

# ADVANCED SOLUTIONS FOR SCIENTIFIC DISCOVERY Product Catalogue Version 6

LABWIT is a premium provider of scientific laboratory instruments, specialising in shaking incubators, orbital shakers, incubators, ovens, laminar flow cabinets, and a wide range of advanced laboratory equipment. With over 25 years of experience in research and development, we are committed to advancing scientific discovery through innovative instrumentation and uncompromising quality for both the life sciences and industrial sectors.

Driven by a relentless pursuit of excellence, we focus on meeting the evolving and diverse needs of our customers. It is this dedication to continuous innovation and customercentric solutions that distinguishes LABWIT in the global marketplace.

In this catalogue, we are proud to introduce our latest innovation: the Ultra-Compact Stackable Shaking Incubator. Designed with flexibility in mind, this groundbreaking model accommodates both traditional shaking incubation for flasks and tubes, and high-throughput microbial screening using 96-well plates. Equipped with our newly developed ø3mm Orbit shaking mechanism, this unit redefines cell culture capabilities by aligning with the growing demands for automation, precision, and reproducibility in laboratory workflows.

Researchers benefit from precise control over temperature, shaking speed, humidity,  $CO_2$  levels, and LED light exposure empowering them to conduct complex experiments with consistency and confidence.

All LABWIT products are developed, manufactured, and marketed in compliance with ISO 9001:2008 standards. Every process—from product design to after-sales support—is governed by rigorous, traceable quality assurance protocols. As a result, we maintain a quality-driven culture that is fully committed to customer satisfaction. Our electrical products conform to the latest international safety standards, including CE requirements.

LABWIT products are available worldwide through our extensive network of qualified distributors, who also provide expert technical support and product guidance. Our mission is to deliver high-performance laboratory equipment—for you, for every lab, and for better scientific results.

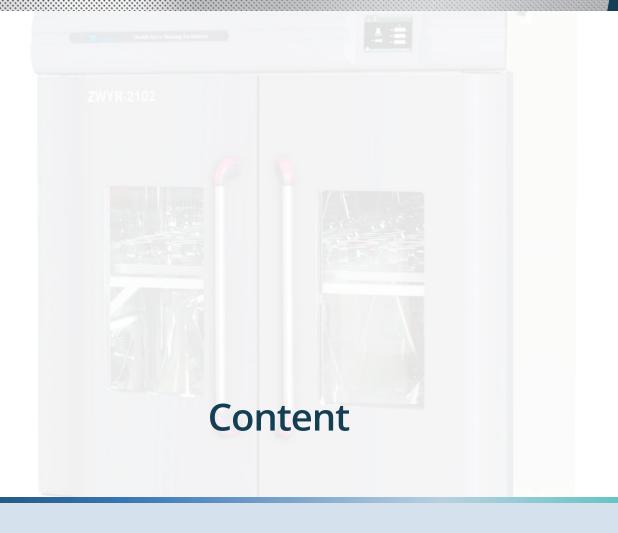












### SHAKING INCUBATORS 4

- SHAKERS AND ROCKERS 41
  - OVENS & INCUBATORS 46
- WATER BATHS & SHAKERS 68
- LAMINAR FLOW CLEAN BENCHES 74

PARTS & ACCESSORIES 81

# SHAKING

### INCUBATORS



LABWIT shaking incubator stands out as innovative, intuitive, and dependable equipment within its segment. Equipped with state-of-the-art microprocessor detection, setting, and PID control for precise temperature and shaking speed regulation, our shaking incubators set the standard for reliability. With additional LED photosynthetic lighting,  $CO_2$  and humidification control options, LABWIT provides comprehensive solutions for all laboratory shaking incubation requirements. Our units are classified into four ranges, ranging from benchtop and horizontal to double-layer and stackable models.

#### Accuracy

Characterised by their exceptional accuracy, LABWIT shaking incubators deliver precise and reliable results for researchers. Equipped with state-of-the-art microprocessor detection and PID control technology, our shaking incubators maintain precise temperature and shaking speed settings, minimising variability and ensuring reproducibility in experiments of cell culture, microbial screening, or other shaking incubation processes.

#### Uniformity

Utilising advanced engineering and precision control mechanisms, such as 3D forced air circulations, our shaking incubators provide exceptional uniformity throughout the incubation chamber, ensuring consistent conditions for all samples. This uniformity eliminates temperature and humidity gradients ensuring that each sample experiences the same conditions, minimising experimental variability and enhancing reproducibility.

#### Reliability

Renowned for their unmatched reliability, LABWIT shaking incubators are committed to offering researchers with consistent and dependable performance even being left on for a long time. Built with durable materials and comprehensive alarm systems, our shaking incubators are designed to withstand rigorous laboratory use without compromising functionality.





Thanks to the ongoing development of both technology and functionality requirements from our industry, LABWIT has been thriving to innovate and is now able to offer our latest and comprehensive solution for microbial, mammalian and plant cell incubation needs, the inspiring ZWYC-290A Ultimate-Cell Stackable Shaking Incubator.

The spaces in the labs are spacious and expensive, The ZWYC-290A can be stacked up to 2-3 units high to offer multiplied incubation capacity on a single unit footprint. Stacking also can be easily managed at a later time. Each compartment unit operates independently with cooling as standard, and can be upgraded with modular controlling options of LED photosynthetic lighting control, active humidity control and CO<sub>2</sub> concentration controls.

