

Model HT-91000

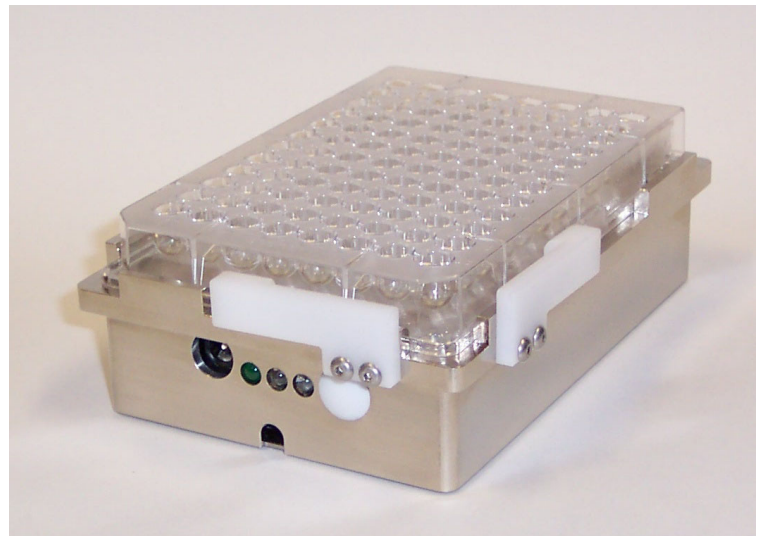
Microplate Orbital Shaker

For Biotechnology, Genomics and Proteomics Processing

Our HT-91000 Microplate Orbital Shaker is designed to provide an orbital shaking motion for a single microplate, keeping liquids either gently stirred or fully mixed and in suspension. Its thin profile and same footprint dimensions as a standard well-plate makes it ideal for use on robotic deck plates wherever you might set a microplate.

Features

- Rotationally shakes a single microplate.
- 0.5, 1 or 2 mm orbital motion.
- 2 selectable & adjustable speeds, 60-3600 RPM each.
- Low stirring speed to ultra-vigorous vortex speeds for viscous liquids.
- 24 VDC power for safe and easy integration with other automation.
- Solid aluminum block base with rubber feet provides stable platform
- Green LED power indicator, two blue LEDs for speed selection indicator.
- Cold running motor allows continuous operation, weeks at a time.
- Small number of precision components for extreme reliability over years of use.
- Spring clips secure microplate; easy on and off for robots or people.
- Base is exact same size as microplate & fits onto robotic decks.



Description

This precision electronic shaker provides a tight 1 mm orbital pattern for standard 96 and 384 well plates and will not spill liquids at higher speeds. It is designed with two continuously variable speeds in the range of 60 to 3600 RPM, providing a gentle stirring motion for skin prevention, medium speeds to ensure liquids remain fully mixed and in suspension across all wells, and vortex mixing for micro tubes.

The footprint of the unique HT-91000 Orbital Shaker is the exact same size as a standard well plate, and drops in easily as a replacement platform for most robotic deck plates.

Its solid aluminum construction does not allow walking or bouncing, and the nickel plating ensures easy wipe down. It has an operating temperature range of 0 to 120 degrees F, and it has negligible temperature rise itself, allowing operation continuously in cold rooms without affecting plate contents.

Designed originally to enhance existing automation and robotics for genome sequencing and archiving applications, its tiny size, standardized SBS microplate footprint and in-well mixing ability make it ideal for many other biotechnology and pharmaceutical applications, including manually loaded microplate handling.

