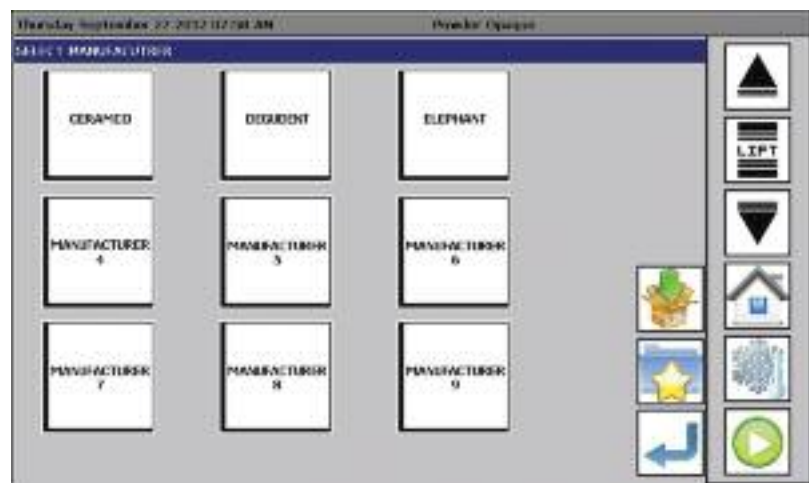


The NeyFire T stores 1,620 ceramic firing programs. These programs are organized into 9 groups based on the manufacturer. Pressing the Ceramic button on the home screen displays the 9 manufacturers' buttons.

Press:



Display Shows:



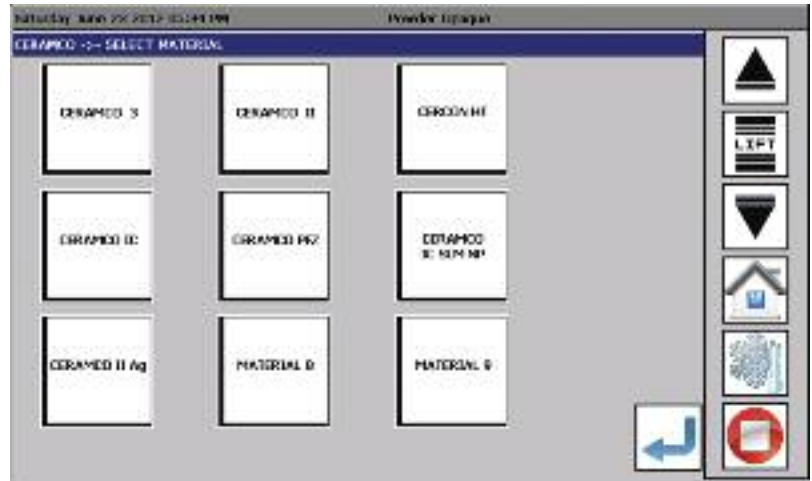
GENERAL CERAMIC OPERATION:

Each manufacturer button holds 9 different brands of Ceramic. Pressing one of the manufacturer buttons displays the 9 ceramic brands. Press the Return button to go back.

Press:



Display Shows:






Each of the 9 brands of Ceramic holds 20 cycles. Use the up arrow or down arrow or a stylus to select a particular cycle.

Press one of the Material Buttons on previous screen



Display Shows:



The selected cycle is highlighted with a blue bar. Press  to view the program parameters. To run the Program press .  Return goes back.


Press to Start Program:

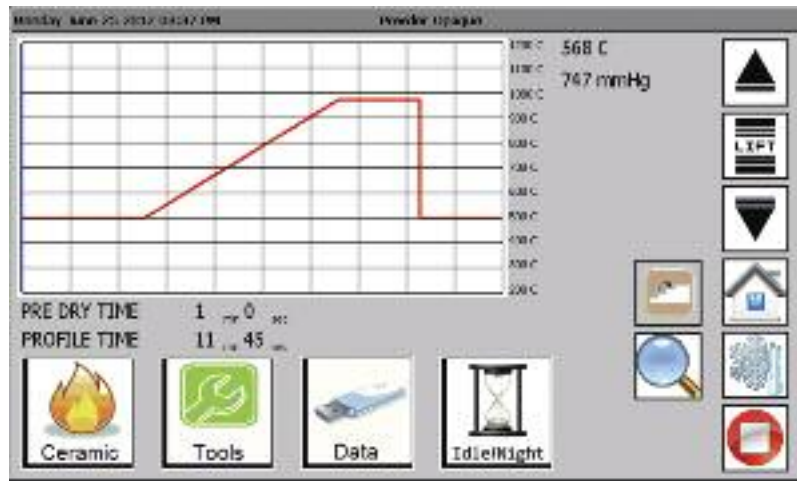


Display Shows:



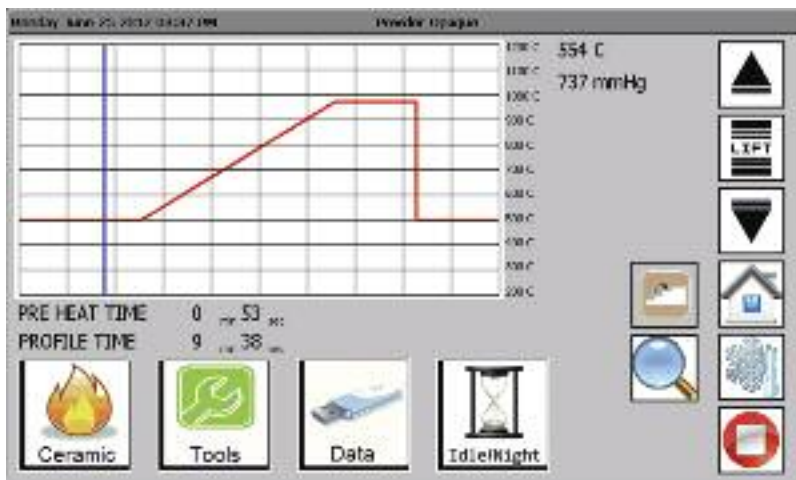
GENERAL CERAMIC OPERATION (CONTINUED):

Once the  button on the control panel is pressed the display changes to cycle run mode. Returning to the home screen will display a temperature profile graph, current position in the cycle, time remaining in that cycle and overall time remaining.

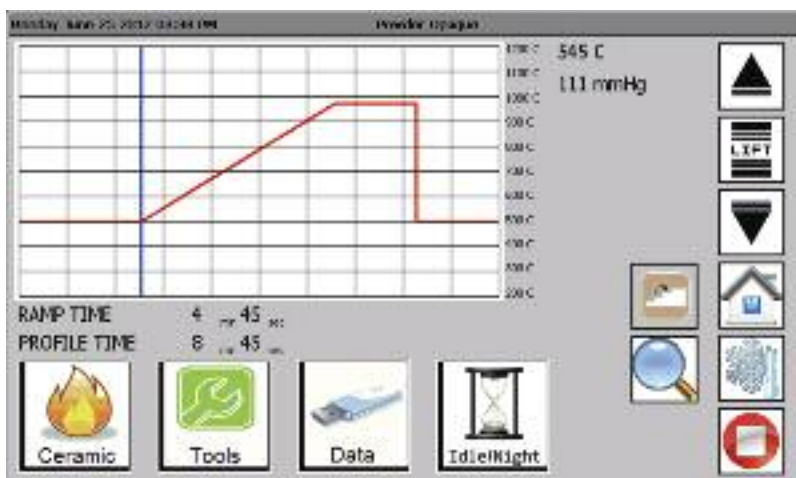


Once the Lo Temp is achieved, the muffle is lowered to the starting position. The dry starting position is adjustable in Tools / Setup from the Night Mode screen.

Each of the three times (Predry, Dry, Preheat) count down. A vertical line marks the position on the graph. During the Dry time the muffle is lowered in small steps so that it closes as the Dry time expires. Once the muffle is fully closed the vacuum pump will cycle to verify a complete seal.

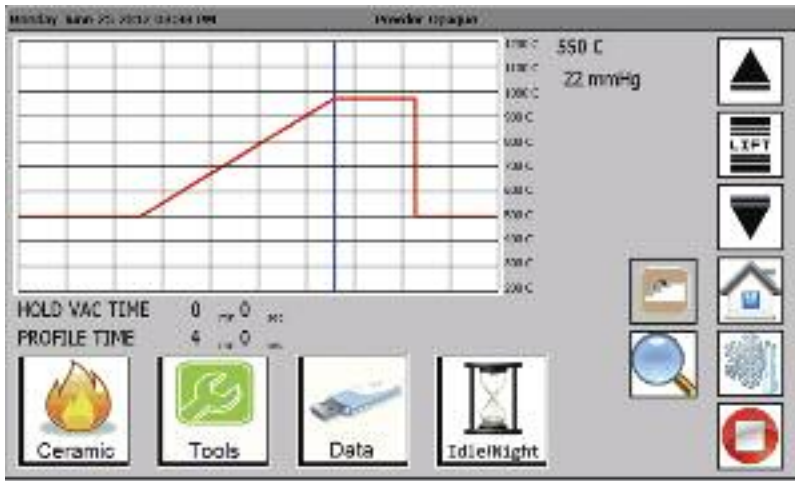


After the Dry time is completed the muffle stays in the closed position during the programmed Preheat time.

