

**GENIE-2T**  
Analog+Timer



**GENIE-2D+Optional H-302** **Digital**

(switch activated Start/Stop) Mode (GENIE-2T).

- **Reproducibility:** Vortexing time is constant, no matter the day or operator. Accuracy  $\pm 5\%$  (GENIE-2T).
- **Digital speed control and display:** Provides accuracy, reproducibility and repeatability (GENIE-2D).
- **Timer Function:** Touch on for 1-99 seconds. Hands-Free for 1-99 minutes or continuous (GENIE-2D).
- **Hands-Free or Touch:** A 3-position power switch operates with continuous action or "Touch On" control. With the true "Hands-Free" operation of continuous action, lab operators can greatly increase lab efficiency (GENIE-2 & GENIE-2T).

### GENIE-2, Tube Head & 75mm Platform Head GENIE-2T, Include Timer 1~60 Min

#### Features:

- **Shaking or Vortexing**

**Action:**

Variable speed control allows slow speed shaking action up to high-speed vortexing.

In addition, each attachment is designed to produce different mixing actions, allowing users to choose the correct action for each application.

- **Multi-Task Versatility:**

A broad range of attachments of various shapes, sizes, and materials allows for mixing of almost all common tubes or containers for Hands-Free or Touch operation.

- **Does not walk:**

Tough metal housing combined with "just enough weight", provides a stable platform for all types of mixing.

- **Unmatched Reliability:**

Many years of proven performance in laboratories all over the world.

- **Timer Function:**

Both Touch and Hands-Free mode automatically turns unit off after set time.

Touch Mode: 1-60 seconds. Hands-Free (switch activated Start/Stop) Mode: 1-60 minutes or continuous mode (GENIE-2T).

- **Convenient:**

No need to watch the clock. Unit automatically stops at set time – in Touch Mode or Hands-Free



**GENIE-2** **Analog**

#### Optional: Tube holders H-302



#### Tube inserts:

Fits recessed platform. Accepts tubes from 10mm to 37mm diameter. Inserts hold 4 to 8 tubes, depending upon size.

Model	Genie-2	Genie-2T	Genie-2D
<b>Supplied</b>	3-inch Platform, Pop-off Cup		
<b>Speed (RPM)</b>	600-3200 (2700 for 50Hz models)	600-3200 (2700 for 50Hz models)	500-3000 (2850 for 50Hz models)
<b>Timer – Touch On: Hands-Free:</b>	N/A	1-60 seconds 1-60 minutes or continuous	1-99 seconds 1-99 minutes or continuous
<b>Weight</b>	4 Kg	4 Kg	4 Kg
<b>Dimensions (base) (D x W x H)</b>	165 x 122 x 165 mm	165 x 122 x 165 mm	165 x 122 x 165 mm

### SI-P246, Pulsing Vortex Mixer



SI-P246

- True pulsing action provides more collisions and random motion.
- For applications requiring more aggressive action than standard vortexing.
- Variable "RUN/STOP" time provides quick pulsing or interval mixing.
- Fully programmable "ON" and "REST" function reduces heat buildup within the vessel, while keeping materials in suspension. Ideal for heat sensitive samples.
- Use with all Vortex-Genie accessories.
- May also be used as a standard "continuous" Vortex Mixer.
- Digital control and display of speed, time, and "RUN/STOP" time, for reproducibility and accuracy, with true speed display.

Model	SI-P246
<b>Supplied</b>	3 inch Platform, Pop-off Cup
<b>Speed</b>	500–3000 (2850 for 50Hz models)
<b>Timer – Hands Free</b>	1–99 minutes or continuous
<b>Pulse – ON/OFF</b>	0.1 seconds – 99 minutes
<b>Weight</b>	4 Kg (8.8 lb)
<b>Dimensions (base) (D x W x H)</b>	165 x 122 x 165mm

### Accessories for Genie Vortex:

#### H-302, Adaptor sets for tubes 10–37mm diameter, Bottles & Flasks

The Large Sample Set (Model H302) can be used with Vortex-Genie 2 mixer for beakers, flasks and large tubes. It consists of a Recessed Platform, 2 Elastic Bands, and an assortment of Foam Inserts for tubes of various diameters (10mm to 37.0mm). A Blank Foam Insert is also provided for user customizing.



