

OPERATOR'S MANUAL

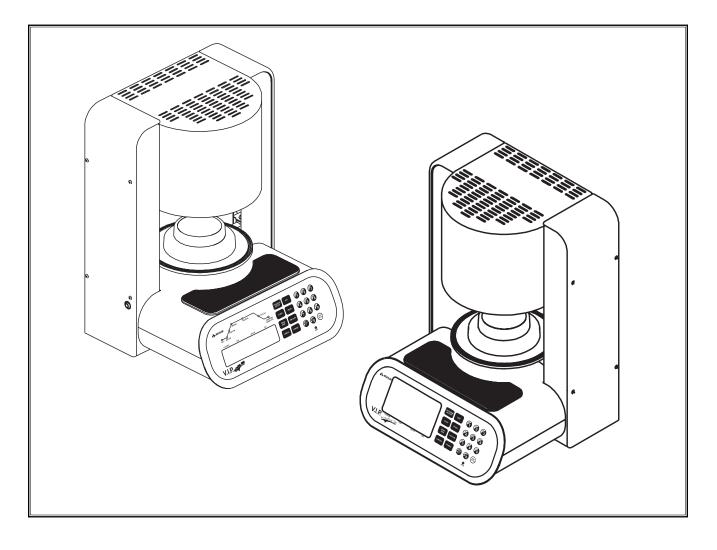






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Congratulations on your purchase of a Jelrus VIP VISION 300/VIP EXECUTIVE 500 vacuum porcelain furnace. Both VIP premium furnaces are designed for use with all regular and all low fusing porcelain. Your VIP furnace contains many advanced features including an Intelligent Memory System providing 100 open free programs, precision platinum thermocouple, on-board PC printer port, programmable cool time and more.

To ensure that your VIP VISION 300/VIP EXECUTIVE 500 gives you the highest level of service, please review and follow the guidelines outlined in this Operator's Manual.

JELRUS WARRANTY

This Jelrus equipment is warranted to be free from defects in material and workmanship for a period of twelve months (24 months for muffle) from the date of installation by authorized Jelrus Dealer service personnel.

Any item returned to our factory in Hicksville, New York during the warranty period, through a Jelrus Authorized Dealer, will be repaired or replaced at our option at no charge provided that our inspection shall indicate it is defective. Dealer labor, shipping and handling charges are not covered by this warranty.

This warranty does not apply to damage due to shipping, misuse, careless handling or repairs by non-authorized service personnel. Warranty void if installed or serviced by other than authorized service personnel. Jelrus is not liable for indirect or consequential damages or loss of any nature in connection with this equipment.

This warranty is in lieu of all other warranties expressed or implied. No representative or person is authorized to assume for us any liability in connection with the sale of our equipment.

ON-LINE WARRANTY REGISTRATION

Quickly and easily register your new Jelrus VIP VISION 300/VIP EXECUTIVE 500 vacuum porcelain furnace on-line. Just have your product model number and serial number available and log onto **http://www.jelrus.com/warranty.cfm** and complete the registration form. This on-line registration ensures a record for the warranty period and helps Jelrus keep you informed of product updates and other valuable information.

SAFETY INSTRUCTIONS

CAUTION

Maintain a minimum clearance of 10 inches (25 cm) in all directions around the VIP VISION 300 and VIP EXECUTIVE 500.

Ensure that the line cord is accessable for emergency removal.

To ensure safe operation of the VIP VISION 300 and VIP EXECUTIVE 500, AUTOMATIC MUFFLE CONDITIONING Program # 400 must be run two times after storing or shipping.

The VIP VISION 300 and VIP EXECUTIVE 500 is designed for indoor use only.

The VIP VISION 300 and VIP EXECUTIVE 500 is designed for installation in overvoltage category II environments.



Alerts the user that important operating and Maintenance instructions have been included with the unit. Read carefully to avoid any problems.



Indicates that the device complies to European Harmonized Standards

> Warns the user that uninsulated voltage within the unit may be of sufficient magnitude to cause electric shock.



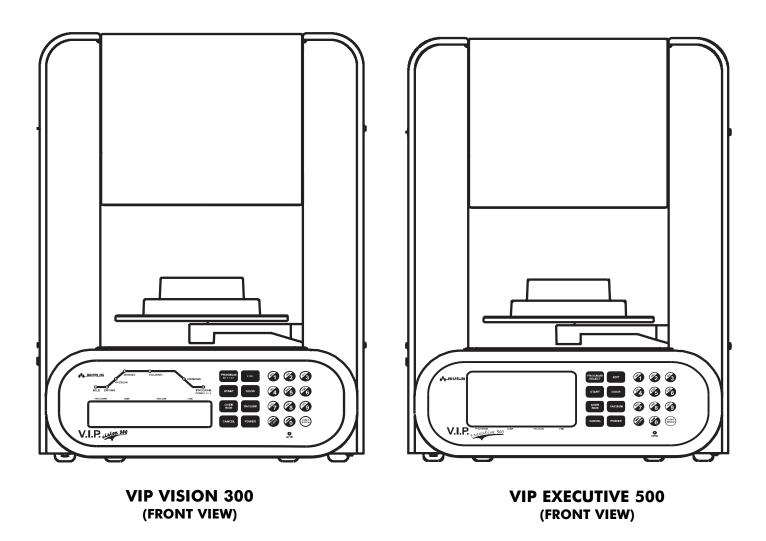
Indicates the presence of a hot surface or component. Touching this surface could result in bodily injury.

SPECIFICATIONS

- Electrical : 100V 50/60 Hz 1700W 115V 50/60 Hz - 1700W 220/240V 50/60 Hz - 2350W
- Muffle: 3.5in. (8.9cm) diameter
- Dimensions: 15"W x 14 1/4"D x 19"H (38.1cmW x 36.2cmD x 48.3cmH)
- Weight: VIP VISION 300 45 Lbs. VIP EXECUTIVE 500 46 Lbs.

Requires external vacuum pump that can achieve 26.5" (67.3cm) of Hg in 50 seconds such as the Silver Bullet P/N 7115A (115V) or 7230A (220/240V).

Classification: This equipment is classified Class A per EN61326



- 1. Remove all packing material from around the furnace.
- 2. Position the furnace in an area which permits comfortable operation. Make sure it is at least 10 inches (25cm) from any combustible surface.
- 3. Remove the Door Insulator from accessories package and place on door.
- 4. Remove Cooling Tray from accessory package and install on cover by snaping the four ball studs in the clips.
- 5. Connect the vacuum pump hose from the vacuum pump to the vacuum hose connector on the rear of the furnace.
- 6. Plug the vacuum pump line cord into the vacuum pump receptacle on the rear of the furnace. The current rating of the pump must be less than 4.5 Amps.
- 7. VACUUM CALIBRATION: Your new Jelrus VIP VISION 300 / VIP EXECUTIVE 500 uses an absolute vacuum sensor. It has been calibrated at the factory using computerized digital equipment and does not require additional calibration. An absolute vacuum sensor does not require reprogramming vacuum levels at high altitudes.
- 8. Plug one end of the power cord into the IEC receptacle on the rear of the furnace and the other end into the wall receptacle.

Note: Make certain to connect the plug into the AC voltage identified on the product label. A separate 15 Amp circuit is recommended for all voltages.

- Wait 5 10 seconds before turning on the power switch.
- 9. Press POWER switch ON. Furnace door will open automatically. Place firing block onto furnace door.
- 10. Run AUTOMATIC MUFFLE CONDITIONING PROGRAM #400 two times. (see page 14)
- 11. Your new Jelrus VIP VISION 300 / VIP EXECUTIVE 500 has been temperature calibrated. It is not necessary to re-calibrate the muffle before use. If you wish to re-calibrate, see TEMPERATURE CALIBRATION, page 13.