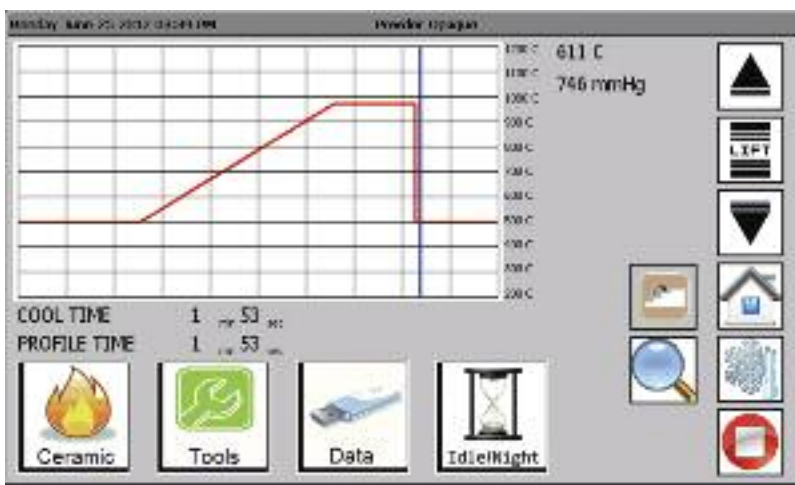


At the end of the Heat time the vacuum pump is activated if requested. After a sufficient vacuum is achieved the temperature increase to the Hi Temp (Rate) is performed.

GENERAL CERAMIC OPERATION (CONTINUED):



At the end of the Rate the hold time is activated. Either Hold with air or Hold with vacuum then Hold with air. This total time is counted down to zero.




At the end of the hold times the vacuum is released and the cool time is accessed. The muffle opens a short distance and then opens in small steps for the remainder of the programmed cool time.

After the Cool segment is complete the NeyFire T returns to the program listing screen with the just completed cycle highlighted. Using the **Up** or **Down** arrow button or a stylus, select another program and the Start button to start the cycle.

EDITING PROGRAM PARAMETERS:



Pressing  changes the screen to the Edit screen which lists program parameters. Use the up and down arrow buttons select the particular parameter to be edited. In order to change a program that has already started, simply edit the parameters desired and press load.

GENERAL CERAMIC OPERATION (CONTINUED):

The screenshot shows the 'Powder Opague' control screen. At the top, it displays the date and time: 'Tuesday October 26 2010 10:01 AM'. Below this, the screen is divided into several sections. On the left, there's a 'PROGRAM NAME' field with 'Powder Opague' entered. Below that, a 'PROPERTY NUMBER' field shows '142' and a 'READY' status. The main area contains a grid of parameters: 'PRE TEMP (°C)' (0/0), 'ACTU PRE TEMP' (650), 'DEF TEMP' (3/0), 'ACTU DEF TEMP' (970), 'PRE HEAT (s)' (3/0), 'HOLD PREHEAT (s)' (0/0), 'COOL TIME' (650), 'HEAT RATE' (70), 'HEAT TEMP' (970), 'HEAT (s)' (0/0), 'COOL DOWN (s)' (0/0), and 'VACUUM LEVEL (%)' (100). To the right of these parameters is a numeric keypad with buttons for '+100', '+10', '+1', '-100', '-10', '-1', and a '0' button. Below the keypad are icons for 'COPY', 'LOAD', and 'PASTE'. At the bottom, there's a 'DUALSTAGE' checkbox and a 'GO' button. On the far right, there's a vertical column of navigation buttons: a triangle up, a triangle down, a 'LEFT' button, a triangle left, a triangle right, a house icon, a gear icon, and a play button.



- saves changed values
Only available when SAVE ENABLE is selected under “Advanced”.



