

iM3® Vet-Tome

INSTRUCTIONS FOR USE AND
TECHNICAL MANUAL



VET-TOME V2000

FOR VETERINARY USE ONLY

INTRODUCTION

The iM3 Vet-Tome is an automated veterinary specific periotome with foot pedal operation that offers precise tooth extraction with minimal or no alveolar bone loss and less trauma. The electric Vet-Tome uses replaceable ultra-thin stainless steel tips/blades coupled with the mechanical in and out action generated by the handpiece to cut the periodontal ligament similar to a Luxator (hand instrument).

The mechanical action and thin flexible blade allows easy insertion into the periodontal ligament (PDL) and alveolus (tooth socket) coupled with the side to side movement by the operator cutting the PDL.

Skilled application

The Vet-Tome is an automated periotome intended for use as a tool for tooth extraction in animals by veterinarians or adequately trained professionals.

WSAVA guidelines recommend full mouth radiographs are performed as part of the dental patient diagnostic work-up. Dental radiographs aid in diagnosis and guide treatment, they are also an important part of the legal record.

iM3 recommends pre and post operative dental radiographs for all patients.

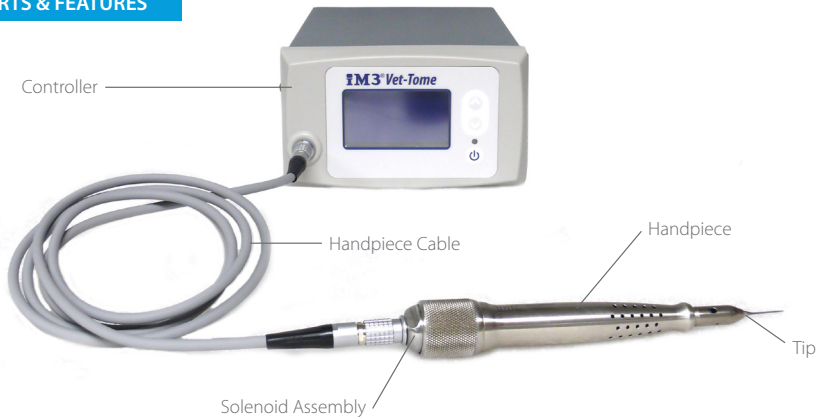
The Vet-Tome and all components should be maintained according to the manufacturer's recommendations and in-line with infection control procedures for the safety and well-being of patients. Improper use, e.g. missing maintenance or non-compliance with our Instructions or the use of accessories and spare parts which are not released by iM3 invalidates all claims under warranty and any other claims.

 **Read all documentation before using the Vet-Tome.**

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PARTS & FEATURES



Release Tool
and 4 Tips



Power
Cord



Foot
Switch

Unpacking

! Inspect components and packaging for damage. If any components have visible defects, including dents or scratches that have penetrated the labels or coating, discoloration or moisture damage do not use the Vet-Tome. Contact iM3 or your local distributor immediately.

PARTS & FEATURES



SAFETY

⚠ DO NOT use in the presence of flammable anaesthetics.

Always use non-flammable anaesthetics with adequate ventilation.

- Use only iM3 replacement Tips designed for the Vet-Tome.
- Inspect all parts prior to use and after sterilization. If damage is found, do not use.
- Follow instructions for proper handling of sterile parts.
- Improper use, assembly, installation, modification, repairs or non-compliance with instructions invalidates all claims and warranty.
- To avoid overheating the handpiece, adhere to duty cycle stated in this manual.
- Do not use any accessories or replacement parts not supplied by iM3.
- If at any point the handpiece is dropped inspect it for damage immediately. If the appearance or function has changed, do not use and return to iM3 for service.
- Do not submerge the handpiece cable, solenoid or any electrical component in any liquid or solution.

HANDPIECE ASSEMBLY



Solenoid

(Not Autoclavable)



Hand Piece

  **The handpiece and tips are not sterile upon delivery.**

The handpiece and tips must be sterilized according to manufacturer's instructions before use and between patients.


- With the handpiece in one hand, insert the solenoid assembly with handpiece cable attached into the handpiece.
- Using gentle pressure, push the solenoid assembly into the handpiece, depressing the spring mechanism.
- While maintaining downward pressure, rotate the solenoid assembly approximately 30 degrees clockwise relative to the handpiece.
- The solenoid and handpiece should now be assembled and ready for use.

