



# VETROSON® “PIEZO” ULTRASONIC SCALER

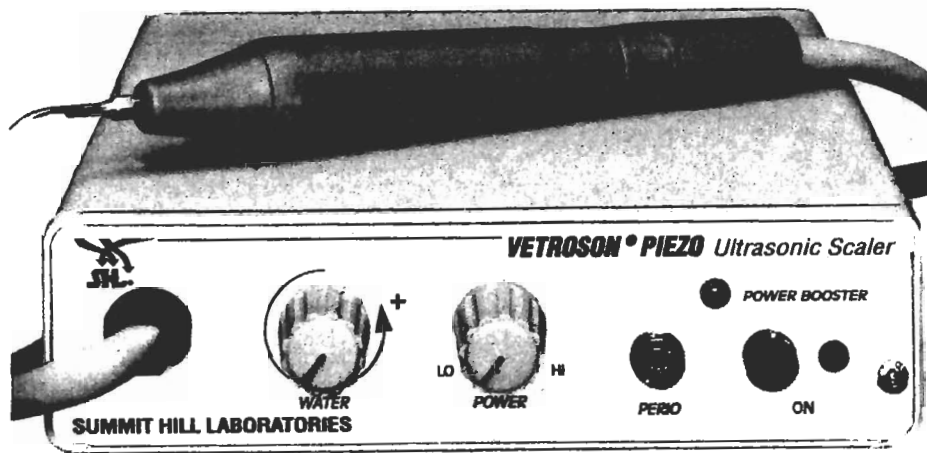
## SUMMIT HILL LABORATORIES

Tinton Falls Business Center  
One Sheila Drive  
Tinton Falls, New Jersey 07724

Phone: (732) 933-0800  
Fax: (732) 933-0055

E-Mail: [Sales@summithilllaboratories.com](mailto:Sales@summithilllaboratories.com)  
[www.summithilllaboratories.com](http://www.summithilllaboratories.com)

## OPERATING INSTRUCTIONS



### YOU RECEIVE:

One VETROSON® “Piezo” Ultrasonic Scaler unit with removable handpiece, foot control pedal, 6’ water line with male quick-connect coupler, 2’ water line with female quick-connect coupler, one transformer cable, disposable in-line filter, plastic tip wrench, three VETROSON® scaling tips (Universal Straight Tip, a Universal Curved Tip and a Perio straight tip)

### STEP ONE: INSTALLATING YOUR VETROSON® “PIEZO” ULTRASONIC SCALER

Locate the device where the control panel will be easy to reach during scaling procedures. The VETROSON® “Piezo” Ultrasonic Scaler requires access to a grounded electrical outlet and a source of drinking-quality water.

The scaler and its separate transformer generate a minimal amount of heat. Avoid covering them, to prevent normal cooling.

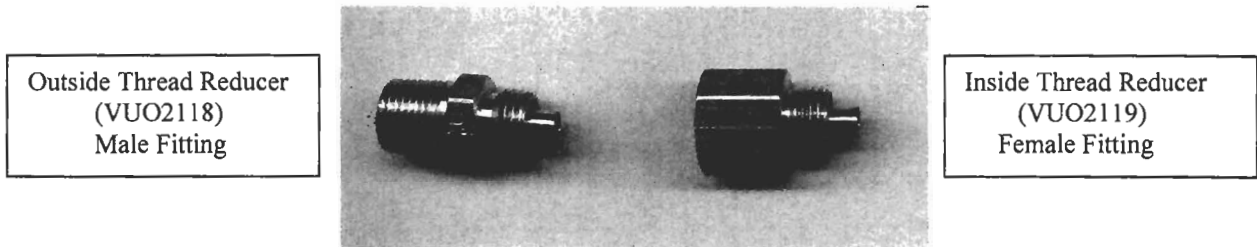
### STEP TWO: WATER CONNECTION

Do not turn the unit on until you have connected the scaler’s water line to a supply of drinking-quality water (20-50 PSI). Water should be clean and free of sediment. This unit has been connected to 6’ of water hose that ends in the male half of the Quick Connect. The 2’ of water hose that terminates in the female half of the Quick Connect needs to be connected to the water source.