- loads changed values



- restores all factory default values



- returns to the program list screen for the selected material

To create a new program:



- copy program values



- paste program values

PROGRAM NAME

The screenshot shows the 'listing' screen. At the top, there's a 'PROGRAM NAME' field with 'Powder Opague' entered. Below this, there's a large keyboard interface with buttons for letters, numbers, and symbols. At the bottom, there are three buttons: 'ENTER', 'STOP', and 'MENU'.

Edit the selected firing program name. Select a program from one of the listing screens and then press Program Name. Once the name is edited, press enter.

GENERAL CERAMIC OPERATION (CONTINUED):

BUTTON TABLE:

The soft keys are used for editing and firing cycle control. The keys are described individually in the following list:



The **Favorite's** button allows the user to access saved frequently fired programs.



Fast Cool setting: toggles ON/OFF. The Fast Cool feature turns the vacuum pump on after the cycle has completed the cool segment. The vacuum pump runs until the muffle temperature is cooled to the current LoT. When this is active, the thermometer will fill blue.



Idle Temperature is the LoT of the previously fired program. This icon will be visible when the NeyFire T is in Idle Mode.



Night Mode: Muffle closes when temperature reaches a programmed Night Temperature to prevent moisture absorption. Can also be activated during a cycle.



The **Start** button will commence the selected program.



Abort will cancel any program no matter where in the firing cycle.



Muffle Up movement.



Pause muffle movement.



Muffle down movement.



This **Search** button shows the program parameters for the particular program selected. Can also be used for editing.



The **Load** button lets the user load the selected program. It also allows the user to change parameters on a program that is already running.



The **Save** button allows the user to save any changes made to a particular program.



The **History** button shows the last 20 programs that were run.

GENERAL CERAMIC OPERATION (CONTINUED):

OPTIONAL FAST COOL DOWN AFTER A FIRING CYCLE:

The fast cool down button shows up in the lower right hand side of the display screen. When activated the vacuum pump is turned on after the furnace complete the firing cycle and run until the muffle temperature is cooled back down to the Lo T. Once the vacuum pump is turned off the muffle temperature may increase for a little while before finally cooling to the Lo T.



The fast cool option is turned on when the thermometer icon is full and turned off when it is empty.

DUAL-STAGE OPERATION



All of the Ceramic programs have the capability of being programmed as two stage cycles. The two stage cycles can be used for crystallization or tempering. The default setting is 1 or single stage. Pressing the button toggles it between 1 and 1+2. Selecting 2 stages enable 6 additional parameters to control the second stage. These parameters do not appear until the 2nd stage is activated.

| | |
|--------------------|-----|
| HEAT RATE2 | 0 |
| HIGH TEMP2 | 400 |
| HOLD2 (hrs) | 0 0 |
| VACUUM ON TEMP2 | 100 |
| VACUUM OFF TEMP2 | 100 |
| HOLD VACUUM2 (hrs) | 0 0 |

The 2nd stage parameter values are edited with the same method as the 1st stage parameters. See description on previous pages.

HOLDING A VACUUM:

Holding vacuum through the Hold time requires that the V stop temperature is equal to or higher than the Hi Temp and the Hold Vacuum Timer be set to the desired time hold a vacuum at the Hi Temp.

NEXT STEP OPERATION:

Next Step button appears on the home screen. Pressing the button moves to the cycle to the next parameter in ceramic firing cycle.



ABORT A FIRING CYCLE:

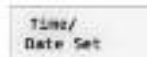
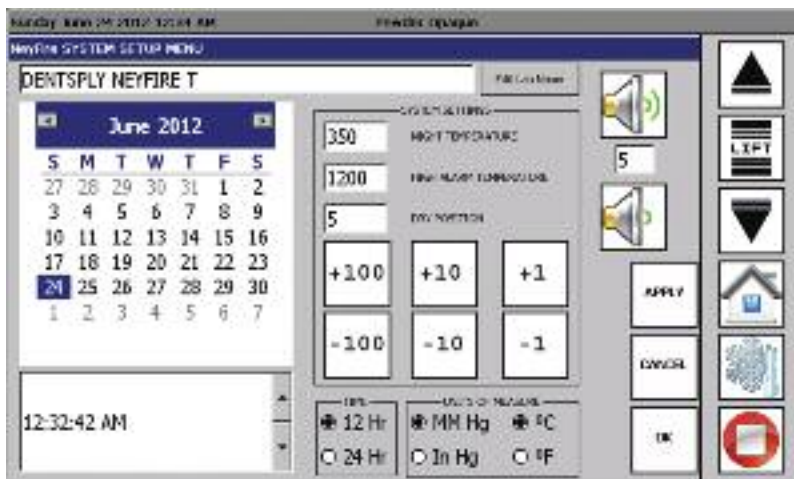
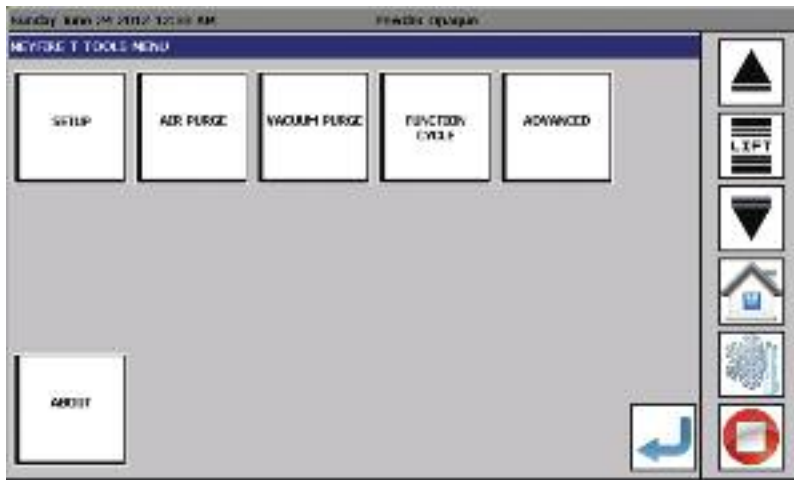
Press the abort button located on the home screen will abort a firing cycle. The red stop button will only appear when a firing cycle is active.



GENERAL CERAMIC OPERATION (CONTINUED):



Press the Tools button to access setup functions and other special programs:



This selection allows the date and time to be set. Use the up/down keys to change values, Press Apply to save

NIGHT TEMP:

This is the muffle temperature during the Night Mode Start up screen. When the Idle/Night key is pressed during a firing cycle the NeyFire T enters the Night Mode after the cycle is completed. Once at the programmed Night Temp the muffle will lower automatically to its closed position.

HIGH ALARM TEMPERATURE:

This functions prevents accidental programming of higher than expected temperatures. Whenever the muffle temperature reaches the programmed value the cycle is interrupted with Err 3. Do not lower this parameter until you have verified that the programs and firing charts currently loaded into the NeyFire do not have Hi Temp that exceed the Max Temp.

GENERAL CERAMIC OPERATION (CONTINUED):

DRY POSITION:

For a firing cycle with a programmed Predry Time this value determines the muffle position .10 – muffle stays full open. 0 – muffle is fully closed, (5 approximately halfway open).

C/F DEGREES:

This setting determines the temperature units for the NeyFire. When °F is selected the measured vacuum is displayed in inHg.

BAROM. PRESSURE:

The value is the local atmospheric pressure reading in mm Hg. Typical 760mm at sea level and goes down with altitude, approximately 80mm per KM (1" per 1000FT). Be advised that local weather reports use a normalized value and not the local barometric pressure which is effected by the local altitude.

AUDIO:

This selection changes volume of the alarm tone. 1 (low tone) – 10

DOWN TIMER:

This timer is activated after a firing cycle and automatically lowers the muffle after the programmed time to conserve energy. The muffle will automatically close after 10 minutes of inactivity.

AUTO CLOSE TIME:

This timer is activated after a firing cycle is completed. Once the muffle is fully raised the time will start and at the end of the time the muffle will close to conserve energy. The max setting is 10 minutes and the minimum setting is 0 (muffle will stay raised).

AIR PURGE

This selection performs a purge cycle without vacuum. The cycle starts at the time of selection and heats to 1095°C and holds for 10:00 minutes. At the completion of the hold time the purge cycle is complete.

VACUUM PURGE

This selection performs a purge cycle under vacuum to remove silver contamination. Place the carbon rod onto the platform before starting a cycle. The cycle starts at the time of the selection, the furnace pulls full vacuum and heats to 1095°C and holds for 10:00 minutes. At the completion of the hold time the vacuum releases and cools to 400°C. Once the temperature has cooled to 400°C the purge cycle is complete.

FUNCTION
CYCLE

This button starts a self test of the NeyFire T.

SHIPPING

Activating the shipping mode will raise the muffle and prevent the muffle from firing. This should be activated before shipping the unit to different facilities or being sent to repair.

NOTE: Make sure unit is cooled to room temperature before packing.

