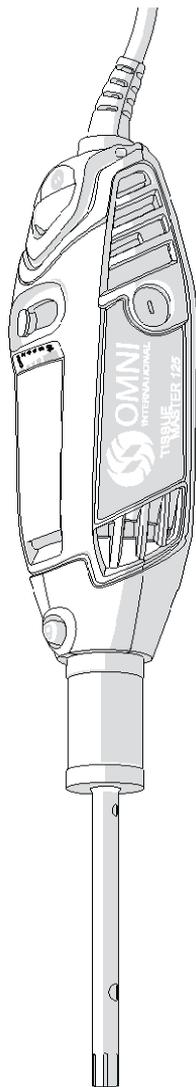


Tissue Master

User Manual



This manual is a guide for the use of the OMNI International Tissue Master and accessories.

Data herein has been verified and validated. It is believed adequate for the intended use of the instrument. If the instrument or procedures are used for purposes over and above the capabilities specified herein, confirmation of the validity and suitability should be obtained, otherwise OMNI International does not guarantee results and assumes no obligation or liability. This publication is not a license to operate under, or a recommendation to infringe upon, any process patents. Notes, cautions, and warnings within the text of this manual are used to emphasize important and critical instructions.

This OMNI International product is warranted to be free from defects in material and workmanship for a period of ONE YEAR from the date of delivery. OMNI International will repair or replace and return free of charge any part which is returned to its factory within said period, transportation prepaid by user, and which is found upon inspection to have been defective in materials or workmanship. For the first 90 days, both parts and service are without charge. For the balance of the period, parts will be provided but service will be charged at established labor rates. This warranty does not include normal wear from use; it does not apply to any instrument or parts which have been altered by anyone other than an employee of OMNI International nor to any instrument which has been damaged through accident, negligence, failure to follow operating instructions, the use of electric currents or circuits other than those specified on the plate affixed to the instrument, misuse, or abuse. OMNI International reserves the right to change, alter, modify, or improve any of its instruments without any obligation whatsoever to make corresponding changes to any instrument previously sold or shipped.

THE FORGOING OBLIGATION IS IN LIEU OF ALL OBLIGATIONS AND LIABILITIES INCLUDING NEGLIGENCE AND ALL WARRANTIES OF MERCHANTABILITY OR OTHERWISE, EXPRESSED OR IMPLIED IN FACT OR BY LAW, AND STATE OUR ENTIRE AND EXCLUSIVE LIABILITY AND BUYERS EXCLUSIVE REMEDY FOR ANY CLAIM OF DAMAGES IN CONNECTION WITH THE SALE OR FURNISHING OF GOODS OR PARTS, THEIR DESIGN, SUITABILITY FOR USE, INSTALLATION, OR OPERATION. OMNI International WILL IN NO EVENT BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES WHATSOEVER, AND THEIR LIABILITY UNDER NO CIRCUMSTANCES WILL EXCEED THE CONTRACT PRICE FOR THE GOODS FOR WHICH LIABILITY IS CLAIMED.

- READ ALL INSTRUCTIONS BEFORE USING.

The Omni Tissue Master has been engineered for economical functionality as well as safety; however, basic safety precautions and common sense must always be demonstrated when using any electrical product. DO NOT attempt to modify any part of the Omni Tissue Master. If you experience problems with or have questions about your Omni Tissue Master, contact your authorized dealer or call OMNI International at 1-800-776-4431 or 1-770-421-0058.

- DO NOT allow the machine to be submerged in any liquid.

- DO NOT use in any setting other than an indoor laboratory.

- DO NOT plug power cord into an incorrect outlet.

To reduce the risk of burns, electrocution, fire, or injury:

- Use this product only for its intended purpose as described in this booklet. DO NOT use attachments not recommended by the manufacturer.

- DO NOT operate the product if it is damaged in any way.

- Keep this product away from heated surfaces.

WARNING: The tip of the saw tooth generator probe is sharp.

WARNING: Reduce the risk of unintentional starting; make sure that the power switch is in the OFF position prior to plugging in the unit.

WARNING: The Omni Tissue Master has an internal speed control. An external speed control should never be used with this instrument.

WARNING: DO NOT process pathogenic material in an open container, since aerosols created during normal processing could be inhaled by the operator. Please call for assistance in processing pathogens or other material which require sealed enclosures.

WARNING: Keep all housings in place and in working order.

WARNING: Remove all tools from the generator probe before turning the motor on.

WARNING: DO NOT use the motor in a dangerous environment.