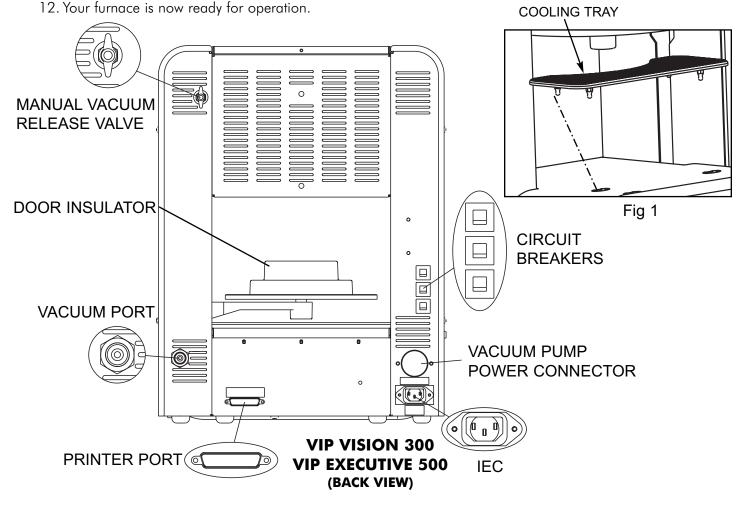


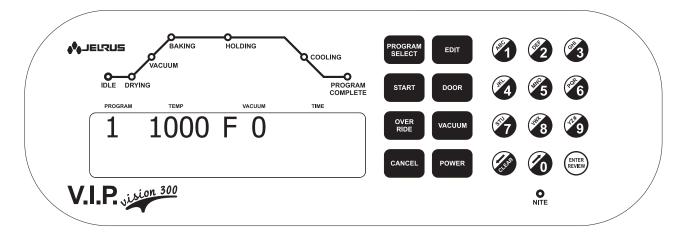
Fig 2

FRONT PANEL

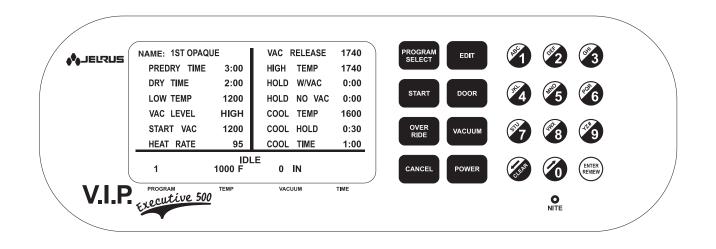
Your new V.I.P. VISION 300 / V.I.P. EXECUTIVE 500 Porcelain Furnace brings the power of an Intelligent Memory System to the dental laboratory. It will remember 100 different programs and perform each of them accurately at your command. In addition, the V.I.P. EXECUTIVE 500 clearly displays all program information all the time. The V.I.P. VISION 300 displays programs sequentially when the ENTER/REVIEW key is pressed and provides an LED time line graph. Your new V.I.P. VISION 300 / V.I.P. EXECUTIVE 500 is also user programmable. You select all the program variables for each of the open programs # 0 - 99.

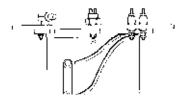
PARAMETER	RANGE*	DEFINITION
PRE-DRY TIME	0 to 99 min. 59 sec.	Selected amount of time platform completes movement from fully open position to fully closed position.
DRY TIME	0 to 99 min. 59 sec.	Selected amount of time during which door remains closed, and muffle is maintained at constant temperature. If the START VAC TEMP is at least 1 degree higher than the LOW TEMP, then the DRY TIME will be without vacuum . After the DRY TIME is completed the temperature will rise to the START VAC TEMP and the vacuum pump will turn on. If the START VAC TEMP is the same as the LOW TEMP then the DRY TIME will be done with vacuum . After the DRY TIME is completed, the furnace will heat to the VAC RELEASE TEMP and HIGH TEMP.
LOW TEMP	100° to 2150°F (38° to 1176°C)	Temperature at which cycle starts. If LOW TEMP is selected to be less than 1000°F (538°C), the furnace will idle at selected LOW TEMP. If LOW TEMP is selected to be above 1000°F, the furnace will idle at 1000°F and heat to the LOW TEMP prior to commencing PRE-DRY cycle.
VAC LEVEL		Vacuum at which work is required to be fired. There are four options:
	0	OFF = No vacuum
	10 to 29 in Hg (25 to 74 cm Hg)	User selected value.
	1	FULL = the maximum value attainable by the vacuum pump. (If the option to not use vacuum has been selected, START VAC TEMP, VAC RELEASE TEMP and HOLD TIME W/VAC will not be displayed and the program will not execute these steps.) We recommend FULL vacuum for all programs requiring vacuum.
	2	HIGH = Maximum vacuum is achieved and the pump stays on the entire time.
START VAC TEMP	This value cannot be less than LOW TEMP and must be less than VAC RELEASE TEMP.	Temperature at which vacuum will turn on. If selected value of START VAC TEMP is equal to LOW TEMP, vacuum starts as soon as door is closed.
HEAT RATE	40° to 400°F/min (22° to 222°C/min)	Rate at which muffle temperature increases with time.
VAC RELEASE TEMP	VAC RELEASE TEMP must be greater than START VAC TEMP and not greater than HIGH TEMP	Vacuum release temperature can be programmed to release vacuum before HIGH TEMP, at HIGH TEMP, or after holding at HIGH TEMP for up to 45 min.
HIGH TEMP	102° to 2200°F (39° to 1204°C)	Maximum temperature to which work must be heated during processing cycle.
HOLD TIME W/VAC	0 to 99 min. 59 sec.	Amount of time vacuum will be held at HIGH TEMP. When this time elapses, vacuum will be released.
HOLD TIME NO VAC	0 to 99 min. 59 sec.	Amount of time furnace will maintain HIGH TEMP after vacuum is released.
COOL TEMP	Any TEMP equal to or below HIGH TEMP min.100°F/38°C	Temperature furnace will cool down to. Default temperature is HIGH TEMP
COOL HOLD	0 to 99 min. 59 sec.	Amount of time furnace will maintain COOL TEMP before door opens.
COOL TIME	0 to 99 min. 59 sec.	Selected amount of time in which platform completes movement from fully closed position to fully opened position.

*Note: Attempts to enter a value outside of acceptable limits will result in an **INVALID ENTRY** message on the Display.



VIP vision 300





KEYPAD FUNCTIONS

PROGRAM SELECT:

Selects program numbers. Press PROGRAM SELECT, enter program number and press ENTER/REVIEW. The Digitized Vision Display on the VIP EXECUTIVE 500 will continuously show all programmed parameters. If INVALID PRO-GRAM NO appears on the display, press CLEAR and re-enter the correct program number.

EDIT:

Allows the user to enter or modify program information. Press EDIT to begin editing. Press ENTER/REVIEW to select the parameter to be changed. Enter the new name or number, press ENTER/REVIEW and then EDIT to exit the EDIT mode. The Digitized Vision Display will continuously show all revised programmed parameters. The EDIT key may be used while the program is running. See page 23.

START:

Press START to begin the program.

DOOR:

To raise or lower the door press DOOR. Pressing DOOR a second time will stop the door. Press DOOR again to continue in the original direction.

OVERRIDE:

Allows the user to re-enter the work into a hot muffle prior to completing the program. See page 10.

VACUUM:

Press VACUUM to raise the door and start the vacuum pump. Pressing VACUUM a second time will stop the vacuum pump. Press DOOR or CANCEL to release the vacuum and open the door.

CANCEL:

Press CANCEL to end a program or lower the door.

POWER:

Turns power ON and OFF.

ALPHA NUMERIC KEYS:

A - Z, O - 9, 🖊 ; Used for entering program name and information. See page 21.

CLEAR:

Press CLEAR to correct a keyboard entry.

ENTER/REVIEW:

Used to enter numeric data, move through each step of the EDIT mode and review the programmed data on the display. The Digitized Vision Display will continuously show all programmed parameters.

