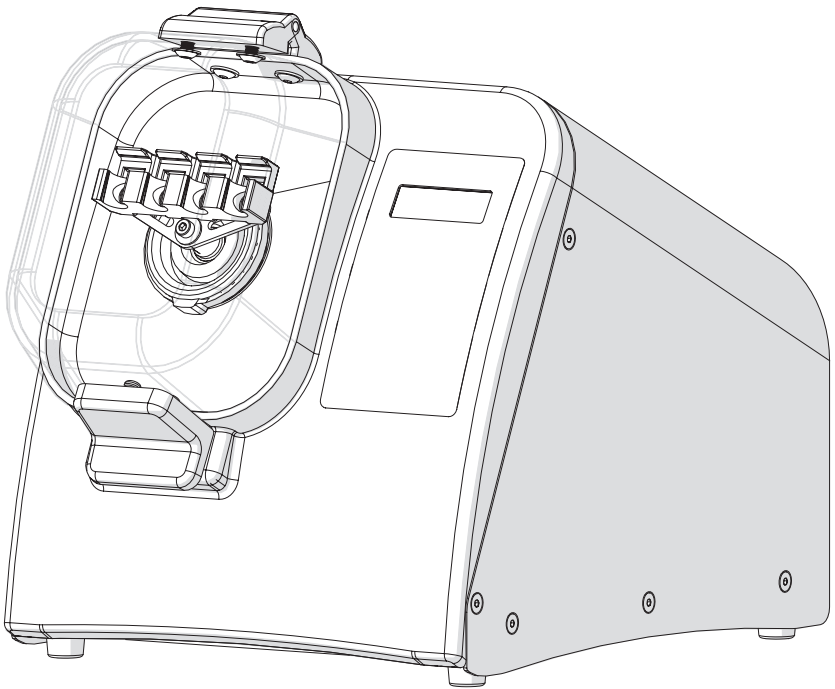


# Bead Ruptor™ 4

## Bead Mill Homogenizer

User Manual





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.

This 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. 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.

This product has been engineered for 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 this product.
- 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 or subject it to an incorrect voltage.
- Use this product only for its intended purpose.
  
- 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.
- 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.
- DO NOT operate the product with the safety ground disconnected.

WARNING: Reduce the risk of unintentional starting; make sure the speed 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.

WARNING: Only use cords supplied by OMNI International or those approved by OMNI International.

**For research use only. Not for use in diagnostic procedures.**

- N'essayez PAS de modifier une quelconque partie de ce produit.
- NE laissez PAS la machine être immergée dans un liquide.
- NE PAS utiliser dans un cadre autre qu'un laboratoire intérieur.
- NE PAS brancher le cordon d'alimentation dans une prise incorrecte ou le soumettre à une tension incorrecte.

- Utilisez ce produit uniquement aux fins pour lesquelles il a été conçu.
- N'UTILISEZ PAS d'accessoires non recommandés par le fabricant.
- NE PAS utiliser le produit s'il est endommagé de quelque manière que ce soit.
- Gardez ce produit à l'écart des surfaces chauffées.
- NE PAS modifier la fiche ou le cordon fourni. Si la fiche ne s'adapte pas à la prise, faites prise appropriée installée par un électricien qualifié.
- NE PAS utiliser le produit avec la mise à la terre de sécurité déconnectée.

AVERTISSEMENT : Réduisez le risque de démarrage involontaire ; assurez-vous que le commutateur de vitesse est en position OFF avant de brancher le moteur.

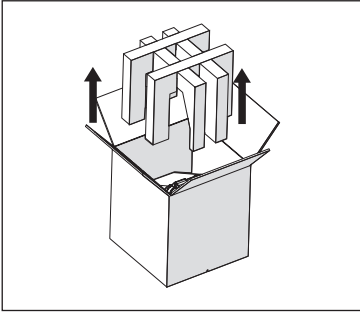
AVERTISSEMENT : Les cordons d'alimentation endommagés ou usés doivent être réparés ou remplacés immédiatement par un électricien qualifié.

AVERTISSEMENT : Une connexion incorrecte de l'équipement peut entraîner un risque d'électrocution.

AVERTISSEMENT : N'utilisez que des cordons fournis par OMNI International ou ceux approuvés par OMNI International.