HANDPIECE DISASSEMBLY

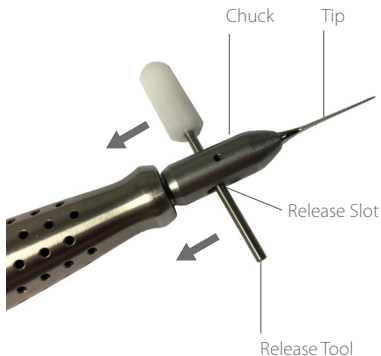
  **The solenoid assembly cannot be sterilized with steam. Parts must be separated before sterilization.**

- Hold the handpiece in one hand.
- Push the exposed portion (where the handpiece cable attaches) of the solenoid assembly inward towards the handpiece.
- While applying inward pressure, turn the solenoid assembly approximately 30 degrees anticlockwise (counter clockwise) relative to the handpiece to remove.
- The solenoid assembly should now be free to pull out of the handpiece.


Handpiece Operation

 The Vet-Tome is not intended for continuous use. Activate the handpiece for a maximum of 15 second intervals with a rest period between each operation. Exceeding the recommended duty cycle will result in the handpiece overheating. Press and hold the footswitch to operate the tip. Releasing the footswitch immediately stops the tip function.

TIP OPERATION



⚠ Inspect Tip for damage. If damage is found, do not use and replace tip.

⚠  Tips and release tool are not shipped sterile and must be sterilized according to manufacturer's instructions before use and between patients. See sterilization instructions.

- Hold the handpiece in one hand.
- Insert release tool into release slot in chuck so that the release tool is centred in the chuck.
- With the same hand that holds the handpiece, grasp the release tool either side of the chuck and pull down towards the handpiece as illustrated by the arrows.
- **Do not twist or unscrew the chuck when changing tips.**
- With free hand place the tip into the end of the chuck.
- Release pressure on the release tool and allow the chuck to return to its original position.
- Remove the release tool from the chuck.
- Tug on the tip to ensure proper placement. The tip should not pull out of the chuck with normal hand force.

To remove the tip, simply repeat the steps above.

USE - STARTING

 **Make sure the mains switch on the back of the controller is in the off position.**

- Connect the power cord to the rear of the controller.
- Connect the footswitch connector to the rear of the controller.
- Connect the handpiece cable to the front of the controller.
- Connect the other end of the handpiece cable to the solenoid located in the handpiece.
- Only connect the power cord to a grounded/earthed wall outlet.
- Ensure the tip release tool is removed from the chuck.
- Ensure tip is installed correctly by pulling on it. The tip should not release from the chuck with normal hand pressure.

USE - FRONT PANEL

Controller Display



FRONT PANEL OPERATION

**Mains Switch: On/Off.**

Located on the back of the unit.

**Hand Piece Standby Switch.****Indicator Light: Green Solid.**

“Ready For Action” This indicates the device is on and ready for use.

**Indicator Light: Green Flashing.**

“Executing Tests” This indicates the device is executing power up sequence.

**Indicator Light: Yellow Solid.**

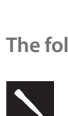
“Device Is Off” This Mains power is on, but the device is off.

**Indicator Light: Yellow Flashing.**

“Attention Required” The unit is in an error state. See manufacturer’s instructions for error conditions.

**Increasing Intensity Switch.**

Increases intensity of the tapping action.

**Decreasing Intensity Switch.**

Decreases intensity of the tapping action.

The following icons may appear in the Display Panel.

**Hand Piece Icon.****Foot Switch Icon.****Hand Piece Attention Required Icon.**

See error condition information.

**Foot Switch Attention Required Icon.**

See error condition information.


**Display Window.**

Intensity Value and Intensity Icon.


TURNING ON

Turning the Vet-Tome on.

- Turn main power switch on located at the back of the unit.
- Press and release handpiece standby switch once on the front of the unit.
- Wait until self-test completes and indicator light is ready for action (solid green).
- LCD displays intensity value (power setting) and intensity icon.
- The footswitch is now operational and when depressed will activate the handpiece.