CONTRAST ADJUSTMENT IN THE IDLE MODE:

To adjust the contrast of the display in the IDLE mode press \checkmark (0). A contrast graph is displayed. Use the \checkmark (CLEAR) and \checkmark (0) to adjust the contrast of the display. When the desired contrast is obtained, press ENTER/REVIEW to memorize this setting.



NITE LED:

When in the NITE mode this LED will be illuminated red.

To run a program or to change a program, it is necessary to select that program number and have it displayed on the PROGRAM # display.

NOTE: If you make an error when using the keypad, press CLEAR and then enter the correct data.

- 1. Once the furnace has been turned on press PROGRAM SELECT, then enter the program number and then press ENTER/REVIEW.
- 2. This program number will now be on the PROGRAM # display. The program name and all program parameters will be displayed on the Digitized Vision Display.
- 3. To start a program press START.
- 4. To edit a program press EDIT; to get out of EDIT mode press EDIT again.
- 5. To stop a program while it is in progress press CANCEL. You can restart a program from the beginning by pressing START.
- **NOTES:** All programs must run from the beginning. When a program is started, the door will not begin to close until the temperature in the muffle is equal to LOW TEMP. This delay will occur if the temperature in the muffle is either below or above LOW TEMP.

At the end of a program, the "Digitized Vision Display" will show "PROGRAM COMPLETE" on the VIP EXECUTIVE 500.

On the VIP VISION 300, the PROGRAM COMPLETE LED will be illuminated RED.

Press any key to clear the display.

To refresh the display in IDLE, press ≠ (0) then ENTER/REVIEW.

TEMPERATURE CALIBRATION

The VIP VISION 300 and VIP EXECUTIVE 500 have been temperature calibrated at the factory using high precision equipment. It is not necessary to recalibrate the furnace.

The furnace incorporates two temperature control programs. One program is for high fusing porcelain and the other is for low fusing porcelain.

The Intelligent Memory System automatically selects the proper heating program by monitoring the programmed HI TEMP.

If the HI TEMP is programmed above 1500°F (815°C) the furnace will automatically use the high fusing porcelain temperature control system.

If the HI TEMP is programmed at 1500°F (815°C) or lower the furnace will automatically use the low fusing porcelain temperature control system.

The temperature calibration may be adjusted to accomodate the users requirements. To adjust the high or low fusing porcelain temperature control systems, follow the directions on page 13.

Note: Optional silver wire calibration will reset only the high fusing porcelain temperature control system.

OVERRIDE is a feature which allows you to reintroduce your work into the hot muffle for one minute at the same value of HIGH TEMP or at a higher value of HIGH TEMP. Vacuum is not needed during OVERRIDE.

WHEN OVERRIDE CAN BE ACTIVATED:

Initially, OVERRIDE can only be activated during COOL TIME, as the door is coming down. Once the program is completed, OVERRIDE cannot be activated. If it is desired to reintroduce the work after this cycle's completion, a new cycle would have to be initiated.

HOW TO ACTIVATE OVERRIDE:

Each OVERRIDE cycle is 1 minute in duration at HIGH TEMP. Press the OVERRIDE button to initiate an OVERRIDE cycle. At this point, "OVERRIDE" and the HIGH TEMP are displayed. The HOLDING LED will be illuminated green on the VIP VISION 300 and the unit reintroduces your work into the hot muffle for an additional minute of HOLD TIME at HIGH TEMP.

To increase HIGH TEMP press OVERRIDE again. Every time you press the OVERRIDE button again HIGH TEMP will increase by one degree*. Your work will return into the hot muffle for one additional minute starting from the moment HIGH TEMP is reached.

At the end of the one minute OVERRIDE cycle the programmed cooling cycle (COOL TEMP, COOL HOLD, COOL TIME) begins. You may repeat this process as many times as you wish - each additional OVERRIDE will begin at the originally programmed HIGH TEMP and last for 1 minute.

ILLUMINATION OF VIP VISION 300 LEDS DURING AN OVERIDE CYCLE.

When the OVERRIDE button is pressed the HOLDING LED will turn green and the COOLING LED will be off. All other LED's will remain red or off as they were prior to the iniation of the OVERRIDE cycle.

After the 1-minute cycle at HIGH TEMP the HOLDING LED will turn red and the COOLING LED will turn green if COOL TEMP, COOL HOLD or COOL TIME were programmed. After the programmed cooling cycle the COOLING LED will turn red and the program will complete.

If the OVERRIDE button is pressed more than once and the HIGH TEMP is increased, the BAKING LED will turn green until the new HIGH TEMP is reached and then turn red. The HOLDING LED will be off until the new HIGH TEMP is reached and then turn green for 1 minute after the new HIGH TEMP is reached. After the 1-minute cycle the HOLDING LED will turn red and the COOLING LED will turn green if COOL TEMP, COOL HOLD or COOL TIME were programmed.

After the programmed cooling cycle the COOLING LED will turn red and the program will complete.

HOW TO CANCEL OVERRIDE

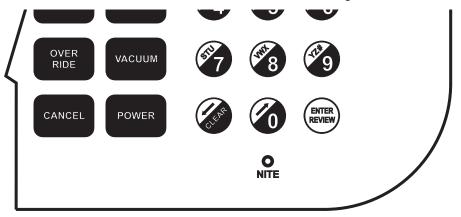
To cancel OVERRIDE at any time, press the CANCEL button. "PROGRAM CANCELED" will be displayed and the furnace door will open at maximum speed.

*The original stored value for HIGH TEMP in your program is not affected.

NITE MODE

Program # 100

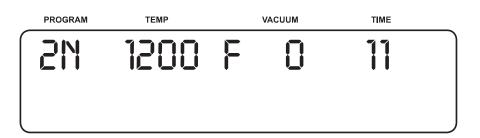
A program which keeps the door closed and maintains muffle temperature at 250°F (121°C). Simply press PROGRAM SELECT, enter PROGRAM "100," and press ENTER/REVIEW. The door will close, the display goes dark and the NITE mode LED will be illuminated RED. Press CANCEL to get out of NITE mode.



AUTOMATIC NIGHT MODE

(Upon completion of Programs # 1 - 99)

When 100 is added to the program number, the VIP VISION 300 and VIP EXECUTIVE 500 will complete the program, cool down to a safe, low temperature, then close the door and go into NITE mode automatically. Example: Program number 2 plus 100 = Program 102. This program will display 2N and automatically go into NITE mode upon completion of the program and the furnace cools down to $250^{\circ}F$ ($121^{\circ}C$).



NAME: 1ST OPAQ	UE	VAC RELEASE	1740
PREDRY TIME	3:00	HIGH TEMP	1740
DRY TIME	2:00	HOLD W/VAC	0:00
LOW TEMP	1200	HOLD NO VAC	0:00
VAC LEVEL	HIGH	COOL TEMP	1600
START VAC	1200	COOL HOLD	0:30
HEAT RATE	95	COOL TIME	1:00
2N	1200 F	0 IN	11
PROGRAM	TEMP	VACUUM	TIME

AUTOMATIC DECONTAMINATION

Program # 200

Simply place Jelrus Pur-I-Fire[™] decontamination pellets into their tray and place onto the firing block. Press PROGRAM SELECT, enter PROGRAM "200," and press ENTER/REVIEW. Press START and the program runs automatically. (See Page 27)

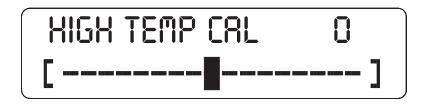
PROGRAM	ТЕМР	VACUUM	TIME
200	1000	8	
RUTO	0230	NTAMINI	RTION
NAME: DECO		VAC RELEASE	2000
PREDRY TI	ME 0:00	HIGH TEMP	2000
DRY TIME	0:00	HOLD W/VAC	10:00
LOW TEMP	1200	HOLD NO VAC	0:00
VAC LEVEL	26	COOL TEMP	2000
START VAC	: 1200	COOL HOLD	
HEAT RATE	100	COOL TIME	10:15
200 A	UTO DECON 1200 F	TAMINATION 0 IN	30
PROGRAM	ТЕМР	VACUUM	TIME

PROGRAMMABLE HIGH FUSING PORCELAIN TEMPERATURE ADJUSTMENT

(above 1500°F (815°C)) Program # 300 (High Fusing Porcelain 1501°F/ 816°C or higher) Press PROGRAM SELECT, enter PROGRAM "300," and press ENTER/REVIEW. A temperature graph is displayed.

