

## benchtop shaker with orbital reciprocating motion optional

According to the different ways of oscillation, the benchtop oscillator is divided into three types: orbital gyratory, warping and reciprocating, which can meet a variety of experimental needs, and is widely used in biology, chemistry and other fields of sample processing.

### benchtop shaker

#### Main Features

1. Multiple oscillation modes: Choose from orbital gyratory, warping, or reciprocating to suit varied experimental needs.
2. LCD display: Backlit screen shows set and real-time parameters for easy monitoring and adjustment.
3. Power failure recovery: Automatically resumes operation after power loss, protecting ongoing experiments.
4. Parameter encryption lock: Secure operating parameters to prevent accidental changes and ensure data accuracy.
5. Parameter storage: Save multiple operating profiles for quick repeat use—streamlines workflow.
6. Timer function: Up to 500 hours, with automatic stop and sound/light alarm at end of run.



7. DC brushless motor: Long life, low noise, and high efficiency for stable, durable performance.
8. Smooth start: Controlled acceleration prevents sample shock at startup—improves safety.
9. Versatile fixtures: Multiple attachment options for various container types and sample fixation.

### Advantages

1. Strong stability: Precise control ensures steady operation, minimizing sample disturbance—ideal for high-frequency, long-term use.
2. High efficiency: Brushless motor and design deliver low-noise, uniform amplitude—boosts lab productivity.
3. User-friendly: LCD, timer, and alarms offer intuitive operation and real-time feedback—prevents loss from errors.
4. High reliability: Power failure recovery and encryption locking safeguard experimental data integrity.



## Working Principle

The benchtop oscillator uses an internal motor to drive containers in chosen vibration modes. Orbital gyratory for uniform liquid mixing, warping for strong up-down agitation (ideal for dye/decolorization), and reciprocating for precise back-and-forth motion (cell culture, hybridization). These modes ensure consistent sample processing for optimal results.

- **Orbital gyratory:** Circular mixing—uniform liquid handling.
- **Warp plate:** Swinging, strong vertical vibration—dyeing/decolorization.
- **Reciprocating:** Linear oscillation—for precise sample treatment.

## Application Fields

1. Electrophoresis gel processing: Fixation, staining, decolorization, developing in molecular biology/cytology.
2. Radioactive developing: Developing/fixing X-ray negatives for clear, even imaging.
3. Cell culture: Uniform shaking for optimal cell growth.
4. Molecular hybridization: Stable environment for repeatable, accurate results.
5. Antigen-antibody reactions: Efficient mixing for immunology.



6. Chemical experiments: Solution mixing, reaction solution treatment, uniform chemical sample processing.

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<b>Model</b>	<b>SH10</b>	<b>SH11</b>	<b>SH12</b>
Display screen	LCD		
Control method	PID		
Air circulation method	natural convection		
Oscillation mode	orbital	reciprocating	rocking
Environmental temperature	5°C to 35°C		
Shaking speed	30 to 300rpm		
Speed increments	1rpm		
Number of triangular flasks	16x50ml or 16x100ml or 9x250ml or 7x500ml		
Timer	0 to 500rpm		
Shaking orbit,tilt angle	30mm	20mm, 24mm, 30mm,	5degree, 8degree,

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<b>Model</b>	<b>SH10</b>	<b>SH11</b>	<b>SH12</b>
		40mm	10degree, 12degree
Permissible load weight	7.5kg		4kg
Platform dimensions	330x350mm		
Platform numbers	1		
External dimensions	400x350x235mm	400x350x160mm	400x350x185mm
Power supply	220Vac, 50/60Hz, 50W		
Weight	25kg	13kg	9.5kg
Other Functions	Auto Power On, Auto Power Off, Monitor Timer, Parameter Storage, Parameter Encryption, Call Recovery		