 Intensity (power setting) values will display the last setting used (1-10, 10 being the maximum). If the mains power has been turned off the intensity setting will return to 1.

Changing Intensity (power) Settings.

 **Power setting should be set to 2-3 for cats and small dogs then increase power per patient/per tooth size. Tip insertion and movement should not be as aggressive in cats and small dogs.**

- Push and release the up arrow (intensity switch) once to increase intensity / power.
- Push and release the down arrow (intensity switch) once to decrease intensity / power.
- Push and hold the intensity switch to increase or decrease the intensity level by one setting every 1.4 seconds.

HOW TO USE

  **The handpiece and tips must be sterilized before use and between patients.**

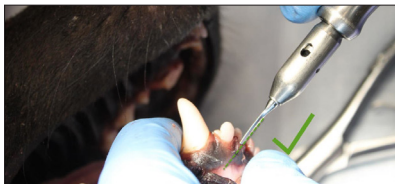
Technique

Approach the tooth at a 45° angle allowing the tip to enter the alveolus (tooth socket) and then follow parallel to the root (within the ligament space). The larger (wider and thicker) tip (V2) can be used first to create a gap, and then insert the thinner tip/blade (V1) to progress deeper. The finer flexible tip is suitable for smaller teeth and curved roots. All tips are used in a side to side motion to cut the ligament whilst working around each quarter of the tooth advancing approximately 5mm deep before moving to the next quarter. Operate for approximately 10 seconds per quarter; do not run the handpiece whilst the tip is being removed from the socket. Repeat this technique 3 to 4 times around the tooth to be extracted.

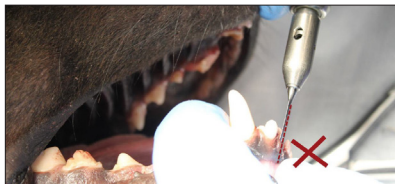
The weight of the handpiece along with the side to side motion allows the tip to advance into the ligament space and the sides of the tip to cut the periodontal ligament.

CAUTION: Using the handpiece in a twisting/elevating motion will damage the Vet-Tome tip and chuck mechanism.

The handpiece may become warm if the Vet-Tome is operated continuously. Ideally operate the handpiece for 10 seconds and then rest for 10 seconds whilst removing the tip from the socket and moving to the next tooth quarter.



Correct



Incorrect

HOW TO USE

Moving the handpiece in a back and forth (side to side) motion is correct vs “up and down”, (in and out) motion which is incorrect. Moving the handpiece up and down will make your tip move up and down as well, which can bend and/or twist the tip.

Tip Function

The fine tips are intended to bend and curve (this does not prohibit tip function) in order to follow the curvature of the tooth. Tips can be straightened by using your index finger and thumb and then applying pressure through the tip length.

Continuously bending and straightening the tips will cause them to break and thus require replacement.

iM3 recommends tips should be replaced after 10 uses/extractions.

There is an obvious noise change when inserting the tip into the ligament space vs hitting bone.

See iM3 website for demonstration video

TROUBLESHOOTING

Error: Handpiece

If an error with the handpiece is detected the following will occur:

- Unit will stop functioning.
- Indicator light will flash yellow.
- Handpiece attention required icon will be displayed in the display window.

Possible Causes & Remedies

Handpiece connector not properly inserted into controller

- Turn standby switch off.
- Remove and re-attach the handpiece cable connector to the controller.
- Turn standby switch on.



Damage to handpiece or solenoid assembly.

Contact iM3 for fault diagnosis and replacement parts.

Error: Foot Switch


If an error with the foot switch is detected the following will occur:

- Unit will stop functioning.
- Indicator light will flash yellow.
- Foot switch attention required icon will be displayed in the display window.

Possible Causes & Remedies

Foot Switch connector is not properly inserted into controller

- Turn standby switch off.
- Remove and re-attach the foot switch cable connector to the controller.
- Turn standby switch on.

 If the foot switch is damaged contact iM3 for fault diagnosis and replacement parts.

Error: System Error

In the case of an error within the controller is detected the following will occur:

- Unit will stop functioning.
- Indicator light will flash yellow.
- Attention icon will be displayed in the display window.