- A. OVERFIRED TEMPERATURE ADJUSTMENT. If your work looks <u>overfired</u>, press the ✓ (0) button and enter the number of degrees you feel your work is overfired. The temperature will be automatically adjusted. Press ENTER/REVIEW. Press CANCEL to exit without changing the setting.
- B. UNDERFIRED TEMPERATURE ADJUSTMENT. If your work looks <u>underfired</u>, press the \checkmark (CLEAR) button and enter the number of degrees you feel your work was underfired. The temperature will be automatically adjusted. Press ENTER/REVIEW. Press CANCEL to exit without changing the setting.

For automatic silver wire calibration see page 24



NOTE: The displayed number indicates the number of degrees + (overfired) or - (underfired) from the factory calibration setting. The graph is a pictorial indication of the adjustment setting.

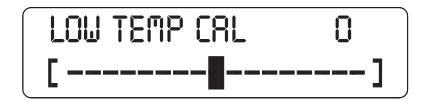
PROGRAMMABLE LOW FUSING PORCELAIN TEMPERATURE ADJUSTMENT

(1500°F (815°C) or lower)

Program # 310 (Low Fusing Porcelain 1500°F/ 815°C or lower)

Press PROGRAM SELECT, enter PROGRAM "310," and press ENTER/REVIEW. A temperature graph is displayed.

- A. OVERFIRED TEMPERATURE ADJUSTMENT. If your work looks <u>overfired</u>, press the ✓ (0) button and enter the number of degrees you feel your work is overfired. The temperature will be automatically adjusted. Press ENTER/REVIEW. Press CANCEL to exit without changing the setting.
- B. UNDERFIRED TEMPERATURE ADJUSTMENT. If your work looks <u>underfired</u>, press the \checkmark (CLEAR) button and enter the number of degrees you feel your work was underfired. The temperature will be automatically adjusted. Press ENTER/REVIEW. Press CANCEL to exit without changing the setting.

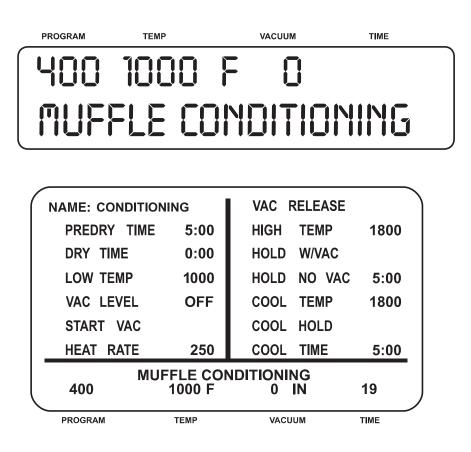


NOTE: The displayed number indicates the number of degrees + (overfired) or - (underfired) from the factory calibration setting. The graph is a pictorial indication of the adjustment setting.

AUTOMATIC MUFFLE CONDITIONING

Program # 400 Press PROGRAM SELECT, enter PROGRAM "400," and press ENTER/REVIEW. The display will now show "MUFFLE CONDITIONING".

Press START and the program will automatically begin.



NOTE: The Automatic Door Close Program #500 only functions when the furnace is set in the Idle mode and not at the completion of a program (program complete illuminated). Make sure that at the end of a program the *Clear* button is depressed to place the furnace in the Idle mode.

AUTOMATIC DOOR CLOSE PROGRAM

Program # 500

Press PROGRAM SELECT, enter program "500," and press ENTER/REVIEW. "AUTO DOOR CLOSE NO" will now be displayed.

Press '0' for NO or '1' through '99' for the time in minutes, then press ENTER/REVIEW. The door will automatically close after the entered number of minutes of no activity.

Factory setting is "NO"

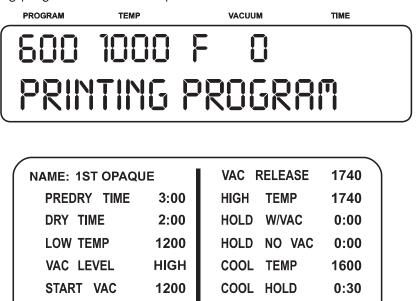
PROGRAM	ТЕМР	VACUUM	TIME
			.
HUIU	UUUK	CLOSE	

(N/	AME: 1ST OPAQI	JE	VAC RELEASE	1740	
	PREDRY TIME	3:00	HIGH TEMP	1740	
	DRY TIME	2:00	HOLD W/VAC	0:00	
	LOW TEMP	1200	HOLD NO VAC	0:00	
	VAC LEVEL	HIGH	COOL TEMP	1600	
	START VAC	1200	COOL HOLD	0:30	
	HEAT RATE	95	COOL TIME	1:00	
	AUTO DOOR CLOSE NO				
	PROGRAM	TEMP	VACUUM	TIME	

PRINTING A PROGRAM

Program #600

Connect a IBM compatible printer to the printer port on the rear of the VIP VISION 300 or VIP EXECUTIVE 500. Press PROGRAM SELECT, enter program "600" and press ENTER/REVIEW. The current memorized program that was displayed before entering program "600" will be printed.

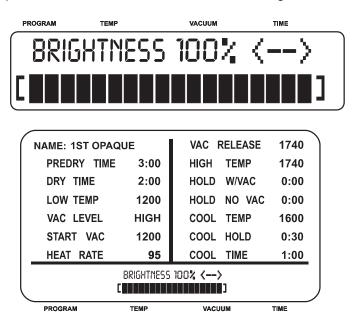


HEAT RATE	95	COOL TIME	1:00	
600	PRINTING 1000 F	PROGRAM 0 IN		
PROGRAM	TEMP	VACUUM	TIME	

BRIGHTNESS ADJUSTMENT

Program #910

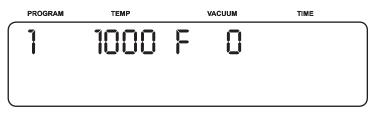
Press PROGRAM SELECT enter program "910" and press ENTER/REVIEW. A brightness graph is displayed. Use the (CLEAR) button to reduce the brightness and the (0) button to increase the brightness of the display. When the desired brightness is obtained, press ENTER/REVIEW to memorize this setting.



ENGLISH UNITS

Program # 912

Press PROGRAM SELECT, enter program "912" and press ENTER/REVIEW. The VIP VISION 300 or VIP EXECUTIVE 500 will automatically switch to English units. Temperature will be in degrees Farenheit. Vacuum will be in inches of Hg.



NAME: 1ST OPAG	UE	VAC RELEASE	1740		
PREDRY TIME	3:00	HIGH TEMP	1740		
DRY TIME	2:00	HOLD W/VAC	0:00		
LOW TEMP	1200	HOLD NO VAC	0:00		
VAC LEVEL	HIGH	COOL TEMP	1600		
START VAC	1200	COOL HOLD	0:30		
HEAT RATE	95	COOL TIME	1:00		
	ID	LE			
	1000 F	0 IN			
PROGRAM	TEMP	VACUUM	ТІМЕ		

METRIC UNITS

Program # 913

Press PROGRAM SELECT, enter program "913," and press ENTER/REVIEW. The VIP VISION 300 or VIP EXECUTIVE 500 will automatically switch to Metric units. Temperature will be in degrees Celcius. Vacuum will be in centimeters of Hg.