H-302

#### H-301, Adaptor sets for 5 & 1.5 tubes & microplate

The Multiple Sample Starter Set (Model H301) can be used with Vortex-Genie 2 mixer and consists of a 6-in (152mm) Platform, Microtube Foam Insert and Microplate Foam Insert. Each insert fits snugly into the 6-in Platform attachment to accommodate either 60 microtubes or one standard footprint microplate, respectively.



H-301

Image	Model	Description
	146-6005-00	<b>6-Inch Platform:</b> The 6-inch (152mm) Platform can be used with the Vortex-Genie 2 family of mixers in conjunction with either the Microtube Foam Insert (Part No. 504-0234-00), Microplate Foam Insert (Part No. 504-0235-00). The 6-inch Platform is included in the Multiple Sample Starter Set (Model H301).
	504-0234-00	<b>Microtube Foam Insert (2):</b> Two high-density foam inserts to accommodate up to 60 microtubes. This insert fits into the 6-in (152mm) Platform attachment (Part No. 146-6005-00) and one is included in the Multiple Sample Starter Set (Model H301) for use with the Vortex-Genie 2 family of mixers.
	504-0235-00	<b>Microplate Foam Insert (2):</b> Two high-density foam inserts to accommodate one standard footprint microplate. This insert fits into the 6-in (152mm) Platform attachment (Part No. 146-6005-00) and one is included in the Multiple Sample Starter Set (Model H301) for use with the Vortex-Genie 2 family of mixers.
	504-0039-00	<b>Recessed Platform:</b> The Recessed Platform can be used with the Vortex-Genie 2 family of mixers in conjunction with either Foam Inserts (Part No. 503-0278-00, 503-0279-00, 503-0280-00, 503-0277-00) or Elastic Bands (Part No. 568-0001-00). The Recessed Platform is included in the Large Sample Set (Model H302).
	503-0278-00	<b>9-13mm Tube Foam Inserts (2):</b> Two high-density Foam Inserts to accommodate 9–16mm diameter tubes. The insert fits into the Recessed Platform (Part No. 504-0039-00) for use with the Vortex-Genie 2 family of mixers. One insert is included in the Large Sample Set (Model H302).

