BURN IN CYCLE

This cycle is to remove moisture from the muffle. The pump will pull down and hold vacuum while the temperature raises to 1095°C. Once the Hi T is reached the vacuum will release and the muffle will open. This will repeat until the count reaches 30.

ABOUT

This button displays the software version and the serial number of the NeyFire T.

GENERAL CERAMIC OPERATION (CONTINUED):

ADVANCED

This section requires the user to enter “DENTSPLY” to access special functions (Vacuum Cycle, Calibrate, DENTSPLY Service, Shipping, Save Enable/Save Disabled)

VACUUM CYCLE

This cycle is to test vacuum leak rate. The pump will pull down and hold full vacuum for 5 minutes without recycling. The leak rate should be less than 25mm Hg. (Note: This test should be performed on a hot dry muffle.)

CALIBRATE

(Temperature): User adjustable calibration of temperature offset Max +20°C, Min –20°C. Positive values raise muffle temperature to the desired temperature and negative values lower the temperature. Entering the 0 in the offsets resets the original factory calibration.

If consistent overfiring is occurring the appropriate value(s) should be reduced by the estimated number of degrees that it is overfiring. The estimated number of degrees that the furnace is underfiring should be added to the appropriate Cal value(s). Once the value(s) is entered press send Cals.

(Vacuum): User adjustable calibration for vacuum is Max +20, Min –20. Positive values raise ambient pressure and negative values lower ambient pressure. Entering the 0 in the offsets resets the original factory calibration.

If the operator cannot achieve acceptable firings or full vacuum, contact DENTSPLY Service for further calibration instructions.

DENTSPLY SERVICE

This selection requires a code to access special functions. These functions require specialized technical equipment and training to effectively use. Contact the DENTSPLY Prosthetics’ Service Department for details and requirements.

SAVE ENABLED

Save Enable allows all programs to operate as normal and can be changed. The operator has the ability to edit firing cycle parameters.

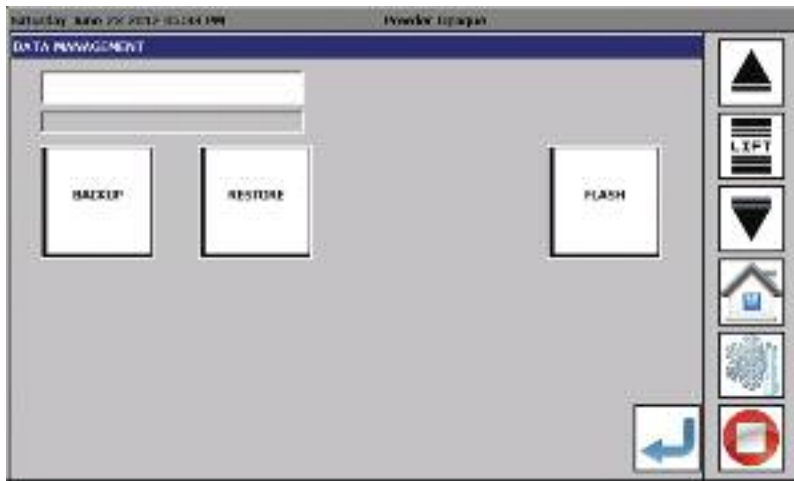
SAVE DISABLED

Save Disable allows all programs to operate as normal but cannot be changed. The operator is also NOT able to edit firing cycle parameters.

GENERAL CERAMIC OPERATION (CONTINUED):



Press this button to access data transfers feature.



To backup the programs saved on the controller, insert the USB device that was supplied and press BACKUP.



To restore the programs that were saved to the USB both by backing them up or by editing using the DENTSPLY Utility, insert the USB device and press restore.



Should a new version of software be released, the files would be downloaded to the USB memory stick provided and the Flash button would be pressed. In order for the update to take effect, the NeyFire T needs to be power cycled after the flash.

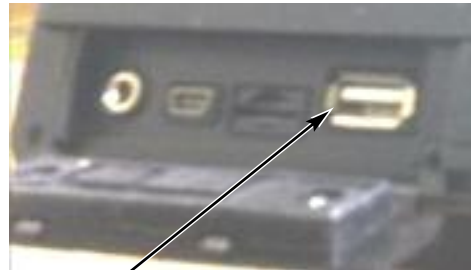
GENERAL CERAMIC OPERATION (CONTINUED):

EDITING PROGRAMS FROM A COMPUTER (PC COMPATIBILITY):


- Insert the USB memory stick that was provided into your computer.
- Open NeyFire folder.
- Double Click on DENTSPLY Utility



- To edit a manufacturer name, material name or firing program select Edit Program Files. Select the item you want to edit or drill down through.
 - To change Language or restore defaults select Options.
 - Once all the appropriate changes are made, select Save File. The modified program will be saved on the USB Memory Stick.
 - Insert Memory Stick into display. When stick is not in use replace with the plug or close access panel.
- Note: ● Units of measure Farenhheit.