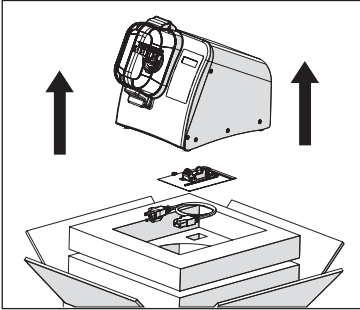
# Unpacking

1.



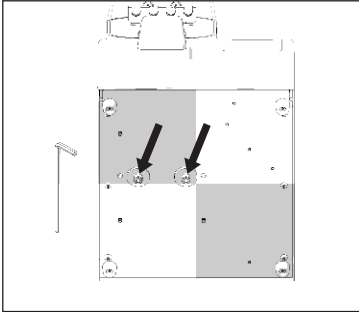
Lift foam from box.

2.



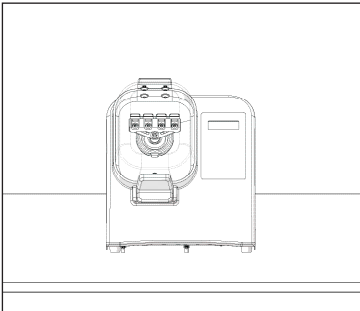
Lift unit up and off of the box bottom.  
DO NOT LIFT THE UNIT BY HOLDING THE LID.  
Remove Tool Kit and Power Cord

3.



Remove the 2 screws from the bottom of the unit.

4.



Place the unit on a stable surface.

5. **Connect power cord**

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## Trademarks

OMNI International is a registered trademark of OMNI International. All other trademarks are the property of their respective owners.

## Proper Equipment Operation

To reduce the risk of electric shock, do not remove the cover. No user serviceable parts are inside. Refer to qualified service personnel if help is required.

Use this product only in the manner described in this manual. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

## Cleaning

Follow internal laboratory process for cleaning and decontamination using 70% ethanol followed by a disinfecting wipe, then a final rinse with ethanol.

## Preventative Maintenance

Normal use: 12 month interval.

**Heavy use** may require a 6 month interval.

## Electric Supply

4C to 40C/ 39F to 104F, Humidity: 5% to 95% RH. Internal use only

## Electric Supply

19-042E 115V, 50-60Hz, 4A Max USA & Canada

19-042E 220V, 50-60Hz, 4A Max International

## FCC

This device complies with part 15 of the FCC (United States Federal Communications Commission) Rules.

Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

## CE

This device complies with all CE rules and requirements.

Changes or modifications to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**DO NOT:** Attempt to service the Bead Ruptor Elite™ Bead Mill in a manner other than those discussed in this manual. Any service must be performed by a qualified service technician. This can be either an OMNI Technician or an end user resource. All parts need to be sourced from OMNI International service department.









For any issue that is unsuccessfully corrected using this guide, please contact your authorized dealer or call:

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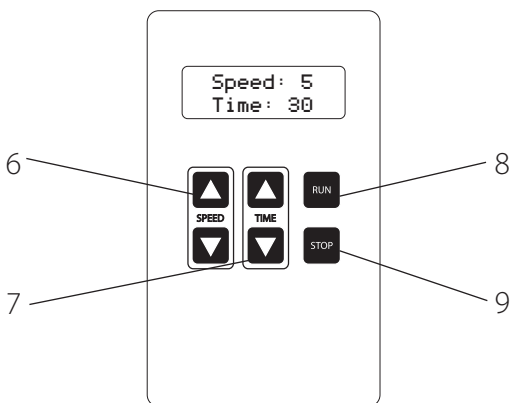
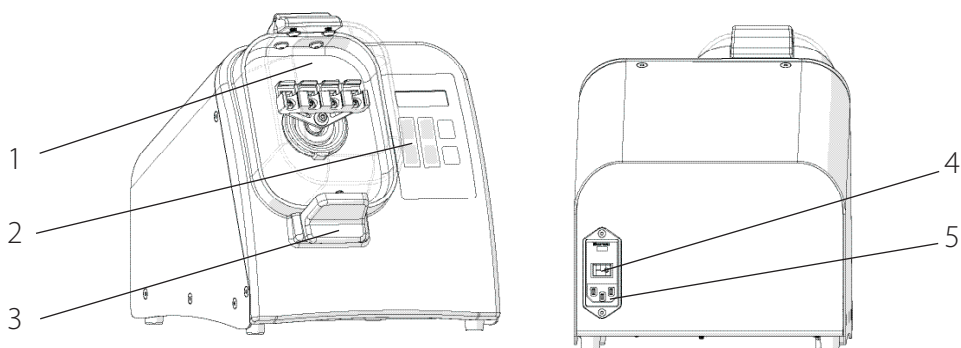
## Specifications