	PROGRAM	TEMP	VACUUM	TIME
\int	1	538	0	

NAME: 1ST OPAQ	NAME: 1ST OPAQUE		949
PREDRY TIME	3:00	HIGH TEMP	949
DRY TIME	2:00	HOLD W/VAC	0:00
LOW TEMP	649	HOLD NO VAC	0:00
VAC LEVEL	HIGH	COOL TEMP	871
START VAC	649	COOL HOLD	0:30
HEAT RATE	53	COOL TIME	1:00
IDLE			
1	538 C	0 CM	
PROGRAM	TEMP	VACUUM	TIME

AUDIBLE TONES (Beeps) ON/OFF

Program # 914

Press PROGRAM SELECT, enter program "914", and press ENTER/REVIEW. BEEP ON will now be displayed. Press "0" for BEEP OFF or "1" for BEEP ON, then press ENTER/REVIEW. The audible tones will be ON or OFF as selected.

PROGRAM	TEMP	VACUUM	TIME	
	8557	P ON		
NAME: 1ST (VAC RELEASE	1740	
PREDRY		HIGH TEMP	1740	
DRY TIME		HOLD W/VAC	0:00	
LOW TEMP	P 1200	HOLD NO VAC	0:00	
VAC LEVE	L HIGH	COOL TEMP	1600	
START VA	AC 1200	COOL HOLD	0:30	
HEAT RAT	E 95	COOL TIME	1:00	
BEEP ON				
PROGRAM	TEMP	VACUUM	TIME	

VIP EXECUTIVE 500

The VIP EXECUTIVE 500 porcelain furnace features Digitized Vision Display. While in the EDIT mode (entering information) a square status indicator will be illuminated next to the individual parameter which can be changed. This status indicator will move to the next parameter after you put in the new desired parameter and press ENTER/REVIEW. While you are running a program, the status indicator will flash next to the parameters which are currently being attained during that program. Once these parameters have been attained, the flashing will stop and the status indicator will become constant to each of these parameters. You can change information (EDIT) while running a program provided you have not already reached the next parameter. See page 23.

VIP VISION 300

The VIP VISION 300 porcelain furnace sequentially displays all information on the display. While in the EDIT mode (entering information) the bottom display line will show each individual parameter, one at a time, by pressing the ENTER/REVIEW button. Information pertaining to a particular parameter can be changed while it is being displayed. When a program is running the LED's will be illuminated green when the function is in process and red when the function is completed. If the function is not programmed the LED will not be illuminated. You can change information (EDIT) while running a program provided you have not already reached the next parameter (See page 23).

VIP VISION 300 LED ILLUMINATION

IDLE LED

The IDLE LED is green whenever the furnace is in the IDLE mode. The IDLE LED turns red when a program is started.

DRYING LED

If a PREDRY TIME or DRY TIME has not been programmed, the DRYING LED will not be illuminated. If a PREDRY TIME and/or DRY TIME has been programmed, the DRYING LED will be green when a program is started. After 100% of the PRE-DRY TIME and/or DRY TIME is completed, the DRYING LED turns red and remains red for the entire program.

VACUUM LED

If VACUUM has not been programmed, the VACUUM LED will not be illuminated. If VACUUM has been programmed, the VACUUM LED turns green when the vacuum pump turns on.

If FULL VAC is programmed, the VACUUM LED turns red when the vacuum pump turns off, and remains red for the entire program even if the vacuum pump turns on automatically at some point in the program in order to maintain full vacuum.

If HIGH VAC is programmed, the VACUUM LED turns red when the vacuum pump reaches 26.5 inches Hg (67.3 cm Hg) and remains red for the entire program even though the vacuum remains on.

If a partial vacuum is programmed, the VACUUM LED turns red when the vacuum pump turns off, and remains red for the entire program even if the vacuum pump turns on to maintain desired level of vacuum.

BAKING LED

The BAKING LED will turn green as soon as the door is closed, the DRYING TIME is completed and the furnace begins to heat above LOW TEMP. The BAKING LED will turn red when the furnace reaches HIGH TEMP and remains red throughout the program.

HOLDING LED

If a HOLD W/VAC time or HOLD NO VAC time has not been programmed, the HOLDING LED will not be illuminated. If a HOLD W/VAC time or HOLD NO VAC time has been programmed, the HOLDING LED will turn green when HIGH TEMP is reached. After 100% of the HOLD W/VAC time and/or HOLD NO VAC time is completed, the HOLDING LED turns red and remains red for the entire program.

COOLING LED

If a COOL TEMP, COOL HOLD time or COOL TIME has not been programmed, the COOLING LED will not be illuminated. If a COOL TEMP, COOL HOLD time or COOL TIME has been programmed, the COOLING LED will turn green when the HOLDING time is completed. After the furnace has reached the COOL TEMP and 100% of the COOL HOLD time and/or COOL TIME is completed, the COOLING LED turns red and remains red for the entire program.

PROGRAM COMPLETE LED

At the end of a program the PROGRAM COMPLETE LED will turn green during the audible beeps signaling the end of the program and then turn red until a key is pressed on the keypad.

NOTES

- a.) If you make an error when using the keypad, press the CLEAR button then press the correct values.
- b.) Time is expressed in minutes and seconds. For example, one minute is entered as '1:0 0 ' which is 1 minute and 00 seconds.
- 1. Push the PROGRAM SELECT button, then the program number desired, and finally the ENTER/REVIEW button. The program number will appear on the display. If no entry is detected within 5 seconds, the display will return to the IDLE mode.
- 2. Push the EDIT button on the keypad. The word EDIT will flash on the "TIME" display. In the EDIT mode any or all of the program information can be changed.

 The display on the VIP VISION 300 will show all the values, one at a time, in that particular program. The Digitized Vision Display will continuously show all program parameters. Each time you press ENTER/REVIEW the next parameter in that program will appear on the display. Initially the display will read NAME.

- 4. NAME. The message NAME will appear on the display. Enter the desired name by sequentially pressing the appropriate key. For example, sequentially pressing the "2" key will change the displayed character from D to E to F to 2 and back to D. Changing to a different key will automatically shift to the next cursor position. If no key is pressed for 2-3 seconds the cursor will automatically move to the next position. To repeat a character entry (e.g. LL) enter the first character wait 2-3 seconds for the curson to move to the next position and enter the second character in the new position. To enter a space press the ✓ (0) key twice. To correct a character press the ✓ (CLEAR) key and reenter the correct character. After the desired name is displayed press ENTER/REVIEW on the keypad.
- 5. PRE-DRY TIME. The message PRE-DRY TIME will appear on the display. If you wish to change the value displayed, enter the value desired by depressing the proper numbers on the Keypad. After the proper value is displayed, press ENTER/REVIEW on the keypad.
- 6. DRY TIME. The message DRY TIME will appear on the display. If you wish to change the value diplayed, enter the value desired by depressing the proper numbers on the keypad. After the proper value is displayed, press ENTER/REVIEW on the keypad. If the START VAC temperature is at least 1 degree higher than the LOW TEMP then the DRY TIME will be without vacuum. After the DRY TIME is complete the temperature will rise to the START VAC temperature and the vacuum pump will turn on. If the START VAC temperature is the same as the LOW TEMP, then the DRY TIME will be done with vacuum. After the DRY TIME is complete, the furnace will heat to the VAC RELEASE temperature and HIGH TEMP.
- 7. LOW TEMP. Now enter the desired LOW TEMP. After pressing the ENTER/REVIEW button, the message VAC LEVEL will appear on the display.

ENTERING INFORMATION: PROGRAMS #0-99

- 8. The VAC LEVEL will be displayed as one of the following:
 - a. HIGH Maximum vacuum is achieved and pump stays on the entire time.
 - b. FULL Maximum vacuum achieved and the pump turns off.
 - c. OFF no vacuum desired.

d. PARTIAL VACUUM - 10 to 29" Hg (25 - 74 cm. Hg) if a vacuum level less than full is desired. (We suggest you use FULL for all programs requiring vacuum.)