(2)

**WHEN CONNECTING TO A COLD WATER PIPE:**

- ❖ For a new installation, have a plumber cut a “T” into the cold water line. We supply a ¼” compression nut and 2’ of braided hose with a female Quick Disconnect attached (OD of ¼ inch and an ID of 1/8 inch). The hose should fit snugly onto the nipple of your plumber’s connection and be held in place with the screw-on compression nut.
- ❖ If your plumber cannot locate the proper fittings to reduce to ¼” for the compression nut we can supply the proper threaded reducing fittings.



- ❖ For do-it-yourself practices, a One-Quarter Inch (1/4”) Self Tapping Saddle Valve can be purchased. Following the instructions, tap into the cold water line near the scaler. The tubing should fit snugly onto the nipple and be held in place with the screw-on compression nut.

**FOR EXISTING WATER CONNECTION:**

- ❖ If the practice has a previously installed Summit Hill Laboratories brass quick-disconnect fitting in the cold water pipe, simply remove the old plastic tubing and compression nut and install the current braided tubing and compression nut. The tubing should fit snugly onto the nipple and be held in place with the screw-on compression nut.

**FOR CONNECTING TO A HIGH SPEED DENTAL UNIT:**

- ❖ If the practice wishes to cut into the braided tank hose of a high-speed dental unit, we have included a Hose Splitter Kit with the **VETROSON® “Piezo” Ultrasonic Scaler**; however, the “T” will generally not marry with clear plastic tubing. Replacement braided tubing (VUO2065) can be purchased.

**IF A PORTABLE WATER SUPPLY IS REQUIRED:**

- ❖ The hoses should easily connect to existing tanks. We can supply the **VETROSON** Portable Water Supply (1 gallon tank, pump and tubing) – VUA4090.

**UNDER NO CONDITIONS SHOULD YOUR SCALER BE CONNECTED TO A FAUCET. TOO MUCH AIR COMBINES WITH THE WATER CAUSING THE UNIT TO OVERHEAT & MALFUNCTION.**

(3)

The **VETROSON® “Piezo” Ultrasonic Scaler** comes with a pre-installed in-line filter. This will prevent particulates in the water supply from clogging the scaler inserts. The filter disc should be replaced before it becomes clogged with debris so that water flow is not impeded. Replacement discs are available from Summit Hill Laboratories.



VU02040 Filter Disc (pack of three)

To replace the Filter Disk:

1. Shut off the water to the scaler, disconnect it from the water supply, and drain the hose into the sink
2. Remove the old filter disc by holding it in one hand and twisting off the hose connections on either side. They rotate in opposite directions. Discard the old filter discs.
3. Install the replacement filter disc and firmly tighten the connectors in the opposite direction, using hand pressure only.
4. Reconnect the scaler to the water supply, turn on the water to the unit and check for leaks.

If the filter becomes clogged and replacement discs are not available, the hose connectors can be locked together without the filter disc to allow emergency operation.

**IMPORTANT: THE WATER LINE TO THE SCALER SHOULD BE TURNED OFF AT THE QUICK-DISCONNECT WHENEVER THE DEVICE IS NOT IN USE.**

### **STEP THREE: ELECTRICAL CONNECTIONS**

The **VETROSON® “Piezo” Ultrasonic Scaler** must be powered via the Transformer Assembly supplied with the scaler.

- Plug the transformer cable into the back of the scaler
- Then plug the transformer into any grounded 110 V outlet.



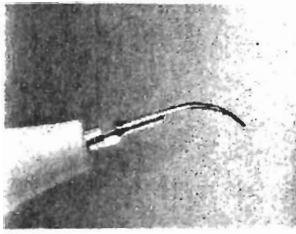
### **STEP FOUR: OPERATION**

Turn the unit on by pressing the **on/off** switch on the front panel. The green **on** LED will light. The scaler may now be activated by pressing the foot pedal. When the pedal is pressed, the green power LED will be brighter to indicate that the unit is activated. The pedal should be placed where it will not be accidentally stepped on when the device is not in use. Pressing the power switch again will turn the unit off.

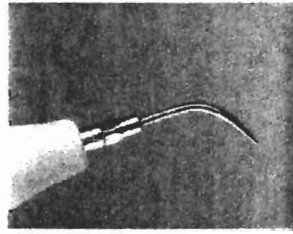
**STEP FIVE: SCALING TIPS**

The VETROSON® “Piezo” Ultrasonic Scaler is supplied with three tips: “Universal” Straight, “Universal” Curved and Perio Straight

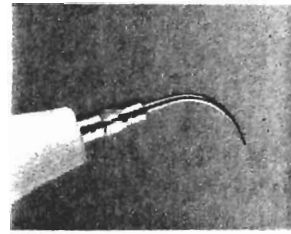
Nothing complicated about tip selection - four tips will handle the average practice requirements.