Port for
Memory Stick

- Press:  and select Restore. This will prompt the user to select ok. The edited programs will show up on the display.

Note: Please do not use any hard objects on the touch screen, intended for finger touch.

MAINTENANCE:**WARNING:**

This equipment contains dangerous voltages. Maintenance and repair work should only be performed by an authorized service technician of DENTSPLY Prosthetics. See Product Service on page 22 of this manual for contact information.

TO KEEP THE EQUIPMENT IN GOOD WORKING ORDER YOU SHOULD FOLLOW THE GUIDELINES BELOW.

- EXAMINE THE EQUIPMENT REGULARLY FOR MECHANICAL DAMAGE.
- DO NOT USE SOLVENTS OR LIQUID CLEANERS ON THE CONTROL PANEL.

CLEANING:

- CLEAN THE UNIT AS NEEDED.
- VACUUM DUST AND DIRT FROM THE FURNACE RATHER THAN BLOW. THIS WILL MINIMIZE THE AMOUNT OF AIR BORN DUST PARTICLES.
- CLEAN EXTERIOR SURFACES WITH A SOFT, DAMP CLOTH USING A MILD DETERGENT AND WATER.
- DO NOT IMMERSE IN WATER!

ERRORS:**WARNING:**

Service of this equipment should be done only by qualified personnel. Failure to comply may result in personnel injury and/or property damage.

| PROBLEM | CAUSE | SOLUTION |
|---|--|--|
| No power to unit | Power switch. No line voltage. | Place switch in ON position. Check wall socket for line voltage. |
| Slow heating (Check muffle down position) | Rate programmed too low. Ramp rate may not be achieved at higher temperatures. Muffle deterioration. | Verify the programmed Heat Rate value is the desired value. Adjust ramp rate lower based on heating chart. Contact DENTSPLY Service Department for instructions on how to check muffle resistance. |
| Firing Platform hits muffle | Misalignment | Adjust white firing platform position so that it is centered on the aluminum door. |
| Displays "Err 1 Over temp" | The muffle temperature exceeded 1250°C. | Contact DENTSPLY Service Department. |
| Displays "Err 2 Open TC" | The thermocouple opened. | Replace thermocouple. |
| Displays "Err 3 Max Temp" | The temperature exceeded the Max temperature programmed | Hi Temp exceeded Hi alarm temp in system set up menu. Contact DENTSPLY Service Department. |
| Displays "Err 4 No Vacuum" | No vacuum detected in the chamber | Check pump connections |
| Displays "Err 5 Low Vacuum" | Little vacuum detected | Check door seal |
| Displays "Err 6 Open Muffle" | The muffle heating wires opened | Replace muffle |
| Displays "Err 7 TC Cable" | The thermocouple wiring malfunctioned | Contact DENTSPLY Service Department. |
| Displays "Err 8 Motor Position" | The muffle position reading is out of range | Check for correct connection of Motor Pot cable |
| Displays "Err 9 Wrong TC" | The thermocouple was incorrectly installed | Reverse thermocouple leads on the circuit board. |
| Displays "Err 10 Memory" | The microprocessor cannot read or write to the external Dataflash IC | Contact DENTSPLY Service Department. |
| Displays "Err 15 Slow Motor" | Muffle travels up or down for more than 12 seconds | Check for obstructions |
| Displays "Err 18 AC Drive" | The control cannot turn off current to the muffle | Contact DENTSPLY Service Department. |
| Displays "Err Hi Motor Current" | Actuator is drawing excess current. | Contact DENTSPLY Service Department. |
| Displays "Err DC Power" | 12V DC is no longer in valid operating range | Replace power supply. |
| Displays "Err Not Closed" | Muffle was no able to close and creat a proper seal. | Check door seal. |
| Dispalys "Fail Safe Err" | Communication between Micro Controllers is not working correctly. | Contact DENTSPLY Service Department. |
| Displays "Serial Comm Err" | Display has lost communication with the furnace. | Check RS232 connection. Contact DENTSPLY Service Department. |

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.