To select the desired vacuum level:

For High Vacuum, press 2 on Keypad, then ENTER/REVIEW. For Full Vacuum, press 1 on Keypad, then ENTER/REVIEW.

For No Vacuum, press 0 on the Keypad, then ENTER/REVIEW.

For Partial Vacuum, press the digits for the numerical value of the vacuum you desire between 10" and 29" Hg (25 and 74cm Hg), then ENTER/REVIEW.

(We suggest you select a vacuum level only if you want less than FULL vacuum).

EXAMPLE: To select a "partial vacuum" of 15" Hg, press the digits 1 and 5. When the desired number is shown on the display, press the ENTER/REVIEW button. When using any program with vacuum, we recommend FULL vacuum.

 START VAC. The message START VAC will now appear. The VIP VISION 300 and VIP EXECUTIVE 500 will skip the vacuum start temperature (START VAC) and go to the heat rate parameter (HEAT RATE) if you have selected to run a program without vacuum (VAC LEVEL OFF) displayed.

Your VIP VISION 300 and VIP EXECUTIVE 500 have a feature which enables you to start your program without vacuum and have vacuum come on later at a temperature of your choice. If you desire the vacuum to start as soon as the door closes at LOW TEMP, enter the same value for START VAC temperature as you have entered for LOW TEMP.

If you desire to start the vacuum at a temperature higher than the LOW TEMP, enter this higher value for VAC START temperature. After pressing ENTER/REVIEW, the message HEAT RATE will now appear.

- 10. HEAT RATE. Your VIP VISION 300 and VIP EXECUTIVE 500 can be programmed to operate at any heat rate from 40 to 400°F/min. (22 to 222°C/ min.). Enter the HEAT RATE desired on the keypad. After pressing ENTER/REVIEW the message VAC RELEASE will appear.
- 11. VAC RELEASE. The vacuum can be released below HIGH TEMP, at HIGH TEMP, or after holding at HIGH TEMP. After pressing ENTER/REVIEW, the message HIGH TEMP will appear.
- 12. HIGH TEMP. Enter on the keypad any value equal to or greater than the VAC RELEASE temperature selected in step 11, up to a value of 2200°F (1204°C). Press ENTER/REVIEW.
- 13. HOLD W/VAC. When you have selected the HIGH TEMP equal to the VAC RELEASE temperature, the message HOLD W/VAC will appear after you press the ENTER/REVIEW button. Enter the time, from 0 to 99 minutes, you want to have the furnace execute HOLD W/VAC at HIGH TEMP before releasing vacuum.

- 14. HOLD NO VAC. If you have selected a VAC RELEASE temperature lower than the HIGH TEMP, the furnace cannot execute HOLD W/VAC at HIGH TEMP since the vacuum has already been released. The VIP VISION 300 and VIP EXECUTIVE 500 Intelligent Memory System knows this and the status light will skip over this setting right to the HOLD NO VAC (hold time without vacuum). Enter the time desired, from 0 to 99 minutes, to input HOLD NO VAC at HIGH TEMP.
- 15. COOL TEMP. Enter the desired COOL TEMP, between 100°F (38°C) and the HIGH TEMP on the keypad. Press ENTER/REVIEW.
- 16. COOL HOLD. Enter the desired COOL HOLD time between 0 and 99 minutes, on the keypad. This is the holding time at COOL TEMP. After the proper value is displayed press ENTER/REVIEW on the keypad.
- 17. COOL TIME. Enter the desired COOL TIME, between 0 and 99 minutes, on the keypad. Press ENTER/ REVIEW. The message NAME will appear. You have now completed entering the information into this program. Press EDIT to go out of the EDIT mode and return to IDLE.

GENERAL:

You may review your entire program by pressing the ENTER/REVIEW button. Continue to press this button to review each individual firing parameter from NAME through COOL TIME.

To leave the EDIT mode and put the VIP VISION 300 and VIP EXECUTIVE 500 into the IDLE mode, press EDIT. IDLE will be displayed on the VIP EXECUTIVE 500 display. The IDLE LED will be illuminated green on the VIP VISION 300.

The VIP VISION 300 and VIP EXECUTIVE 500 are programmed to IDLE at 1000°F (538°C). If you have selected a LOW TEMP below 1000°F, it will idle at your selected LOW TEMP.

EDITING WHILE PROGRAM IS RUNNING:

After a program has started, you may EDIT all programmed information (except NAME and LOW TEMP) if you have not yet reached that parameter. After pressing EDIT, if no other key is pressed, the EDIT mode will turn off in 5 seconds.

When changing vacuum parameters during PRE DRY TIME, the START VAC temperature will be initially set to LOW TEMP. When changing parameters during DRY TIME, the START VAC temperature will be initially set to 1 degree higher than LOW TEMP.

HEAT RATE may not be changed after the DRY TIME mode is completed and heating has begun.

During the program, pressing the ENTER/REVIEW key will display the modified program. After the program is completed, the modified parameters return to the original programmed numbers. The Digitized Vision Display will continuously show all programmed parameters.

NOTE: When in the EDIT mode, the program will not change to the next phase of the program until EDIT is pressed or 5 seconds have past after the last key was pressed.

OPTIONAL TEMPERATURE CALIBRATION USING SILVER WIRE

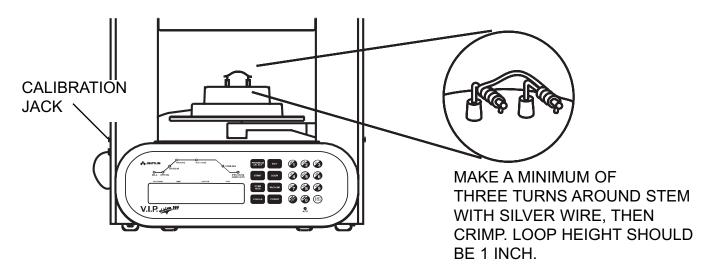
Your VIP VISION 300 and VIP EXECUTIVE 500 have been factory calibrated. It is not necessary to re-calibrate unless you suspect a temperature related problem. Best results are obtained by running program #400 one or two times prior to performing temperature calibration.

Note: Optional silver wire calibration kit available P/N 23709.

The silver wire calibration program will recalibrate only the high fusing porcelain temperature control system.

The temperature calibration can be adjusted. Use program 300 for high fusing porcelain temperature calibration adjustment and program 310 for low fusing porcelain temperature calibration adjustment (see page 13).

- 1. Clean the calibrating instrument electrodes with sandpaper or emery cloth each time prior to using, then bridge them with the pure silver wire as shown. Wrap the wire tightly around each electrode at least three times. Crimp in place. Leave a small loop of wire between the electrodes. DO NOT STRETCH the wire between the electrodes. The loop height should be 1 inch for the calibration to be accurate.
- 2. Remove the door insulating platform and replace it with the calibration instrument. Guide the wires from the calibration instrument out towards the front of the furnace.
- 3. Insert the plug from the calibration instrument into the Calibration Jack. Make sure the plug is completely inserted. Observe that the display reads "AUTOMATIC SILVER CAL." If the silver wire is not making good contact "CHECK SILVER WIRE" will be displayed on the display. Correct the problem and press the CLEAR button.
- 4. Press the START button. The display will read "SILVER CAL RUNNING." When the low temperature (1300°F/704°C) has been achieved the door will close automatically and the furnace will execute the Calibration Program. There is a 20 minute heat soak at 1300°F before the temperature rise begins. At 1760°F (960°C) the silver wire will melt. The VIP VISION 300 and VIP EXECUTIVE 500 will automatically adjust the temperature to 1760°F (960°C). A beep will sound to let you know that this has taken place. The lower display will show "SILVER CAL COMPLETE." If CANCEL is pressed during the process the display will show "SILVER CAL FAILED". Repeat the process from step 1.
- 5. After a short time the door will open. Verify that the silver wire has melted. Remove the calibration instrument plug from the Calibration Jack.
- 6. Use tongs to remove the calibration instrument and replace it with the regular firing block.