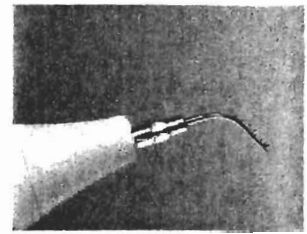
**Universal Straight**



**Universal Arched**



**Perio**



**X-P10 Power Tip**

The new XP-10 Power Tip should be preferred to the Perio for deep pocket scaling. It reaches down up to 10mm.

The VETROSON® “Piezo” Ultrasonic Scaler accepts any piezo scaler tip manufactured by Summit Hill Laboratories along with tips designed for Piezo scalers. Tips are easily threaded on and off the handpiece using the plastic tip wrench supplied with the scaler, but not over-tightened.

Old, worn, or blunt scaling tips will provide poor cleaning action and excess heat, and should be replaced promptly. Tips that have been bent should not be used. If replacing tips with new ones

**STEP SIX: CONTROLLING THE POWER**

The “Piezo” Scaler gives you several ways to adjust the scaling power:

The **POWER control** on the main power unit is used to set the scaling power for the case at hand.

The **Perio button** reduces the range of the power control knob. When this switch is pressed it lights up. Now relatively large movements of the power control knob will produce small changes in tip power. This permits very subtle adjustments. This special low power range is useful for subgingival scaling and also permits the VETROSON® to be used for endodontic procedures with the appropriate tips.

For short-term increases in power during scaling, activate the power booster by pressing the foot pedal harder. This lights the Power Booster LED on the front panel. When the light is on, the power of the unit is temporarily increased to a point midway between the current power setting and maximum power. This power-boosting mode allows you to scale at lower power for greater patient comfort. If you encounter hard-to-remove accretions, simply activate the Power Booster feature to eliminate them. At low power settings, Power Booster mode will cause a major boost in power. At high power settings, Power Booster mode produces no significant increase. The Power Booster feature also works in the Perio mode, but only within the lower power range.

Remember that since the Power Booster mode does not change the water flow, extended procedures may require a water adjustment.

To return to normal power, lighten foot pressure. The yellow Power Booster light will go out.

**STEP SEVEN: CONTROLLING WATER FLOW**

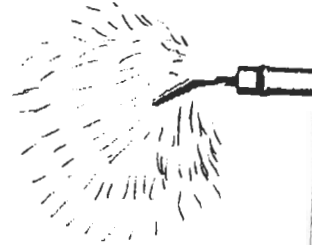
It is imperative to correctly set the water flow for maximum efficiency and power. To assure correct water flow use any tip except the perio tip.

(5)

- 1) Turn the water control knob counter-clockwise until water is spraying both at the “elbow” of the tip and at the end of the tip. (See diagram below)
- 2) When the spray is coming from the elbow to the end of the tip, stop. You are now in the right position. This will result in maximum scaling power.
- 3) If water does not flow through the scaler tip when the foot pedal is pressed, see Troubleshooting Section.



**Spray Pattern with Insufficient Water**



**Correct Spray Pattern**

### **INFECTION CONTROL:**

The scaling tips and wrench may be sterilized in any conventional steam autoclave using the recommendations of its manufacturer. Autoclaving does not remove debris that has accumulated on the tip. Failure to adequately remove debris prior to autoclaving may result in inadequate sterilization. The tip and wrench should be scrubbed with soap and water or cleaned in an ultrasonic and then rinsed before autoclaving. The handpiece and cable may be cleaned with a disinfectant that will not harm the plastic surface (such as a 1:6 dilute solution “Sporicidin” in water). They should then be rinsed with water. **They are not autoclavable.**

The exterior case of the scaler may be wiped with a cloth dampened by any standard surface spray cleaner as desired.

### **GENERAL COMMENTS CONCERNING SCALING:**

- The VETROSON® “Piezo” Ultrasonic Scaler should be used only by trained professionals.
- Scaling tips and wrenches should be sterilized before each use.
- Do not operate unit without water flowing.
- Use of facemask is recommended when operating this device to avoid inhalation of bacterially contaminated aerosol by the operator.
- Before using the tip in the oral cavity, adjust the water spray until desired mist is obtained. For maximum efficiency use a good flow of water which acts as coolant, lubricant and lavage to flush out debris.
- Grasp handpiece in a comfortable manner, like holding a pen. To remove deposits from teeth, always use a light, brushing stroke with the side of the scaler tip in contact with the tooth surface. Excess pressure will not improve scaling action. Keep the scaler tip in motion at all times and use repeated gentle strokes to remove all tenacious deposits.
- Do not test scaler tip on fingers. It will feel uncomfortably hot. This is not a good or true test of how it feels on a tooth.