Input Voltage	19-042E 115V, 50-60Hz USA & Canada
Input Voltage	19-042E 220V, 50-60Hz International
Input Current	4A max
Power Connector	IEC 60320 C13
Fuse	6x30 mm / 4A max
Overvoltage Category	II
Pollution Degree	2
Altitude	Up to 2000 m
<b>For Indoor Use Only.</b> <b>Preventative Maintenance: Replace Tube holders once a year at a minimum</b>	

## Table of Symbols

Symbol	Description	Symbol	Description
	Caution. Refer to the User documentation. (ISO 7000-0434B)		On (power). [(IEC 60417-5007)
	Hazardous voltage; risk of electric shock. (IEC 60417-6042)	○	Off (power). (IEC 60417-5008)
	Fuse. (IEC 60417-5016)	CE	CE compliance mark.
	Alternating current. (IEC 60417-5032)		Consult Instructions for Use. (ISO 7000-1641)
	KC Certification Mark		WEEE symbol (EN50419:2005).
	UK Conformity Assessed mark		

# Overview



- 1. Lid
- 2. Keypad
- 3. Lid Latch
- 4. ON/Off Switch
- 5. Power Cord Port
- 6. Speed Control
- 7. Timer Control
- 8. Run Button
- 9. Stop Button

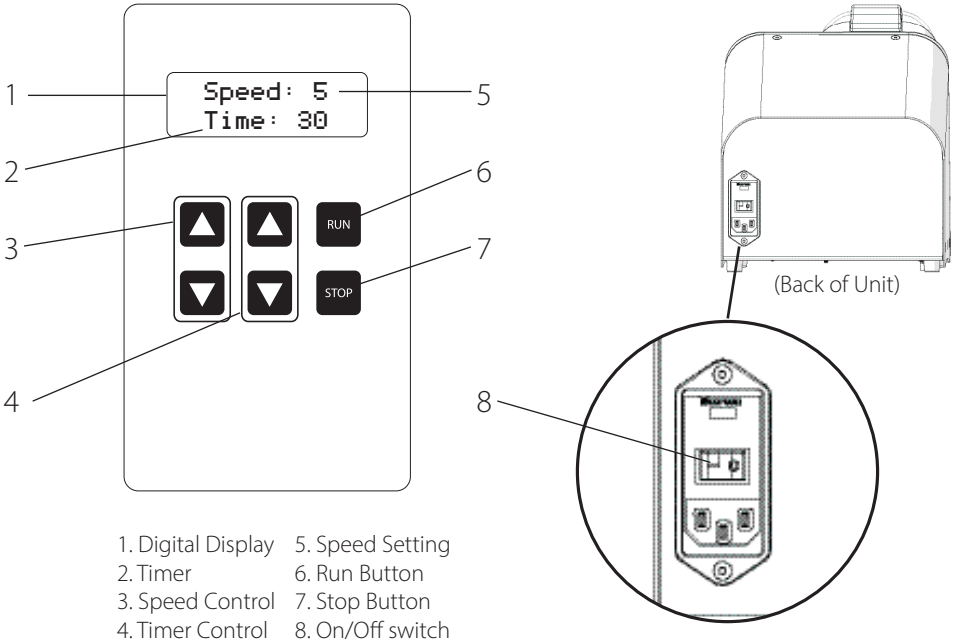
The Bead Ruptor™ 4 consists of the following:

Description	Quantity
Bead Ruptor™ 4	1
Power Cord	1
Spare Fuse	1
2 mL Tube Holder Assembly	1
7 mL Tube Holder Assembly	1
Allen Key	1
User Manual	1

The Bead Ruptor™ 4 Bead Mill Homogenizer is a homogenizing instrument that processes samples by shaking in sealed tubes at varying speeds and dwell times. It is recommended that no flammable liquids be used during processing.