WARNING: Disconnect the motor before servicing, and when changing the generator probe.

WARNING: DO NOT modify the plug or cord that is provided. If the plug will not fit the outlet, have the proper outlet installed by a qualified electrician.

WARNING: Reduce the risk of unintentional starting; make sure the power switch is in the OFF position before plugging in the motor.

WARNING: Damaged or worn power cords should be repaired or replaced immediately by a qualified electrician.

WARNING: Improper connection of the equipment can result in a risk of electric shock.

DECONTAMINATION

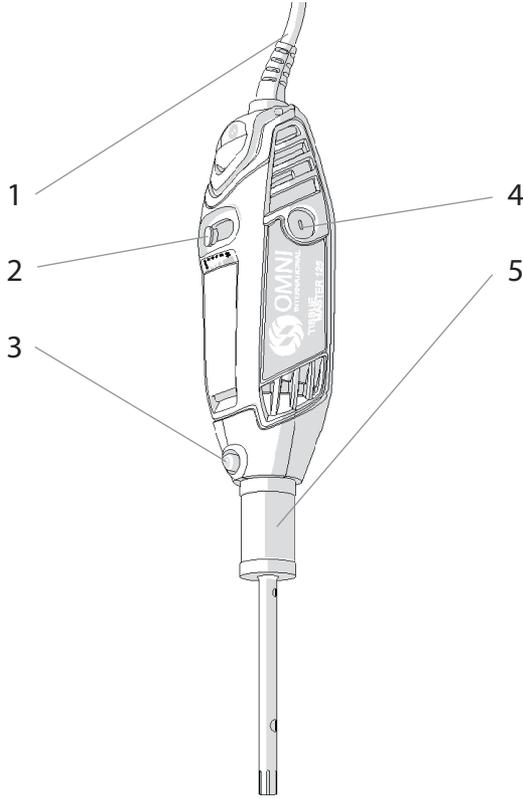
Should an instrument or component that has been used with radioactive or pathogenic material require factory or field service, comply with the following procedure to ensure the safety of service personnel:

Clean the parts to be serviced of all encrusted material and decontaminate them. There must be no radioactivity detectable by survey equipment. Obtain a Decontamination Certificate from OMNI International. Complete the certificate and attach to the instrument or parts being returned. If no Decontamination Certificate is attached, and a potential radioactive or biological hazard is detected or suspected by OMNI International the equipment will not be serviced until proper decontamination and certification is complete. The sender will be contacted for instructions as to the disposition of the equipment. Disposition costs will be borne by the sender.

WARNING: It is a violation of federal law to transport biologically hazardous or radioactive materials without proper packaging, labeling, and appropriate warnings.

Should this product ever require service, please contact
OMNI International at 1-800-776-4431

Overview



- 1. Power Cord
- 2. Variable Speed Control
- 3. Shaft Lock Button
- 4. Motor Brushes
- 5. Generator Probe

The Omni Tissue Master consists of the following:

Description	Part Number	Quantity
Motor Drive Unit	TM125 (115V or 230V)	1
Collet Wrench	F2109	1
Probe Cleaning Brush	10327-1	1
Generator Probe	5, 7, or 10 mm Probe	1
User Manual	03-203	1

Optional Stand Available (sold separately) - Order No. F22000

Operation

1. Power Cord
2. Variable Speed Control
3. Shaft Lock Button

General Operation

Power

- Plug in the power cord.

Start

- Move the speed control switch on the front of the unit away from the Off position.

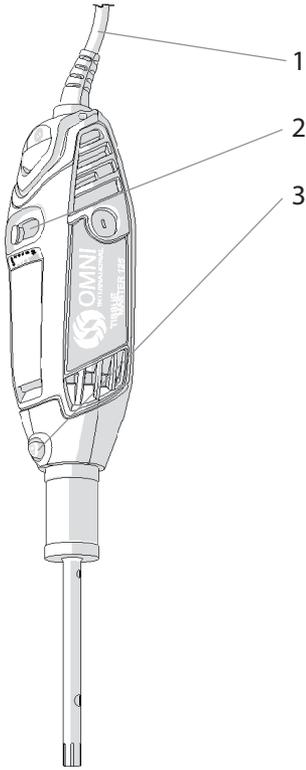
Set Speed

- Adjust speed using the variable speed control. To increase rpm, move control from left to right.

Variable from 5,000 - 35,000 rpm (120V) and
Variable from 10,000 - 33,000 rpm (230V)

Stop

- Return the speed control switch to the Off position.