### **COMMON OPERATOR ERRORS:**

- Failure to keep tip parallel with the long axis of the tooth surface.
- Excessive hand pressure.
- Failure to use the lowest effective power setting for the case at hand.
- Insufficient water flow.
- Use of worn out tip.

These failures in procedure can result in ineffective or incomplete removal of deposits and possible damage to the pulp or tooth structure.

### **TROUBLESHOOTING PROBLEMS AND SOLUTIONS:**

- 1) Unit does not operate (“on” indicator does not light)
  - Transformer cable disconnected from wall outlet or scaler. Plug power unit in properly.
  - Wall outlet not live. Test outlet with another electrical device/ Call electrician.
  - Unit fuse or other internal component has failed. Contact Summit Hill Laboratories
- 2) Scaling tip does not vibrate properly
  - Faulty, damaged or worn tip. Replace with new tip
  - Tip not correctly seated/ threaded in handpiece. Remove tip and reinsert correctly with tip wrench
  - Power control not correctly adjusted. Adjust power with handpiece over sink.
- 3) No water spray
  - Too little water flow/ hose kinked. Unkink hose
  - Water filter clogged. Replace filter disk or temporarily bypass it until disk is available
  - Water passage in tip blocked. Unclog tip water passage with the wire.
  - No water supply. See section on “Water Connection” above or call Summit Hill Laboratories

### **SPECIFICATIONS:**

Power: 110V, 50/60Hz, 35VA (For 230V model: 50Hz, 3VA)

Tip operating frequency: 29KHz

Operates at room temperature between 50 degrees F and 100 degrees F (10 degrees C-38 degrees C)

Weight: 30 oz

Size: H 1 5/8” x W 5 1/2” x D 7 1/2”

### **CONFORMANCE TO STANDARDS:**

The Summit Hill Laboratories VETROSON® “Piezo” Ultrasonic Scaler conforms to UL60601-1 C22.2 No.601.1 certified to ISO9001/13485. Certified to CAN/CSA. The device is CE marked-certified to European Medical Device Directive (93/42/EEC).

### **WARNINGS:**

- Water supply to **VETROSON® “Piezo” Ultrasonic** should always be disconnected when scaler is not in use.
- All ultrasonic scalers produce aerosols. Precautions should be taken to prevent transmission of contagious diseases.
- Like all scalers of this type, the handpiece produces a small magnetic field. It has been reported that this can cause some sensitive patient monitoring devices (e.g. pulse oximeter) to give inconsistent or inaccurate readings.
- As with all electrical products, the **VETROSON® “Piezo” Ultrasonic Scaler** should not be immersed in water or other liquids. Avoid placing it where it can fall or be pulled into liquid. Do not reach for the scaler if it has fallen into liquid.
- Do not use the scaler if it has been dropped or damaged or immersed in liquid. Call Summit Hill Laboratories for servicing.
- If the device will not be used for an extended period, unplug transformer from wall.

**WARRANTY:**

SUMMIT HILL LABORATORIES will repair or replace any part of the control unit that proves defective by reason of workmanship and/or material for a period of five years from the date of purchase without charge for parts or labor. The handpiece, transformer, foot pedal and cables are covered by a one-year warranty from date of purchase. Other listed components and accessories are warranted against defects by reason of improper workmanship and/or material for a period of thirty days from date of purchase.

**WATS "HELP" LINE:**

Please call our office anytime you have a problem with our equipment. Also, we have technical advisers available to help you with any questions you may have regarding set-up, accessories, etc. Please avail yourself of this service. Call 1-800-922-0722. For general information on our products please see us on the internet: [www.Summithilllaboratories.com](http://www.Summithilllaboratories.com)

**SERIAL NUMBERS:**

Before placing your call to SUMMIT HILL LABORATORIES regarding "help", "assistance" or "repairs", have the serial number on your unit available to expedite the processing of the paperwork. Thank you.

*Summit Hill Laboratories  
Copyright 2007*

1/14/2008