

OMNI TH_Q

DIGITAL TISSUE HOMOGENIZER

USER MANUAL



OMNI
INTERNATIONAL

The Homogenizer Company™

REV. B
03-225

WARRANTY INFORMATION

This manual is a guide for the use of the Omni International TH₀, Digital Tissue Homogenizer 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 THREE (3) YEARS 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 whatever 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.

IMPORTANT SAFEGUARDS

- **READ ALL INSTRUCTIONS BEFORE USING.**
- **SAVE THIS OWNER'S MANUAL.**

The Omni TH_Q 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 TH_Q. If you experience problems with or have questions about your Omni TH_Q, contact your authorized dealer or call Omni International at 800-776-4431 or 770-421-0058.

DANGER

- **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.

WARNING

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.

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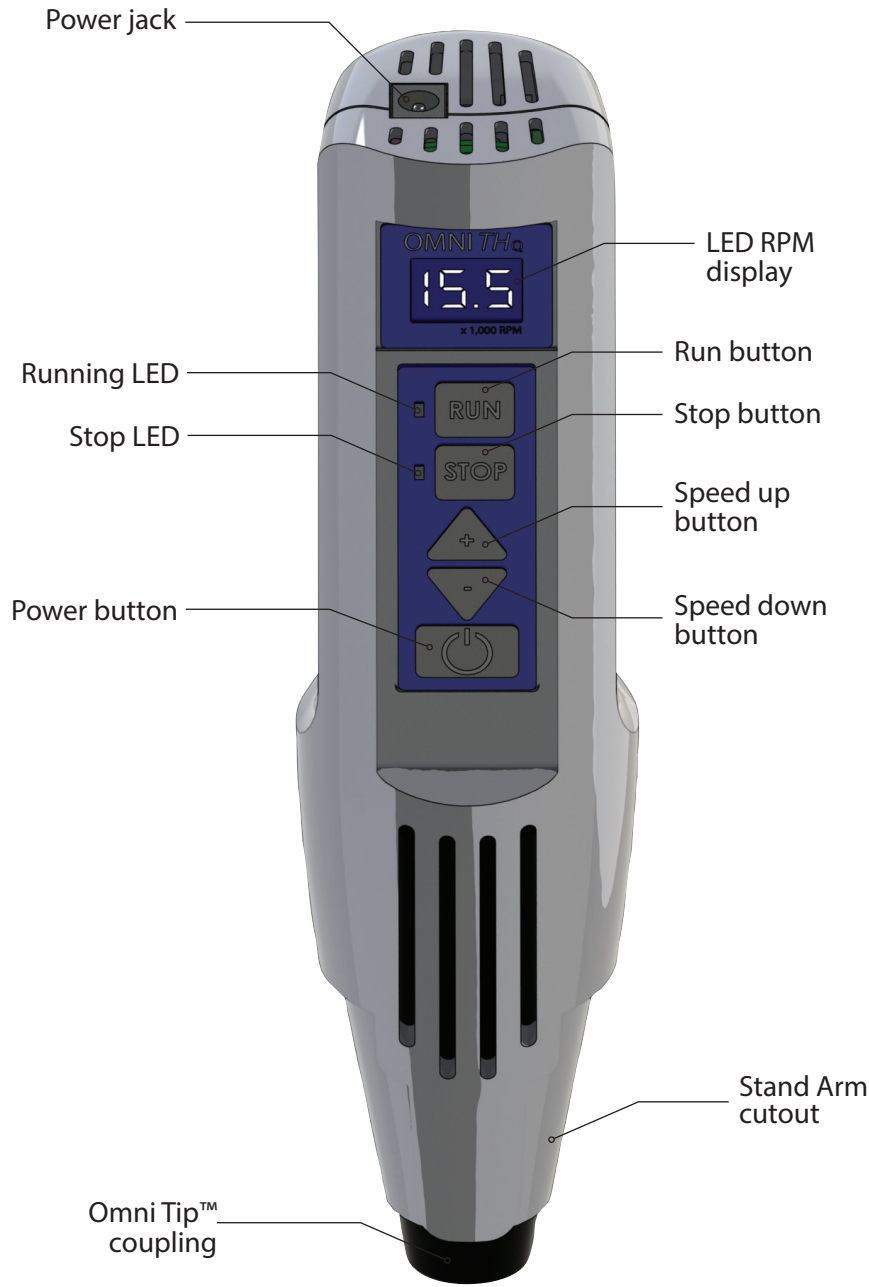
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1.1 DEVICE LAYOUT



1.2 BUTTONS / DISPLAY

The TH_Q is operated by means of a digital touch-pad.

The speed of the TH_Q is indicated on the LED display.

Press **“RUN”** to begin homogenization at indicated speed

Press **“STOP”** to end homogenization

Use the **“+”** & **“-”** arrow keys to change the speed of the motor

Press the power button to turn the motor on or off. The motor will store the last selected speed when powered off.



1.3 PARTS AND ACCESSORIES

Prior to operation, please remove all parts from the shipping container and inspect for damaged or missing parts. If any parts are found to be damaged or missing, please contact Omni International at 1-800-776-4431.

The Omni TH_Q Digital Tissue Homogenizer Package consists of the following:

Description	Part Number	Quantity
Motor Drive Unit	12-200-1	1
Post Clamp Assembly	12-118	1
Omni Tip Plastic Probes (Hard & Soft Tissue)	30007L (Soft)	6
	30007HT (Hard)	6
Tool Kit	T1001	1
Instruction Manual	03-225	1
Storage Case	04-502	1

Also available, but not supplied with the instrument:

Description	Part Number	Quantity
Stand Assembly*	S1000	1

1.4 POWERING DEVICE

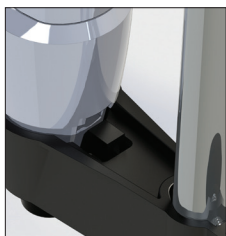


Connect the included power supply to the Omni TH_Q motor unit and plug the power supply unit into an appropriate outlet.