METHODS OF PRODUCT SERVICE AVAILABLE:

- Telephone assistance available at the number listed below,
- Return the unit for servicing using the instructions below,
- Visit “www.Ceramco.com” to download manuals and additional information.
- Call DENTSPLY at the phone number below and obtain a service manual.

BEFORE RETURNING THE UNIT:

- Call DENTSPLY for a PR (Product Return) number. This is used to track and identify your unit. Equipment received without this number may not be identifiable.
- Secure top section in down position using original rubber bands supplied with the original packaging.
- Equipment damaged in shipment as a result of improper packing may not be paid by the carrier.

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

Ship prepaid to:
DENTSPLY Prosthetics
ATTN: Equipment Repair
PR Number _____
470 West College Ave.
York, PA 17404 USA
Phone: 800.835.6639 Option #1 (US Customers)
717.849.4502 (International Customers)
Fax: 717.849.4238
Email: YorkPa-Prosthetics-Equipment-Repair@dentsply.com

Disposing of the device:

The device is an electronic device according to the “Act Governing the Sale, Return and Environmentally Sound Disposal of Electrical and Electronic Devices” (ElektroG).

It was identified in accordance with the existing law and provided with this symbol.



The device is not intended for private use. It is manufactured and delivered for commercial use and is to be disposed of by the end user according to the specifications of the Electrical and Electronic Equipment Act – ElektroG.

DECLARATION OF CONFORMITY:

DENTSPLY

CERAMCO®

570 West College Ave., York, PA 17405, USA



DECLARATION OF CONFORMITY

Manufacturer: Dentsply Prosthetics
570 W. College Ave.
York, PA 17405 USA

Product Name: Ney Fire T Vacuum Furnace

Description: Dental Veneering Furnace

Type: Laboratory Equipment

Model Number: 9495611

Serial Numbers: JNE-xxxx-xxx (Where x is a number from 0-9)

The equipment which accompanies this declaration is in conformity with EU Directive(s):-


- **2006/95/EC** Low Voltage Directive
- **2004/108/EC** Electromagnetic Compatibility Directive
- **2008/35/EC** RoHS Directive
- **2008/34/EC** WEEE Directive

Implemented through our EU Representative:
Degudent GmbH
Rodenbacher Chaussee 4
D-63457 Hanau Germany
Phone +49 6181 59 57 59

The following harmonized standards have been used:-

- **EN 61010-1:2001** *Safety requirements for electrical equipment for measurement, control and laboratory use. General requirements*
- **IEC 61010-2-010:2003** *Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-010: Particular requirements for laboratory equipment for the heating of material*
- **IEC 61326-1:2005** *Electrical equipment for measurement, control and laboratory use EMC requirements Part 1: General requirements*

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).


Juan Alvarez
Operations Manager
Dentsply Prosthetics
York, PA USA

16 October 2012

WARRANTY:

WARRANTY: Except with respect to those components parts and uses which are hereinafter described, DENTSPLY Prosthetics warrants this furnace to be free from defects in material and workmanship for a period of three years from the date of sale or 15,000 firing cycles whichever occurs first. DENTSPLY Prosthetics' liability under this warranty is limited solely to repairing or, at DENTSPLY Prosthetics' option, replacing those products included within the warranty which are returned to DENTSPLY Prosthetics within the applicable warranty period (with shipping charges prepaid), and which are determined by DENTSPLY Prosthetics 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 Prosthetics 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 Prosthetics 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 Prosthetics 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 Prosthetics
DENTSPLY International
570 West College Avenue
York, PA 17404-2558 USA
PH: 800.243.1942

FAX: 877.630.2894
prosthetics.dentsply.com

EC REP DeguDent GmbH
Rodenbacher Chaussee 4
63457 Hanau-Wolfgang
Germany
Tel. +49/6181/5950

Product Service Office:

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DENTSPLY International
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York, PA 17404 USA
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717.849.4502 (International Customers)
FAX: 717-849-4238

Email:
YorkPa-Prosthetics-Equipment-Repair@dentsply.com

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

DENTSPLY

CERAMCO®

DENTSPLY International Inc.
570 West College Ave.
York, PA 17405-0872
717-699-4190
Fax: 717-849-4543
www.ceramco.com
www.dentsply.com

EC REP
DeguDent GmbH
Rodenbacher Chaussee 4
63457 Hanau-Wolfgang
GERMANY
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degudent.com

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