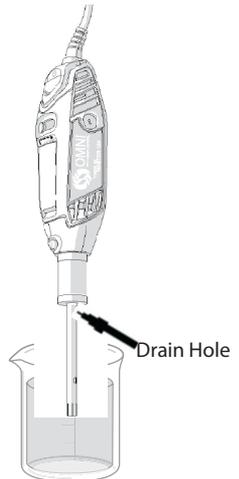
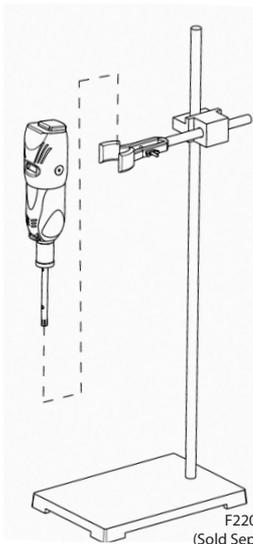


Stand Mounting

1. Thread the larger rod onto the base plate.
2. Thread the cross-rod into the motor cradle.
3. Assemble the clamp to the vertical rod.
4. Assemble the cross-rod to the clamp.
5. Insert the motor unit into the motor cradle and tighten the thumb screws.

Always submerge probe in liquid before starting.

***Never run dry**



*Do not submerge drain hole or leave probe submerged for an extended time period. Doing so can cause rust to build up on the shaft.

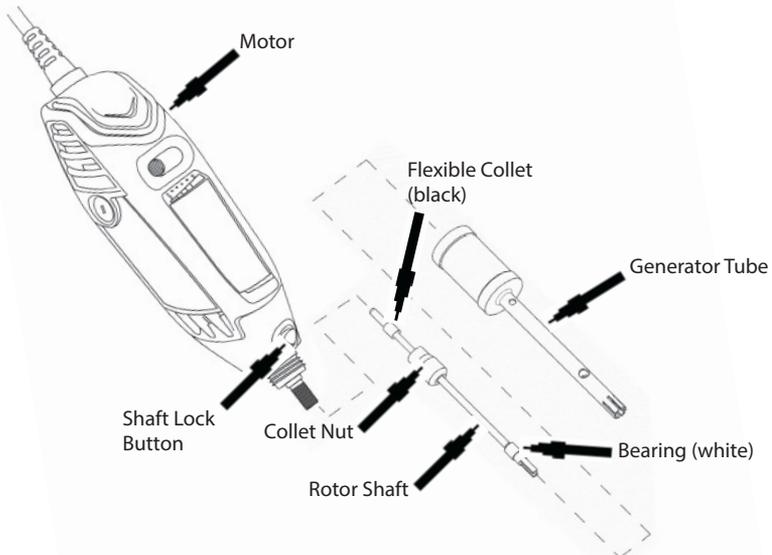
Generator Probe Options for the Tissue Master

Size	Processing Range	Type	Resulting Particle Size	Order No.
5 mm	<200 μ L - 5 mL	Flat Bottom	Fine	F2107-05
7 mm	250 μ L - 30 mL	Flat Bottom	Fine	F2107
10 mm	1.5 - 100 mL	Flat Bottom	Fine	F2107-10

Generator Probe & Accessory Maintenance Disassembly

In order to thoroughly clean the components of the Tissue Master, it must be disassembled.

1. Disconnect the MOTOR from the power source.
2. Unthread the GENERATOR TUBE from the motor unit.
3. Hold down the SHAFT LOCK BUTTON. Use the collet wrench to loosen (counter-clockwise) and remove the COLLET NUT.
4. Remove the steel ROTOR SHAFT from the COLLET NUT and FLEXIBLE COLLET.
5. If the BEARING is worn, it needs to be replaced (see "Bearing Removal").
6. If the BEARING does not need replacing, wipe the rotor shaft with a cloth or paper towel. Use the included brush to clean inside the generator tube.



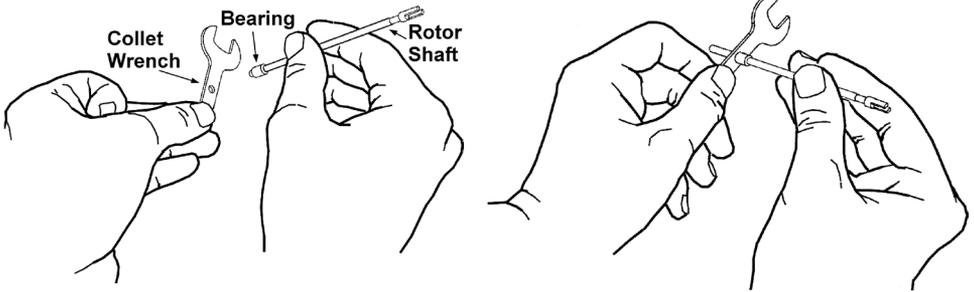
NOTE: To help prevent rusting, wipe down the shaft with dilute (5%) bleach and immediately follow up with 70% ethanol to remove the residue.