DIAGNOSTIC MESSAGES

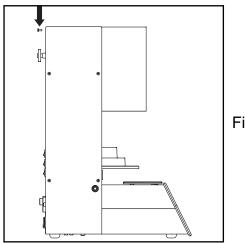
MESSAGE	CAUSE	COMMENTS
1. INVALID ENTRY	Number entered is outside of allowable limits.	Press CLEAR and enter new number.
	OR	
	Two or more parameters are in conflict.	Press CLEAR and enter new param eter
2. INVALID PROGRAM NO	Program number entered is outside of allowable limits.	Press CLEAR and enter new program number.
3. CHECK VACUUM	Low or no vacuum	Press CLEAR. Check pump, hoses, and connections. Pump must achieve selected vacuum (programmed partial vacuum or 26.5 in Hg (67.3 cm Hg) for FULL or HIGH vacuum) within 50 seconds. The system will purge and a continuous warning beep will sound.
4. CHECK DOOR	Debris on gasket, obstruction or door sensor difficulty. The closing or opening time is 20% greater than the programmed time.	When detecting an obstruction the door will automatically reverse and go to the opposite end of travel. A warning beep will sound. Press CLEAR.
5. CHECK SILVER WIRE	During optional silver wire calibration the silver wire is not properly attached to calibration brick or does not melt by 1900°F (1038°C	Check silver wire and crimp onto calibration block. Press CLEAR.).
6. SILVER CAL FAILED	During optional silver wire calibration the silver wire opened below 1650°F (899°C).	Press CLEAR Repeat the silver wire calibration process.
7. POWER FAIL	Power Failure.	Can occur anytime when a program is running. Press CLEAR.

DIAGNOSTIC MESSAGES

MESSAGE	CAUSE	COMMENTS
8. CHECK SET VALUES	Incorrect program parameters.	Determine which parameter is improper and re-program or press CLEAR and try again.
9. OPEN THERMOCOUPLE	Open Thermocouple.	Check the wires at the Thermocouple and the TB1 on the Main Board. If wires are OK, Thermocouple needs to be replaced. Press CLEAR.
10. TEMPERATURE PROBLEM	Muffle temperature exceeds 2250°F (1232°C). Message appears instantly.	Press CLEAR. If problem persists, replace Power Supply Assembly and/ or Main Board.
	OR	
	Thermocouple leads reversed. Message appears after 1 minute.	Connect leads as follows: BLK wire to RED terminal on main board, BLK wire to RED painted post thermo- couple. Press CLEAR.
	OR	
	Thermocouple leads shorted. Message appears after 1 minute.	Remove the shorted condition. Press CLEAR.
	OR	
	Temperature is less than 100°F (38°C) for 1 minute.	Check connections. Press CLEAR. Do heating test program 930.
11. HEATING GOOD		Initiated by Heating Test Program 930.
HEATING FAILED	Faulty heating system.	Initiated by Heating Test Program 930. Check connections. Measure Muffle resistance. 100V unit approximately 8 ohms 115V unit approximately 11 ohms 220V/240V unit approximately 16 ohms Replace Muffle if necessary.
12. CHECK PRINTER	Printer cable not connected. Printer AC not plugged in.	Correct problem with printer. Press CLEAR.

It is good practice to decontaminate your furnace at least twice a month. Even if you do not use silver/ palladium alloys, contamination can take place simply from the use of steel tweezers or tongs. We recommend the use of Pur-I-Fire[™] Decontaminant (Jelrus Order # 7102).

- 1. Place a single layer of Pur-I-Fire[™] pellets on the ceramic tray provided. Place the ceramic tray on the firing block.
- 2. Select program number 200.
- Press the START button. When the LOW TEMP is reached, the door will close and the VIP VISION 300 and VIP EXECUTIVE 500 will automatically perform the proper decontamination program. This will take about 20 to 25 minutes.
- 4. When the door opens, remove the tray and discard the used Pur-I-Fire[™] pellets. Save the tray for reuse.
- **NOTES**: It may be necessary to decontaminate an excessively contaminated muffle and/or door brick more than once.



TO ACCESS THE MUFFLE

- 1. Open door.
- 2. Shut off Power Disconnect Plug.
- 3. Remove screw from rear panel. Fig. 1A

Fig 1A

↑	Fig
----------	-----

 Carefully lift cover up just enough to clear rear panel lip. Fig. 1B

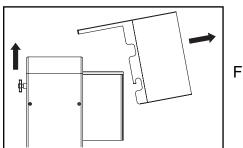


Fig 1C

1B

5. Tilt cover as shown and remove. Fig. 1C

TO SERVICE THE ELECTRICAL MODULES:

- 1. Close door.
- 2. Shut off Power Disconnect Plug.
- 3. Remove the 3 screws from the cover on the rear of the unit. Fig. 2A
- 4. Remove the cooling tray by lifting it from the cover. Fig. 2B
- 5. Remove the 2 top screws from the cover. Fig. 2C
- 6. Loosen the 2 thumb screws from the bottom of the chassis. Fig. 2D
- 7. Slide the face plate forward. Fig. 2E
- 8. Loosen the 2 captive screws from the inside of the cover. Fig. 2F
- 9. Lift and remove cover. Fig. 2G