Image	Model	Description
	503-0279-00	<b>14-29mm Tube Foam Inserts (2):</b> Two high-density Foam Inserts to accommodate 14-29mm diameter tubes. The insert fits into the Recessed Platform (Part No. 504-0039-00) for use with the Vortex-Genie 2 family of mixers. One insert is included in the Large Sample Set (Model H302).
	503-0280-00	<b>29-37mm Tube Foam Inserts (2):</b> Two high-density Foam Inserts to accommodate 29-37mm diameter tubes. The insert fits into the Recessed Platform (Part No. 504-0039-00) for use with the Vortex-Genie 2 family of mixers. One insert is included in the Large Sample Set (Model H302).
	503-0277-00	<b>Blank Foam Inserts (2):</b> Two high-density Foam Inserts are customized by the user for odd-shaped vessels. The insert fits into the Recessed Platform (Part No. 504-0039-00) for use with the Vortex-Genie 2 family of mixers. One insert is included in the Large Sample Set (Model H302).
	503-0283-00	<b>Assorted Foam Inserts (4):</b> High-density Foam Inserts for each of the following: 9-16mm Tubes, 14-29mm Tubes, 29-37mm Tubes. A Blank Foam Insert is also included for user customization. Each insert fits into the Recessed Platform (Part No. 504-0039-00) and one of each is included in the Large Sample Set (Model H302) for use with the Vortex-Genie 2 family of mixers.
	568-0001-00	<b>Elastic Bands (2):</b> Two Elastic Bands securely fasten various sample vessels to the Recessed Platform (Part No. 504-0039-00). Two bands are included in the Large Sample Set (Model H302) for use with the Vortex-Genie 2 family of mixers. Sample vessels of up to 500ml can be used as well as microplates.
	146-3011-00	<b>Pop-Off Cup:</b> Plastic pop-off cup for mixing and vortexing in single tubes. The pop-off cup may be used on the Vortex-Genie 1, Disruptor Genie and the Vortex-Genie 2 family of mixers.
	OK-0500-902	<b>3-Inch Platform With Rubber Cover:</b> Plastic 3-inch (76mm) platform with rubber cover (consists of Part No. 580-2013-00) for mixing and vortexing in beakers, flasks and multiple tubes. The plastic 3-inch platform with rubber cover may be used on the Vortex-Genie 2 family of mixers.
	580-2013-00	<b>Rubber Cover For 3-Inch Platform:</b> Replacement rubber cover for the 3-in (76mm) platform. This may be used on the Vortex-Genie 2 family of mixers.
	SI-0564	<b>TurboMix Attachment:</b> The New and Improved patented TurboMix attachment permanently mounts to most existing Vortex-Genie 2 family of mixers to provide extremely vigorous mixing of up to twelve 1.5ml or 2.0ml microtubes (snap-top or screw-cap) through a combination of vortexing and impact collision. This system is ideal for aggressive and rapid dissolution, resuspension or mixing of samples and is also convenient and effective for cell disruption in glass bead procedures.
	SI-0565	<b>Universal Microtube Holder:</b> New and Improved patented removable Microtube Holder for use with the TurboMix Attachment (Part No. SI-0564) on the Vortex-Genie 2 family of products, and the Vortex-Genie Pulse, as well as the Disruptor Genie. Accepts 1.5ml or 2.0ml microtubes (snap-top or screw-cap).
	SI-0511	<b>Large Ampule/Tube Attachment:</b> The Large Ampule/Tube Attachment can be used with the Vortex-Genie 2 family of mixers and provides vigorous end-to-end agitation combined with vortexing of up to four 10mm-17mm diameter tubes or ampules.
	SI-0570	<b>Small Ampule/Tube Attachment:</b> The Small Ampule/Tube Attachment can be used with the Vortex-Genie 2 family of mixers and provides vigorous end-to-end agitation combined with vortexing of up to four 15mm-17mm diameter tubes or ampules.



Image	Model	Description
	SI-H506	<b>Horizontal 50ml Tube Holder:</b> Tube Holder holds six 50mL tubes horizontally. Holder snaps on to any Vortex-Genie 2 mixer. No additional attachment necessary.
	SI-H512	<b>Horizontal 15ml Tube Holder:</b> Tube Holder holds twelve 15mL tubes horizontally. Holder snaps on to any Vortex-Genie 2 mixer. No additional attachment necessary.
	SI-H524	<b>Horizontal Microtube Holder:</b> Tube Holder holds twenty-four microtubes horizontally. Holder snaps on to any Vortex-Genie 2 mixer. No additional attachment necessary.
	SI-V203	<b>Vertical High Speed 50ml Tube Holder:</b> Tube Holder holds three 50mL tubes vertically. Holder snaps on to any Vortex-Genie 2 Mixer. Optimized for high speed vortexing a small number of tubes. No additional attachment necessary.
	SI-V206	<b>Vertical High Speed 15ml Tube Holder:</b> Tube Holder holds six 15mL tubes vertically. Holder snaps on to any Vortex-Genie 2 Mixer. Optimized for high speed vortexing a small number of tubes. No additional attachment necessary.
	SI-V209	<b>Vertical High Speed Microtube Holder:</b> Tube Holder holds nine microtubes vertically. Holder snaps on to any Vortex-Genie 2 Mixer. Optimized for high speed vortexing a small number of tubes. No additional attachment necessary.
	SI-V506	<b>Vertical 50ml Tube Holder:</b> Tube Holder holds six 50mL tubes vertically. Holder snaps on to any Vortex-Genie 2 mixer. No additional attachment necessary.
	SI-V512	<b>Vertical 15ml Tube Holder:</b> Tube Holder holds twelve 15mL tubes vertically. Holder snaps on to any Vortex-Genie 2 mixer and the Vortex-Genie Pulse. No additional attachment necessary.
	SI-V524	<b>Vertical Microtube Holder:</b> Tube Holder holds twenty-four microtubes vertically. Holder snaps on to any Vortex-Genie 2 mixer. No additional attachment necessary.
	SI-V525	<b>Vertical 50ml, 15ml, Microtube Holder:</b> Tube Holder holds six 50mL, six 15mL and twelve microtubes vertically. Holder snaps on to any Vortex-Genie 2 product. No additional attachment necessary.
	OK-0236-408	<b>Bottom Closure With Feet Kit:</b> This kit contains the Bottom Closure with Feet and (4) Screws. The Bottom Closure can be easily installed using either a 1/4" nut driver or pliers.
	OK-0236-900	<b>Shock Absorbing Feet (4):</b> Replacement rubber feet kit. This kit is an upgrade to the standard Vortex-Genie rubber feet. These feet are made of shock absorbing Sorbothane™ rubber. Fits on all Vortex-Genie mixers and Disruptor Genie. Kit includes rubber feet plus four mounting screws, which can easily be mounted using a standard screwdriver.