1.5 STAND-MOUNTING THE OMNI TH_Q

To mount the Omni TH_Q to a stand assembly, refer to the figure and follow these steps:

1. Secure the 24" post by twisting it into the base plate until securely tightened.
2. Loosen the locking knob and slide the included post clamp assembly down over the end of the post until the clamp is at the desired height and lock in place.
3. Slide the TH_Q motor into the opening on the end of the post clamp assembly and push it down firmly. The unit will lock in place.



4. To remove the TH_Q, press the black button on the back of the opening of the post clamp assembly and lift the motor from the cradle.



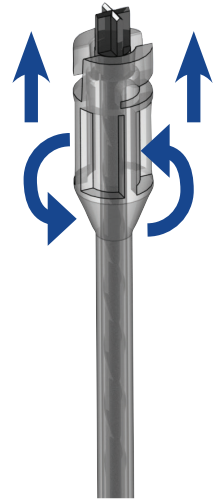
2.1 INSTALLING ROTOR-STATOR GENERATOR PROBES

Stainless steel and plastic Omni Tip™ rotor-stator generator probes are easily installed to the Omni TH_Q motor by means of a quarter-turn bayonet mount. Simply push the generator probe into the motor housing as far as possible, turn clockwise, and release. The Omni TH_Q is ready to operate.



CAUTION: Remove the blue protective cap from the stainless steel generator probes before processing. Replace the blue cap when not in use.

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



2.2 HOMOGENIZATION

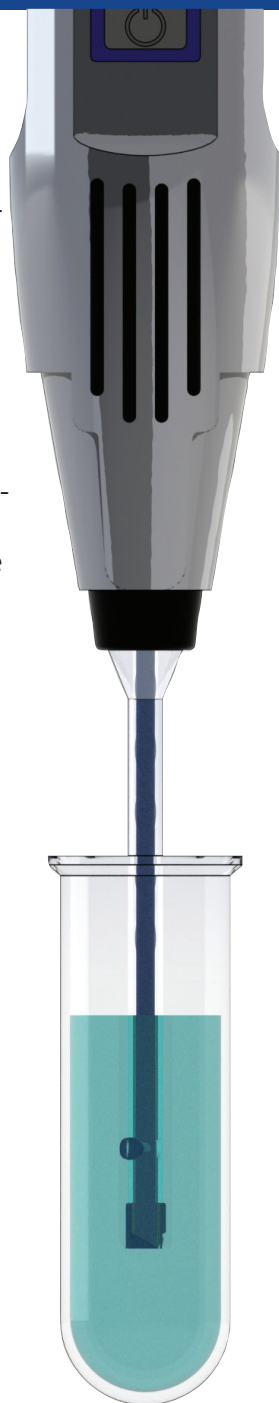
Insert the generator probe into the Omni TH_Q motor. The depth of the generator probe in the sample vessel can significantly affect flow patterns within the vessel. This also affects processing efficiency. As a rule of thumb, the generator probe usually operates most efficiently at a depth of 1/3 (to 1/2) of the liquid height. Heavy sediments may require deeper immersion, and this processing depth can be optimized by observing flow patterns and related processing results. While processing, liquid can circulate through the two holes at the bottom of the generator probe. The top hole of the stainless steel generator probe should not be immersed in the sample. Blocking the upper hole could result in liquid being drawn into the lower motor bearing.

CAUTION: When using glass-filled Teflon lower bearings, do not operate the unit for extended periods of time without immersing the bottom of the generator probe in liquid or the sample being processed in order to avoid premature failure of the lower bearing.

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



3.1 SPECIFICATIONS

Motor Speed:	8,000 - 32,000 rpm
Processing Capacity:	0.1-150 mL
Height (motor only):	21.92 cm (8.63 in.)
Weight (motor only):	340 g (11.99 oz.)
Electrical Requirements:	115V, 60Hz or 220V, 50Hz

Standards Approval/Compliance: CE Certified (220V)

NOTE: The TH_Q is equipped with a universal power supply which works with an input voltage of 110V-230V at 50 or 60 Hz

3.2 STAINLESS STEEL GENERATOR PROBES

Stainless steel generator probes are also available for the Omni TH_Q, but are not supplied with the instrument.

Description	Part Number
5 mm x 75 mm Stainless Steel Generator Probe	B5-75
7 mm x 95 mm Stainless Steel Generator Probe	B7-95ST
10 mm x 110 mm Stainless Steel Generator Probe	B10-110ST
12 mm x 110 mm Stainless Steel Generator Probe	B12-110ST

3.3 MOTOR DRIVE UNIT

The Motor drive housing should be wiped off after use, especially when concentrated and potentially damaging liquids are used during processing. Never use solvents to clean unit or accessories.

3.4 MOTOR BEARINGS

The Omni TH_Q, Digital Tissue Homogenizer motor is equipped with sealed ball bearings. Under normal use they require no additional lubrication.

3.5 STORAGE

The unique design of the Omni TH_Q Tissue Homogenizer allows the hand-held unit to stand vertically on a bench-top or shelf so that it can be stored in less than six square inches of space.

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

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

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: 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.

SECTION 4 — TROUBLESHOOTING

Do not attempt to service the Omni TH_Q 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 Omni International technical assistance at 1-800-776-4431 or 1-770-421-0058.

PROBLEM	CORRECTIVE ACTION
The Omni TH _Q 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
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
Motor does not spin. Green light flashes.	<p>Rotor is locked. Remove the obstruction.</p>

5.1 ASSISTANCE

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

5.2 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.

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