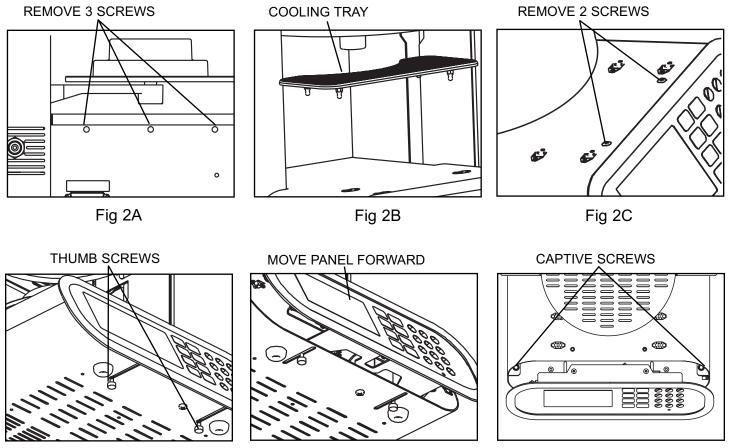


Fig 2D

Fig 2E

Fig 2F

LIFT COVER AND REMOVE TOWARD FRONT

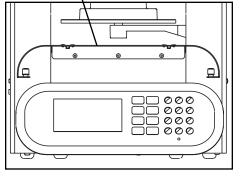


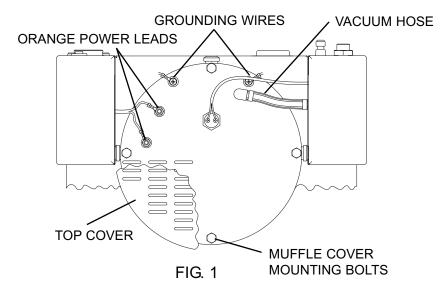
Fig 2G

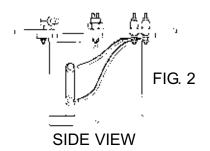
1. MUFFLE REMOVAL

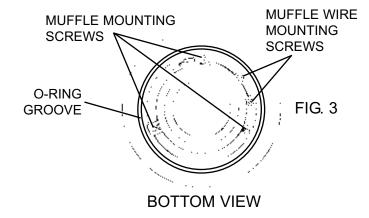
- 1. Be sure that the line cord is disconnected from the power receptacle.
- 2. Remove the muffle housing (See SERVICE, Page 28).
- 3. Remove the two thermocouple leads which are attached to the thermocouple terminals. Note the position and color coding of the thermocouple leads so they may be reattached the same way.
- 4. Remove the two orange power leads which are attached to the power terminals on the top plate. Fig. 1 Note that the lug on each power lead is secured to the power terminal with a hex nut above and below the lug. DO NOT attempt to loosen the top hex nut without holding the bottom hex nut with a wrench or pliers.
- 5. Remove the vacuum hose from the barbed fitting on the top plate. Rotate the hose gently in both directions to facilitate its removal from the fittings.
- 6. Remove the four hex bolts from the top plate. Fig. 1
- 7. Remove the top plate form the vacuum chamber. Turn it over and place it on top of the vacuum chamber with the muffle side up. This position is recommended in order to prevent damage to the thermocouple posts protruding from the top plate. The top plate can also be placed on any level surface if spacers are used to protect the thermocouple posts. Fig. 3
- 8. Remove the two muffle power leads which are attached to the two power terminals on the exposed (bottom) side of the top plate. Note that the lug on each muffle power lead is secured to the power terminal with a hex nut above and below the lug. DO NOT attempt to loosen the top hex nut without first holding the bottom hex nut with a wrench or pliers.
- 9. Remove the three screws which secure the muffle to the muffle base.
- 10. Carefully lift the muffle STRAIGHT UP from the base. Muffle base will remain attached to the top plate.

NOTE: DO NOT "ROCK" the muffle from side to side when removing it, as this may damage the thermocouple.

11. Remove old O-ring from the top plate.



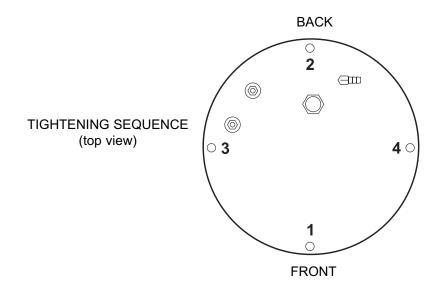




2. NEW MUFFLE INSTALLATION

1. Carefully align the thermocouple hole in the replacement muffle with the thermocouple itself protruding from the top plate. Slide the replacement muffle over the thermocouple and then over the muffle base.

- 2. Install the three sets of screws and washers which secure the muffle to the muffle base.
- 3. Clean O-ring groove on top plate.
- 4. Apply a thin uniform coat of vacuum grease (supplied with your new muffle) to the O-ring. Place the O-ring into the O-ring groove on the top plate.
- 5. Hold the O-ring in place while placing the top plate on the vacuum chamber.
- 6. Rotate the top plate so that the barbed fitting is at the "one o'clock" position when looking down from the front of the machine (see illustration below)
- 7. Reconnect the vacuum hose, being careful not to kink the hose. This connection will determine the position in which the top plate should be secured. (See 8.)
- 8. Align the holes of the muffle housing with the holes on the top plate and install the four bolts. Torque bolts (in sequence shown below) to 100"/lbs.
- 9. Observing the earlier wire color codes (RED and BLACK), reconnect the thermocouple. Tighten the connections securely.
- 10. Replace the muffle housing (See SERVICE, Page 28).
- 11. Run the Muffle Conditioning Program (#400). This will break in the new muffle and eliminate any moisture which may have been absorbed by the muffle and the firing block. (Moisture can affect vacuum.) If any moisture collects on the firing platform, repeat Programm #400.



Note: DO NOT "Rock" the muffle from side to side when replacing it, as this may damage the thermocouple.

- 1. Be sure that the line cord is disconnected from the power receptacle.
- 2. Remove Muffle housing (See SERVICE, Page 28).
- 3. Remove the two thermocouple leads. Note the position and color coding of the two thermocouple leads, so they may be reattached in the same manner.
- 4. Remove the thermocouple and O-ring.
- 5. Lift the thermocouple out of the top plate.
- 6. Reverse this procedure to install the replacement thermocouple. Apply O-ring lubricant (provided) to O-ring before installing. Tighten the connections securely, observing the color coding.
- 7. Re-calibrate the furnace after replacing the thermocouple (as outlined under TEMPERATURE CALIBRATION, Page 13).
- **NOTE**: The thermocouple used in this furnace contains PLATINUM and may be returned for credit against the purchase of a replacement thermocouple.

POWER FAILURE PROTECTION

If power failure occurs while a program is running, you have the following three choices:

- Do nothing. When the power resumes, the program in progress will automatically restart at the point where the power failure occurred regardless of the amount of time that has passed. To indicate that a power failure has occurred, POWER FAILURE will appear on the lower display. Press CLEAR to remove this message and return to normally displayed information.
- Do nothing. When the power resumes, the program in progress will automatically restart at the point where the power failure occurred regardless of the amount of time that has passed. The restarted program may be stopped by pressing CANCEL. At this time the door will open and the work may be removed.
- 3. If you want to remove your work from the muffle during the power failure and prior to the power returning, perform the following steps:
 - 1. Turn knob on the back of the VIP VISION 300 or VIP EXECUTIVE 500 one-half turn in a counterclock wise direction to release vacuum. (Be sure to close this knob TIGHTLY after vacuum is released.) Fig. 1
 - 2. Gently pull down on the lift mechanism and remove work.

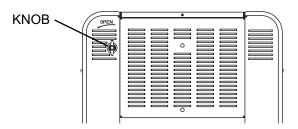


FIG. 1

SPARE PARTS - VIP VISION 300 ONLY

DESCRIPTION	100V	115V	220V/240V	
Bezel Display and Keypad Assembly Keypad and Panel	26146 26145	26146 26145	26146 26145	
LED Graph PCB	26157	26157	26157	
Display Module 2 x 20 Character	26144	26144	26144	
Main PCB	24139-3	24139-3	24139-3	

SPARE PARTS - VIP EXECUTIVE 500 ONLY

DESCRIPTION	100V	115V	220V/240V
Bezel Display and Keypad Assembly	24146	24146	24146
Keypad and Panel	24145	24145	24145
Display Module Graphic	24144	24144	24144
Main PCB	24139-5	24139-5	24139-5

SPARE PARTS LIST - VIP VISION 300/VIP EXECUTIVE 500

DESCRIPTION	100V	115V	220V/240V
Muffle Replacement Kit	23701	23702	23703
Muffle Vacuum Hose	23705	23705	23705
Muffle Terminal Gasket	23706	23706	23706
Door or Muffle Top Plate O-Ring	23707	23707	23707
Thermocouple + O-Ring Replacement Kit	23708	23708	23708
Lift Mechanism Kit	23733	23733	23733
Door Switch Upper and Lower	24879	24879	24879
Cooling Tray	24361	24361	24361
Door Drive Motor Assembly	23737	23737	23737
Door Drive Belt	23738	23738	23738
Upper Door Drive Pulley Kit	23739	23739	23739
Vacuum Hose Manifold to Transducer W/Filters	24554	24554	24554
Vacuum Hose Manifold to Inlet	23714	23714	23714
Vacuum Manifold Assembly	24162	24162	24162
Power Input Filter, IEC	N/A	N/A	24184
Choke and Capacitor Assembly	N/A	N/A	24161
Line Filter Module	24186	24186	N/A
Power Supply	24157	24157	24157
Line Cord Kit - US / JAPAN	26202	26202	-
Line Cord Kit - Continental Europe	-	-	23203
Line Cord Kit - Israel Line Cord Kit - Italy Line Cord Kit - Australia Line Cord Kit - England	- - -	- - -	23204 23205 23206 23202

ACCESSORIES

DESCRIPTION	100V	115V	220V/240V
Calibration Instrument Kit	23709	23709	23709
Firing Block	23710	23710	23710
Ceramic Support Tray - 3" Diameter	700037	700037	700037
Silver Wire	28383	28383	28383
Pur-I-Fire™ Decontaminant	7102	7102	7102



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