

# BENCHTOP CO<sub>2</sub> Resistant Shaker



ADJ. SHAKING  
DIAMETER



REMOTE (WIRED)  
CONTROLLED



CO<sub>2</sub>  
HIGH HUMIDITY  
& CO<sub>2</sub> RESISTANT



FLASK CAPACITY

## High-Precision Magnetic Drive Intelligent Control Flexible & Reliable



The **ZWY-304C Benchtop CO<sub>2</sub> Resistant Shaking Incubator** integrates advanced **magnetic drive technology** with a **FOC vector control system**, delivering exceptional stability, low energy consumption, and excellent durability under harsh environment conditions. Its compact footprint combined with powerful performance makes it an ideal solution for biological research, pharmaceutical development, and multi-scenario laboratory applications requiring reliable orbital shaking under demanding environments.

### Magnetic Direct Drive System

Equipped with a high-torque magnetic driver, the system operates at low power consumption (18W), with smooth motion, low noise, and minimal vibration. Extremely low heat emission poses no risk the stable temperature control inside the incubator.

Compared with traditional belt-driven mechanisms, the maintenance-free design significantly enhances long-term reliability and service life while eliminating belt wear and particulate contamination.



## Adjustable Shaking Orbit

**10-level orbit diameter adjustment (3–50 mm)** allows flexible configuration to accommodate different vessel sizes and experimental requirements, enabling both gentle mixing and vigorous shaking within a single platform. Maximum loading weight up to 7.5kg.



## Dual Intelligent Control Modes

- **Fixed-Value Mode:** Quickly set speed and time with intuitive operation.
- **Program Mode:** Supports multi-step programs (up to 9 segments), enabling complex experimental workflows while also covering routine culture applications.

## High-Precision Speed Regulation

Speed range **20–350 rpm**, accuracy up to **±1 rpm**. Excellent uniformity and repeatability are maintained at both low and high speeds, ensuring reliable experimental results.

## High-Durability Structural Design

Constructed with high-performance materials suitable for long-term operation in extreme environments 37°C, CO<sub>2</sub> 20%, up to 95%RH; such as **CO<sub>2</sub> incubators** and artificial **climate chambers**.



## Handheld Intelligent Controller

Independent handheld controller enables remote operation **without opening the incubator door**, minimizing environmental fluctuations. The intuitive interface provides real-time parameter visibility and simple, efficient operation.



## Safety & Intelligent Protection System

### Dual Protection: Stall & Overspeed Alarm

Automatic alarm and active breaking protection are triggered in case of abnormal load or speed deviation, safeguarding both equipment and samples.

### Power-Failure Memory & Auto-Recovery

Automatically resumes previous operating status after power restoration, preventing experimental interruption and improving workflow continuity.

### Parameter Lock & Anti-Misoperation

Critical parameters can be password-protected to prevent accidental modification, ideal for shared laboratory environments.

### Selectable Motor Rotation Direction

Supports forward and reverse rotation to accommodate various vessels and experimental needs.



## Technical Specifications

Model	
<b>Drive Mode</b>	Magnetic Drive
<b>Max. Load Capacity</b>	7.5 kg
<b>Orbit Diameter</b>	3 / 5 / 10 / 12.5 / 20 / <b>25 (Default)</b> / 30 / 35 / 40 / 50mm (10 adjustable levels)
<b>Speed Range</b>	20-350 rpm (no load)
<b>Speed Accuracy</b>	±1rpm
<b>Timer</b>	0–99 h 59 min
<b>Material of Shaker</b>	High Graded Stainless Steel
<b>Controller Dimensions (L×W×H)</b>	162 × 80 × 30 mm
<b>Controller Display</b>	LED
<b>Material of Shaking Tray</b>	Aluminium
<b>Shaking Tray Size (L×W)</b>	365 x 350mm
<b>Loading Capacity</b>	50ml × 30, 100ml × 16, 250ml × 16, 500ml × 9, 1000ml × 6, 2000ml × 4, 3000ml × 3, 5000ml × 1, Microplate × 6, Tube Rack × 3
<b>External Dimensions (L×W×H)</b>	365 × 355 × 93mm (with platform)
<b>Packaging Dimensions (L×W×H)</b>	530 × 450 × 250mm
<b>Net Weight</b>	15 kg
<b>Gross Weight</b>	23 kg
<b>Working Environment</b>	<b>Temperature:</b> 0 ~ 60°C <b>Humidity:</b> Up to 95% RH
<b>Power Consumption (Max.)</b>	18W
<b>Power Supply</b>	AC 100-240V, 50/60 Hz

## Ordering Information

Part No.	Description
<b>ZWY-304C</b>	Benchtop CO <sub>2</sub> Resistant Shaker 20-350rpm
<b>P6052</b>	Tray for ZWY-304C, 365×350mm, Predrilled
<b>P6053</b>	Tray for ZWY-304C, 365×250mm, Plain
<b>P7030</b>	Universal Spring Pallet for ZWY-304, 365×350mm
<b>P8010</b>	Tube Rack S/S
<b>P8011</b>	Tube Rack ABS Plastic
<b>P8017</b>	Sticky Mat, 20×20cm
<b>P8082</b>	Sticky Mat, 20×8cm
<b>P8021</b>	O Clamp, S/S, for 50ml Flask, with Spring Retainer
<b>P8022</b>	O Clamp, S/S, for 100ml Flask, with Spring Retainer
<b>P8023</b>	O Clamp, S/S, for 250ml Flask, with Spring Retainer
<b>P8024</b>	O Clamp, S/S, for 500ml Flask, with Spring Retainer
<b>P8025</b>	O Clamp, S/S, for 750ml Flask, with Spring Retainer
<b>P8026</b>	O Clamp, S/S, for 1000ml Flask, with Spring Retainer
<b>P8027</b>	O Clamp, S/S, for 2000ml Flask, with Spring Retainer
<b>P8028</b>	O Clamp, S/S, for 3000ml Flask, with Spring Retainer
<b>P8029</b>	O Clamp, S/S, for 5000ml Flask, with Spring Retainer
<b>P8032</b>	O Clamp, S/S, for 96 Well Plate



\* Incubator unit is sold separately

## ZWY-304C Benchtop CO<sub>2</sub> Resistant Shaker

### Precision Agitation for Controlled CO<sub>2</sub> Incubation Environments

Engineered specifically for reliable performance inside CO<sub>2</sub> incubators, the ZWY-304C Orbital Shaker delivers stable, contamination-free agitation under demanding cell culture conditions.



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