SI-100

- Variable speed control allows slow speed shaking action, up to high speed vortexing
- Compact, robust, durable and efficient design.
- Variable speed control, up to 3000rpm.
- Continuous operation or automatically press start. Fast, thorough, & quiet vortex mixing action, yet vibration free
- Using high quality motor to achieve high performance
- SI-100 with a single cup head suitable for mixing the content of one tube; SI-200 with a platform head suitable for mixing the contents of several test tubes simultaneously or one flask only.

### SI-100 Tube Head, SI-200 100mm Platform Head

#### Features:

- Powerful & quiet.
- Power on LED indicator rugged and sturdy for most demanding applications or tubes.
- Ideal for mixing solutions in small flasks with circular, oscillating movement
- Realize high power, stable motion with low noise
- Tough housing provides a stable platform for all types of mixing
- 3-position power switch operates with continuous action or "touch on" control



SI-200

Model	Max speed	Top head size	Weight (kg)	Size
SI-100	3000rpm	Rubber tube head with Ø26mm	3.2	W160xD130xH170mm
SI-200		Rubber platform head with Ø100mm	4.2	W200xD130xH180mm



SI-600

15 places of 50ml

50 places of 15ml

Optional: Foam Test Tube Racks

### SI-600, Multi-Tube Vortexer

Compact design, benchtop Mix-Smart can be used for virtually any mixing applications. It accommodates micro test tubes, PCR plates, deepwell plates and MTPs. The Mix-Smart only takes up an area of 17x24 cm, less than the size of this A4 paper. But the Mix-Smart can offer many options for holding a wide variety of tubes and plates.

#### Features:

##### Pulsing mode:

Programmable pulsing mode allows user to adjust the pulse-on/pulse-off times between 1~59 seconds in 1 second intervals. This feature enhances the vortex action by creating a more vigorous mix.

##### Microprocessor control:

The variable speed microprocessor control provides consistent uniform mixing action.

##### LCD display:

Independent LCD displays for speed and time allow operator to view both settings at once

##### Applications:

Suspensions, high throughput testing in clinical, environmental, and chemistry labs.