# General Operation



## 1. Power

- Plug in the power cord and move the On/Off switch on back of the unit to the ON position.

## 2. Set Speed

- Adjust speed using up and down buttons.

## 3. Set Timer

- Adjust run time using up and down buttons from 1 sec. to 5 min.

## 4. Start

- Press Run button.

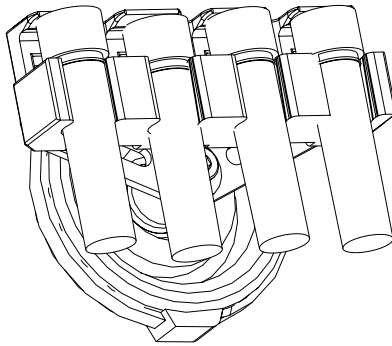
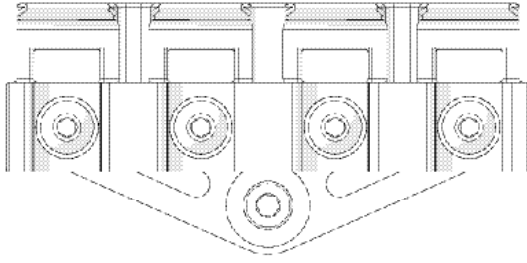
## 5. Pause/Stop

- Press Stop Button to Pause.

- Press Stop again to reset timer and cancel run

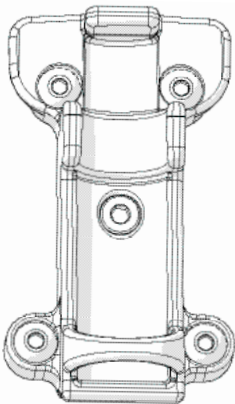
Speed Setting	Processing Power in G's	Processing Speed in M/S
1	30	1.5
2	60	2.5
3	90	3.7
4	120	4.4
5	150	5.0

# Loading Sample Tubes

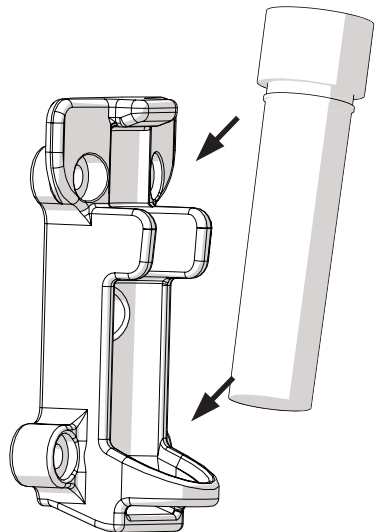


1.5 mL & 2 mL Tubes

## 7 mL Tube Carriage

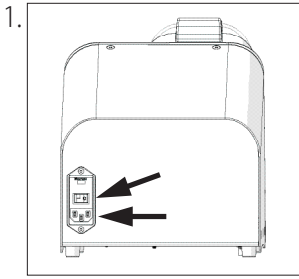


7 mL Tubes

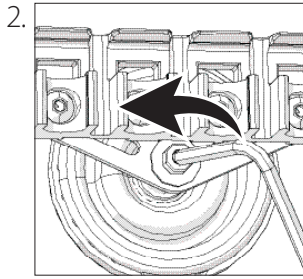


OMNI Bead tubes should be used exclusively with OMNI Bead Ruptor™ Homogenizers.

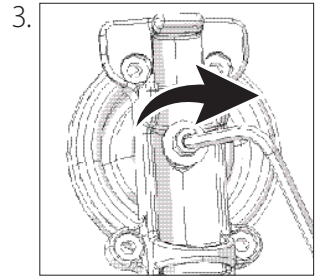
# Changing the Tube Holder



Turn unit off and unplug power cord.