Possible Causes & Remedies

Internal controller error:

- Visually inspect all components, check connections, turn mains switch off.
- Turn mains switch on, if this fails to clear the error, contact iM3 to order a replacement controller.

CLEANING & HANDLING

⚠ Follow your country-specific directives, standards and guidelines for cleaning, disinfection and sterilization. Always use sterile handling techniques when working with sterile components.

Controller & Foot switch

The controller and foot switch should not come in contact with the patient. Only apply external spray or wipe with microbiologically tested surface disinfectants or alcohol as required. Do not submerge the controller or foot switch under any circumstances.

Disinfecting & Cleaning the Handpiece & Tips



The handpiece & tips must be decontaminated and then steam sterilized before use between patients.

- Remove the tip from the handpiece.
- Separate the handpiece and solenoid assembly before decontamination.
- Do not place the solenoid in the disinfection solution or an ultrasonic bath.
- Rinse the handpiece & tips under demineralized water (<38°C/100°F) with the aid of a brush (brush is not recommended in U.K.).
- Then remove any liquid residue (absorbent cloth, blow dry with compressed air from 3 way syringe).
- Place the handpiece & tip in the disinfection solution or the ultrasonic bath for a minimum of 12 minutes.
- Rinse the handpiece and tips and dry.
- The cleaned and dried handpiece & tip must then be steam sterilized.



iM3 recommends sterilization according to EN 13060, class B.


Follow your country-specific directives, standards and guidelines.

Steam sterilization class B with sterilizers in accordance with EN 13060. Sterilization holding time a minimum of 3 minutes at 134 °C (273.2 °F)

If the handpiece or tips show signs of physical degradation or deformity, including colour change, do not reuse. iM3 recommends replacing hand pieces and tips if this occurs.

- Allow the handpiece and tips to cool at room temperature before use.

Disposal Of Unusable Parts

 Inappropriate disposal of contaminated objects may spread infection or diseases. Follow country specific directives, standards and guidelines for the disposal of contaminated components. Dispose of Vet-Tome tips in a container appropriate for sharp objects.

PRODUCT SPECIFICATIONS

Technical Description

Model:	Vet-Tome (product code V2000)
Manufacturer:	iM3 Inc. 12414 NE 95th St, Vancouver, WA 98682 USA
Supply Voltage & Current:	100 to 240 Volts AC, 500 mA max
Supply frequency:	50/60 Hz
Mode of Operation:	Intermittent with max. 15 seconds of continuous operation
Fuses:	2 x T2A/250V
Operating Temperature Range:	5 to 30 Degrees C.
Storage / Shipping temperature Range:	-30 to 85 Degrees C.

Vet-Tome Accessories

Description:	Catalogue number:
Vet-Tome Tip V1 - Standard (5pc)	V2001
Vet-Tome Tip V2 - Heavy (5pc)	V2002
Vet-Tome release Tool	V2009
Vet-Tome Controller	V2100

Description:	Catalogue number:
Vet-Tome Handpiece	V2010
Vet-Tome Handpiece Cable	V2006
Vet-Tome Solenoid	V2007
Vet-Tome Foot Pedal	V2008

WARRANTY

Limited Warranty

This product has been manufactured with great care by highly qualified specialists. A wide variety of tests and controls guarantee faultless operation. Please note that claims under warranty can only be validated when all the directions in the instructions for use have been followed.

iM3 is liable for material or manufacturing defects within a warranty period of 12 months from the date of purchase. The Vet-Tome tips are covered by a 3 month warranty from date of purchase.

iM3 recommends tips should be used a maximum of 10 times (10 individual teeth) before being discarded.

iM3 accepts no responsibility for damage caused by incorrect handling or by repairs carried out by third parties not authorized to do so by iM3.

Furthermore, by using the product the Purchaser agrees that iM3 Inc shall not be liable for any incidental or consequential damages arising directly or indirectly from the use of the product.

Claims under warranty – accompanied by proof of purchase – must be sent to the vendor or to an authorized iM3 service organization. The provision of service under warranty extends neither the warranty period nor any other guarantee period.



Manufactured for and serviced by:

The Vet-Tome contains no internal user serviceable parts. Refer all service or repairs to qualified service personnel at iM3 or accredited iM3 Authorised Service Partners. www.im3vet.com

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