Model	SI-600
Speed Range	500~2500rpm
Speed Accuracy	±25rpm
Timer	1min~99h59min
Orbit	3.6mm
Maximum Weight Capacity	4.5kg
Tray Dimensions	L31xW18cm
Overall Dimensions	L426xW250xH480mm

Model	Tube Capacity	DIM.(mm)
300-02041-01	50xΦ10mm	245x132x45
300-02041-02	50xΦ12mm	245x132x45
300-02041-03	50xΦ13mm	245x132x45
300-02041-04	50xΦ16mm/15ml	245x132x45
300-02041-05	50xΦ25mm	245x132x45
300-02041-06	15xΦ29mm/50ml	245x132x45
300-02041-00	Tray pad set (upper & lower)	305x178.5x25

- Process up to 50 samples at a time
- Displays for speed and time



**Specifications:**

- 2D Mix-Control
  - Optimized mixing
  - Anti-spill technology
- Programmed soft keys
- Reliable universal holder
- Automatic imbalance detection—a common feature in centrifuges
- Integrated vortex function.

Model	SI-500
Mixing Speed	300rpm to 3,000rpm (increment: 10rpm)
Touch vortexing speed	3,500rpm
Power supply	230V/120V, 50/60Hz, 45W
Adjustable mixing time	15s to 99h59min; continuous
Mixing & vortexing radius	1.5mm (3mm mixing Orbit)
DIM.(W x D x H)mm	170x240x140
Weight	4.5kg



**SI-500, Mix Smart**

Compact thanks to design, the benchtop Mix-Smart can be used for virtually any mixing applications. It accommodates micro test tubes, PCR plates, deepwell plates and MTPs. The Mix-Smart only takes up an area of 17x24 cm, less than the size of this A4 paper. The Mix-Smart can be offered many options for holding a wide variety of tubes and plates.

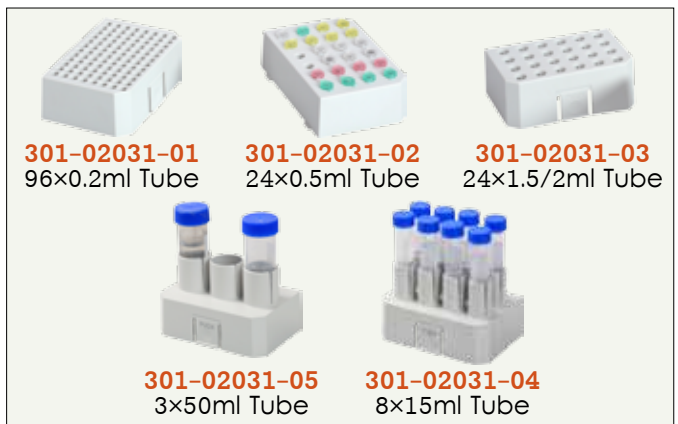
**Features:**

- Mixing 3-in-1
  - Plates (up to 96-, 384-, and 1536-well formats)
    - PCR plates (skirted, semi-skirted, unskirted)
    - Deepwell plates etc..
    - MTPs
  - Tubes
    - 0.2ml PCR tubes and PCR strips
    - 0.5ml Micro test tubes
    - 1.5ml/2.0ml Micro test tubes
    - 15ml Micro test tubes
    - 50ml Micro test tubes
  - Vortexing numerous tube sizes.



**Applications:**

- Mixing PCR preparations
- Resuspending pellets (e.g., bacteria, DNA, cell culture pellets)
- Incubation (e.g., ELISA assays)
- Colorimetric assays (e.g., Bradford, Lowry, BCA)
- Reporter gene assays (e.g., galactosidase, luciferase)
- Mixing restriction digestion preparations
- Vortexing numerous tube formats (e.g., 15ml and 50ml conical tubes).



Model	Description
301-02031-01	96x0.2ml PCR Tube Holder
301-02031-02	24x0.5ml Tube Holder
301-02031-03	24x1.5ml /2.0ml Tube Holder
301-02031-04	8x15ml Tube Holder
301-02031-05	3x50ml Tube Holder



### SI-0401, SI-0401A, SI-4001, SI-4001A, Microplate Mixers



- Small vortexing orbit of 1.0mm for thorough mixing regardless of sample viscosity, even in 384-well plates.
- Speed and orbit combine to offer true vortexing action in each well of a microplate.
- All models may be used as standard "continuous" microplate mixers/shakers.
- Digital Pulse version is programmable with "ON" and "OFF" Pulsing time between 0.1 seconds to 99 minutes.
- Analog model is ideal for high speed mixing. Digital Pulse model is ideal for precise speed and time control.
- Multi-MicroPlate Genie accepts up to 4 microplates, 8 with optional accessory tray.