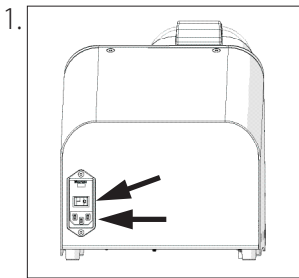


Use the supplied 3 mm allen wrench to loosen tube carriage holder screw

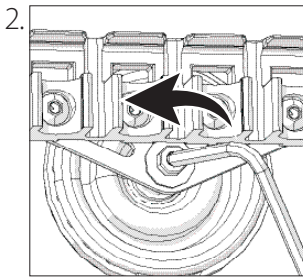


Use the supplied 3 mm allen wrench to tighten tube carriage holder screw

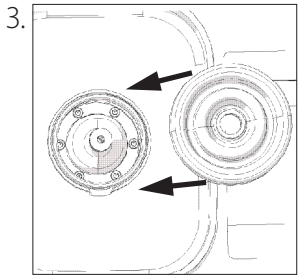
# Changing the Neck Gasket



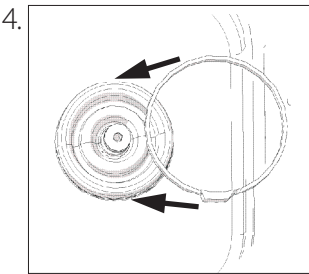
Turn unit off and unplug the power cord.



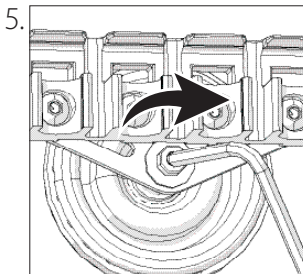
Use the supplied 3 mm allen wrench to loosen the central screw and remove restriction tie and old neck gasket.



Slide the new neck gasket onto the pivot shaft and housing



Secure the new neck gasket using the restriction tie with the clamp positioned toward the bottom of the instrument. Tighten central screw.



Use the supplied 3 mm allen wrench to tighten the central screw and secure the tube carriage.

# Troubleshooting

## Error Codes

Error Code	Definition	Cause	Possible Solution
Error 1	Display screen shows incomplete or unusual characters	CPU needs to be reset	Turn off the unit. Wait 30 seconds. Turn the unit back on.
Error 2	No display on the screen	No Power	Check main voltage. Check that the voltage of the unit (100V-240V) matches what is being delivered by the main power supply. Make sure the unit is plugged in properly. Check and replace fuses if blown.
		Faulty display screen	Turn off the unit. Contact manufacturer for assistance.
Error 3	Unit powers on but motor does not turn	Faulty motor	Contact manufacturer for assistance.
Error 4	Close Door	Lid is not seated properly.	Check Lid latch for obstruction Press lid and ensure the handle is closed
		Detection system is faulty.	

**WARNING:** Any service must be performed by a qualified service technician. This can be either an OMNI Technician or an end user resource.

All parts need to be sourced from the OMNI International service department

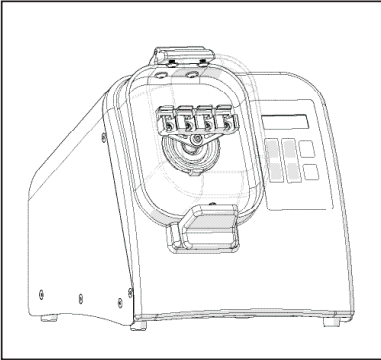
**ADVERTISEMENT :** Tout entretien doit être effectué par un technicien d'entretien qualifié. Il peut s'agir d'un technicien OMNI ou d'une ressource utilisateur final.

Toutes les pièces doivent provenir du service après-vente d'OMNI International.

# Transporting the Bead Ruptor™ 4

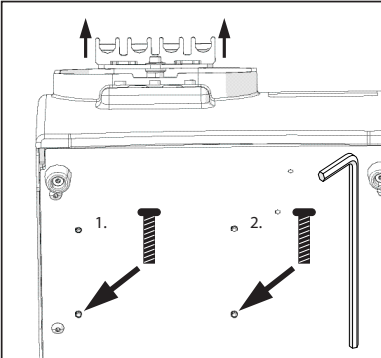
The Bead Ruptor™ 4 must be shipped in its original packaging.  
Before transporting please follow this steps.

1.



Remove all tubes, cover the unit in its plastic bag.

2.



The tube carriage will slide back. Lift the tube carriage to align the motor mount holes to the holes in the base plate.

Insert screws with allen key until you feel them engage (It may take some finesse to get them aligned with the internals of the unit).

Tighten screws until completely seated.

For more information about service please call:

800.776.4431 • 770.421.0058

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# Notes

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