NOTE: FluidFilm product is added to the collet nut and threaded motor shaft to prevent rusting.

Generator Probe & Accessory Maintenance (cont.)

Reassembly

1. Stand the new BEARING flat on a table surface and press the smaller end of the ROTOR SHAFT through the BEARING.
2. Holding the ROTOR SHAFT off the table, push the ROTOR SHAFT through the hole in the center of the collet wrench and use the wrench to press the BEARING down



the shaft until it snaps into place (the bearing should feel loose in the bearing seat). (see figures below)

3. Slide the COLLET NUT onto the ROTOR SHAFT.
4. Slide the FLEXIBLE COLLET about one centimeter onto the ROTOR SHAFT.
5. Check that the unit is disconnected from the power source.
6. Insert the ROTOR SHAFT into the MOTOR unit until it stops. Ensure that the shaft is all the way in the motor unit.
7. Slide the COLLET NUT down the ROTOR SHAFT and thread it onto the MOTOR unit.
8. Hold down the SHAFT LOCK BUTTON and hand tighten the collet nut as much as possible. DO NOT use the collet wrench.
9. Slide the GENERATOR TUBE over the ROTOR SHAFT and thread it onto the MOTOR unit. Firmly hand tighten the tube.
10. See next section for instructions to run-in the new BEARING. (if the bearing was not replaced, the Tissue Master is ready for use)

Generator Probe & Accessory Maintenance (cont.)

Bearing Removal

1. Hold the BEARING/ROTOR SHAFT with a pair of pliers.
2. Use a sharp knife to cut the BEARING lengthwise.
3. Peel the BEARING off of the shaft and discard.

WARNING:

DO NOT hold the bearing/rotor shaft with bare hands while cutting.

Bearing Run-In

1. If the BEARING was replaced, it must be run-in before use.
2. Immerse 1/3 of the GENERATOR in water and run the MOTOR at a low speed for one minute.

NOTE:

DO NOT run unit without tube attached.

3. Increase speed at one minute intervals for three minutes
4. Run at full speed for one minute.
5. Disconnect the unit from the power source.

NOTE:

If the probe is excessively noisy, turn the motor off and return to step 1.

6. Remove the GENERATOR TUBE and clean the BEARING with the brush. (DO NOT remove the bearing or collet nut)
7. Re-install the GENERATOR TUBE. The Tissue Master is now ready for use.

Troubleshooting

Do not attempt to service the Tissue Master in a manner other than those discussed in this manual. For any issue that is unsuccessfully corrected using this guide, please contact your authorized dealer or call technical assistance at OMNI International at 1-800-776-4431 or 770-421-0058.

PROBLEM	CORRECTIVE ACTION
The Tissue Master is plugged in and turned on but is not functioning.	<ul style="list-style-type: none">- Check power cord connectors- Check wall socket for power to the outlet
Motor is turned ON and makes a “buzzing” sound, but is not spinning.	<ul style="list-style-type: none">- Check that the brushes are not worn and are correctly installed. Replace if necessary.
Motor unit operating speed declines, stalls intermittently, or stops completely	<ul style="list-style-type: none">- Check that the brushes are not worn and are correctly installed. Replace if necessary.- Check the condition of the flexible collet and replace if needed
Excessive noise during normal operation	<ul style="list-style-type: none">- Check the condition of the PTFE bearing (white) and replace if needed- Check the condition of the flexible collet and replace if needed.
Rotor shaft slides out of the bottom of the tube.	<ul style="list-style-type: none">- Check the condition of the flexible collet and replace if needed
Excessive noise during run-in of a new bearing	<ul style="list-style-type: none">- Turn the Tissue Master OFF and return to step 1 of Bearing Run-In in the Generator Probe and Accessory Maintenance Section.
Teflon bearing wears quickly	<ul style="list-style-type: none">- Fluid level may be too low in the tube.- Immerse the probe deeper into the fluid.
Excessive splashing in sample tube	<ul style="list-style-type: none">- Fluid level too low for tube size



OMNI
International

935 Cobb Place Blvd.
Kennesaw, GA 30144
800.776.4431 • 770.421.0058
www.omni-inc.com