Model	SI-0401	SI-0401A	SI-4001	SI-4001A
<b>Speed</b>	750 – 3200 RPM (2700 RPM for 50Hz models)	500 – 3000 RPM (2850 for 50Hz models)	750 – 3200 RPM (2700 RPM for 50Hz models)	500 – 3000 RPM (2850 for 50Hz models)
<b>Time</b>	1–60 min. or continuous	0–99 min. or continuous	1–60 min. or continuous	0–99 min. or continuous
<b>Vortexing Orbit</b>	1.0 mm diameter	1.0 mm diameter	1.0 mm diameter	1.0 mm diameter
<b>Max. Capacity</b>	1 microplate, any type with standard SBS footprint 4 microplates (8 microplates with optional accessory tray)			
<b>Dimensions</b>	165Dx165Wx165H mm	165Dx165Wx165H mm	335Dx240Wx165H mm	335Dx240Wx165H mm
<b>Weight</b>	2.75kg	2.75kg	3.7kg	3.7kg

### SI-150, MicroPlate Mixer



Compact & universal Microplate Mixer can hold 1 or 2 microplates, used in life science field including microbiology, cell & molecular biology, immunology & biotechnology.



Model	SI-150
<b>Voltage (VAC)</b>	100–240
<b>Frequency (Hz)</b>	50/60
<b>Power (W)</b>	20
<b>Shaking movement</b>	Orbital
<b>Orbital diameter (mm)</b>	4.5
<b>Max. shaking weight (with accessory) (kg)</b>	0.5
<b>Motor type</b>	DC brushless motor
<b>Motor rating input (W)</b>	18
<b>Motor rating output (W)</b>	10
<b>Speed range (rpm)</b>	Single microplate: 0–1500 Double microplate: 0–1000
<b>Speed display</b>	Scale
<b>Dimensions (mm)</b>	260x150x80
<b>Weight (kg)</b>	3
<b>Permissible ambient temperature (°C)</b>	5–40
<b>Permissible relative humidity</b>	80%

#### Features:

- Compact and universal Microplate Mixer suitable for small vessels and 96 microplate
- Wide range of accessories, easy installation and replacement
- Continuous operation
- Stepless speed regulation of motor
- DC brushless motor low running noise & long service.

## SI-D248, SI-DD48, Cell Disruptor/Homogenizer



SI-D248, Analog

SI-DD48, Digital

Disrupter Beads

**Features:**

- Dramatically Increased Disruption Efficiency:**  
 Ideal for difficult glass bead procedures – cell disruptions/homogenizations of yeast cells, bacteria, plant and animal tissue and pellet resuspensions. or anything that requires extremely violent high-speed agitation.
- More Than Vortexing Alone:**  
 Patented multi-directional action simultaneously agitates and vortexes at high-speed producing greater yields in less time.
- Digital model:**  
 for accurate, reproducible, repeatable results.
- Economical:**  
 Performance comparable to expensive ultrasonic cell disrupters/homogenizers. Compares favorably to Mini-Bead Beater\*.
- Vortex-Genie Rugged Reliability:**  
 Solid metal casting and stainless steel construction. Does not “walk”.
- Suitable for Use in Cold Rooms or Incubators**
- Vortex Too:**  
 Simply remove the Micro Tube holder and snap on the Pop-off Cup (supplied with the unit) to achieve continuous or timed 0-15 minutes – Analog or 0-99 min- Digital high-speed vortexing of single test tubes.