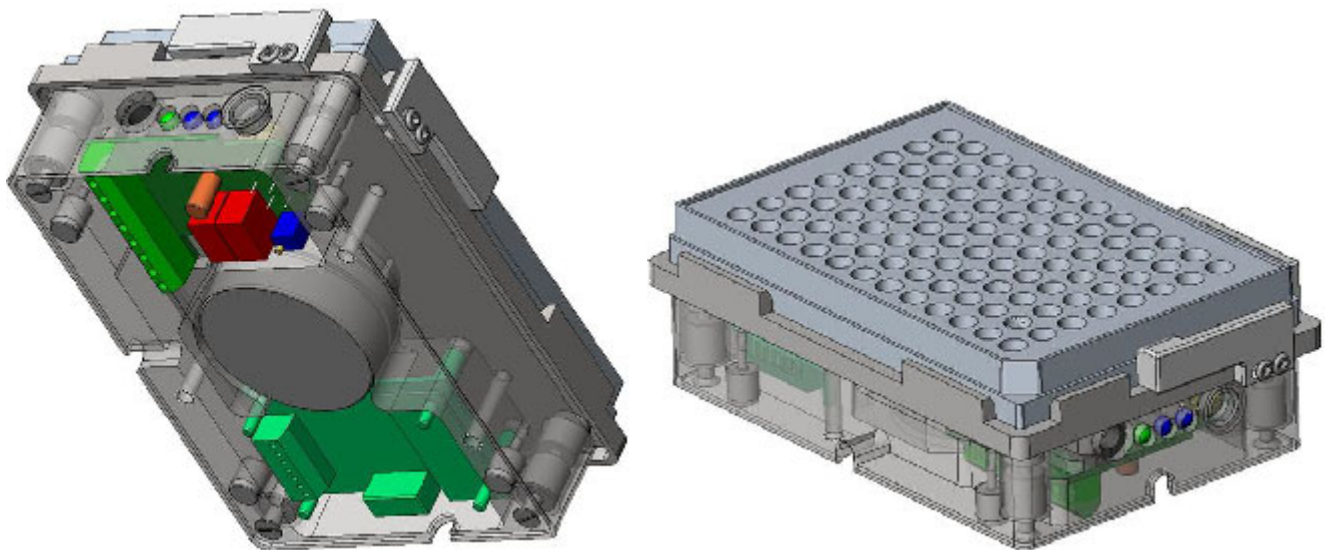
HT-91000 MICROPLATE ORBITAL SHAKER

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Specifications

Orbital Motion	1.0 mm diameter, circular shape, constant everywhere on well plate. 0.5 and 2.0 mm optional.
Speed	60 RPM to 3600 RPM, 2 separately adjustable potentiometers for two independent speeds. Speeds can be selected using external switches, relays or solid state switches. 7500 RPM top speed optional.
Power Required	24 VDC, 250 mA. 100-240VAC 50-60Hz AC power adapter included.
Connection for Power	Internal terminal block or supplied 100-220 VAC power adapter.
Indicators	Green LED for power indicator, two blue LEDs indicating Speed A or Speed B activation.
Base Dimension	3.350" (85mm) width, 5.030" (127.8mm) length
Microplate Platform Dimension	3.650" (92.7mm) width, 5.300" (134.6mm) length, centered on top of base. Secures a single 96 or 384 micro well plate with SBS footprint.
Height	1.215" (30.9mm) height from bottom of rubber feet to top surface of shaker table platform. 1.775" (45.1mm) height from bottom of rubber feet to the top surface of a standard well plate. 0.995" (25.3mm) from bottom of rubber feet to bottom of shaker platform.
Weight	1.58 pounds (717 g)
Operating Temperature	0° F to 160° F (-17.5° C to 71.0° C), non-condensing, RH to 90%
Start-up Time	1.5 second to set speed
Motor	Hi-torque 3-phase brushless DC servo motor and drive electronics with eccentric in precision bearing. Four post vibration isolators. Planar surface motion.
Mixing Speed	Speed varies based on your liquid viscosity. For 96 well plates water fully mixes in each microplate well at 1300 RPM, 2000 RPM for 384 well plates.
Material	Aluminum, nickel plated, stainless steel hardware, white polypropylene clips.
Warranty	Two year limited replacement warranty.

3D CAD Views



HT-91000 MICROPLATE ORBITAL SHAKER

Ordering Information

Standard Model:

Part Number: **Model HT-91000-1**, Microplate Orbital Shaker, 1 mm orbital motion, 100-240 VAC 50-60 Hz power adapter included, \$865 USD Quantity 1

Optional Models:

Part Number: **Model HT-91000-0.5**, 0.5 mm orbital motion

Part Number: **Model HT-91000-2**, 2 mm orbital motion

Accessory Modifications per Model:

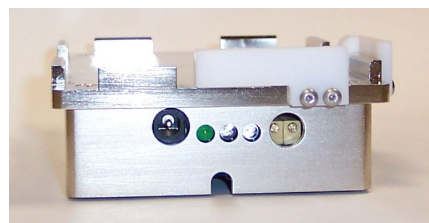
7500 RPM High Speed option, doubles shaker speeds.

Containment Clip Material option: Standard polypropylene clip replaced with Delrin, polyethylene or nylon.

Containment Clip For Lid option: Higher clip design accommodates wellplate lid along with well plate. Let us know the model and brand of wellplate.

Increased Weight option: Handle loads up to 3 lbs. (1.4 kg).

Custom Shaker Platform: Tell us what bio-robot gripper design you are using and we will reconfigure the shaker platform to accommodate that gripper.



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