**Beads:**

- Spherical lead free soda lime glass beads are available in two sizes.
- Can be used for disruption of yeast, bacteria, and other samples.
- Used in combination with Disrupter Genie or Turbo Mix attachment for Vortex-Genie 2 or Vortex-Genie 2T.

**Accessories: (more information in pages 664-665)**

Universal Microtube Holder

Shock Absorbing Feet (4)

Bottom Closure w/ Feet Kit

Pop-off Cup

Model	SI-D248	SI-DD48	Disrupter Beads
<b>Supplied</b>	Universal Microtube Holder (tubes not included) and Pop-off Cup		0.1mm diameter beads for bacteria or 0.5mm diameter beads for yeast
<b>Timer</b>	0-15 min or continuous	0-99 min or continuous	N/A
<b>Speed</b>	3000 RPM (2850 for 50Hz models)	1000-3000 RPM (2850 for 50Hz models)	N/A
<b>Speed Alarm</b>	N/A	On/Off, Adjustable	N/A
<b>Dimensions (base) (D x W x H)</b>	165 x 122 x 190 mm	165 x 122 x 190 mm	N/A
<b>Weight</b>	4.3 kg	4.3 kg	375g





SI-M246

### SI-M246, High Capacity Vortex Mixing

- New adjustable clamping system accommodates a greater variety of containers, including deep well plates and up to (4) 500mL bottles.
- New clamping system allows the user to quickly change from one type of vessel to another.
- Digital control and display of speed and time for reproducibility and accuracy, with true speed display.
- Programmable gentle ramp up to speed, allows use of open containers.
- Use for gentle, orbital-style shaking or more vigorous vortexing.
- Durable and heavy zinc die casting with specially designed feet prevents "walking".
- No additional holders or accessories necessary. Racks are included.
- May be used in cold rooms or incubators.

Model	SI-M246
Supplied (Capacity)	Two 12-Pack Multi-Tube Racks holding up to 24 tubes of any material up to 29mm dia., up to six 250mL vessels, or up to 4 deep well plates
Speed	200-1000 RPM (950 for 50Hz models)
Orbit	4mm dia.
Timer	1-99 minutes or continuous
Dimensions (DxWxH)	310 x 270 x 195 mm
Weight	11.3 Kg (25 lb)



With Teflon Jars  
BMIX-100-T  
Bead Beater

### BMIX-100, Mix Disrupter

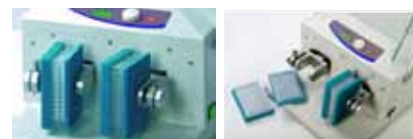
#### Tube Holders for reaction vials, PTFE Jars:

- 0.2 ml with 12 places on each arm
- 1.5 ml with 6 and 12 places on each arm
- 2.0 ml with 6 and 12 places on each arm
- 2.0 ml with 24 places on each arm.



#### PCR Plates Holder, Squared PTFE Jars:

- 2x Deep Well Plates
- 6x Microtiter Plates



#### Applications:

- High-yield DNA/RNA extracting methods
- Airborne pathogen transmission
- Detection of Mycobacterium tuberculosis in the Air
- Detection of Avian Influenza Virus in Surface Water
- Direct Detection of Pathogens in Food and Water
- Prevent biofilm growth in the distribution systems
- Detection of bacterial genera like Acinetobacter, Campylobacter, Gallionella, Rhizobiales, Rhodococcus, Microbacterium, and classes like Xanthomonadaceae, Rhodocyclaceae, Comamonadaceae.



#### Positive Examples:

Airborne pathogen transmission  
 Detection of Mycobacterium tuberculosis in the Air  
 Detection of Avian Influenza Virus in Surface Water  
 Direct Detection of Pathogens in Food and Water  
 Prevent biofilm growth in the distribution systems  
 High-yield DNA/RNA extracting method  
 Detection of bacterial genera like Acinetobacter, Campylobacter, Gallionella, Rhizobiales, Rhodococcus, Microbacterium, & classes like Xanthomonadaceae, Rhodocyclaceae, Comamonadaceae.