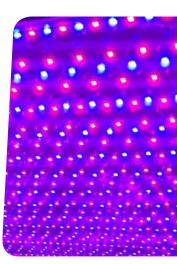
#### **Intuitive Touch Screen Panel**

**Integrated:** Comprehensive information available at fingertips. The screen panel clearly indicates all basic operational parameters, such as temperature, speed and timer; as well as the optional parameters, for example, humidity level, and  $CO_2$  concentration just in one page.

**User friendly:** Graphic user interface, easy to operate with icons and prompts, which makes it easy change the operating parameters settings, even those multi set points under programmable mode intuitively.

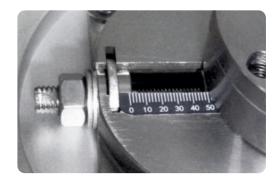
**Intelligent:** Self diagnostic alarm system monitors all functions and parameters and prompts in case of errors, which are clearly indicated in the touch screen panel.





#### **Multi Balanced Driving System**

Innovated multi balanced driving system ensures smooth and reliable orbital shaking movement with a speed between 30-300rpm, even when there is imbalanced or maximum loading on the shaking platform. To achieve the maximised flexibility for all applications requiring optimised oxygen transfer rate, the shaking diameter can be steplessly adjusted from 1-50mm. Long life brushless motor provides consistent and no vibration shaking motion, maintenance free and low heat emissions.



#### Direct Injection Humidification System

Humidity is important for long term cell cultivations with flasks as well as when micro plates are used. Active controlled humidification system can effectively reduce evaporation during cultivation, hence, preventing the samples from drying out.

The humidification system of Ultimate-Cell features 140°C steam direct injection into the chamber and active PID control with world class humidity sensor for utmost accuracy of measurement. Clear curtain prevents humidity losses during door opening.

#### **Extended Chamber Capacity**

The chamber is one of the biggest of its range and can take up to 32 pieces of 500ml Erlenmeyer flasks while the plain shaking tray (#P6023) and sticky mats are used.



Moreover, the traditional predrilled shaking tray (#P6022) with dedicated holes for fixing flask clamps is also available. With extended effective inner height as 425mm, the unit chamber is always compatible with 5000ml flasks even when the photosynthetic LED lighting is equipped.

The maximum capacity for various Erlenmeyer flask clamps is shown in the table below.

#### **Excellent Temperature Controlling System**



New solid polyurethane casing optimises the insulation of the chamber, together with the sound air circulation system and PID controller ensures evenly distributed air flow as well as accurate and uniformed temperature control across the chamber.

Sound cooling system with CFC free refrigerant and automatic defrosting system ensures long term stable operation at as low as 4°C or 15°C lower than ambient.

Microprocessor controller provides unmatched versatility by enabling users to create personalized program (with up to 10 segments with cycles) to automate changes to function parameters.

### Advanced CO<sub>2</sub> controlling with Infrared (IR) sensor

The effective controlling of  $CO_2$  concentration is essential for cultivations of mammalian cells and algae. The  $CO_2$  concentration is well maintained between 0-20% to keep the pH value of the solution media at healthy level.



LABWIT incorporates a world class single beam, dual wavelength IR  $CO_2$  sensor, which guarantees superior performance and accuracy to the situations where temperature and humidity fluctuate rapidly, such as when the door is opened frequently.

#### Photosynthetic LED Lighting

Ultimate-Cell can be equipped with LED lighting panel for the cultivation of those phototrophic organisms, such as plant culture, algae, etc. Light panels available in warm white and blue & red, with light intensity up to 300µmol/(m<sup>2</sup>\*s). Even light distributions over the shaking tray. Easy programmable for day and night simulations. With height of 10mm, the light panel minimises the impact on the usable internal height above the shaking tray.

Flask (ml)	P8021 50ml	P8022 100ml	P8023 250ml	P8024 500ml	P8026 1000ml	P8027 2000ml	P8028 3000ml	P8029 5000ml	P8012 96 Well Plate	P8010 Tube Rack
P6023 Tray	98	72	50	32	18	11	8	6	24	8
P6022 Tray	91	70	40	26	15	11	8	5	19	8

#### **Contamination Control**



#### **UV Sterilisation**

The UV sterilisation system is isolated from the samples, sterilises chamber air in the back chamber wall to maintain contamination-free conditions within the chamber.

#### **Easy Cleaning Chamber**

The chamber bottom is designed to catch and drain excess water and liquid spills in case of flask breaks through an outlet on the side.



	Machine
Outside (WxDxH)	1320 x 870 x 590mm (Side Cooling)*
Inside (WxDxH)	940 x 570 x 480mm
Volume	257L
Net/Gross Weight (with Cooling)	200kg
Control Panel	TFT Touch Screen
Illumination	2 x Halogen lights
Operation Menu in	English
Ambient Temperature	10-35°C
UV Light	≥400 mW/m <sup>2</sup>
Noise Level	<70 dB (1m above floor)
Power	1150W
Electricity	AC 220-240 Volt, 50/60Hz

	Temperature
Control Mode	Fixed Value & Program
Temperature Range	Ambient - 15°C to 60°C (Min.4°C) #
Temperature Accuracy	±0.1°C
Temperature Uniformity	±0.2°C @ 37°C
Principle of Sensor	PT100
Air Circulation	360m³/Hour
Recovery (@37°C)	10 mins (30 Seconds Door Opening)

	Humidity
Humidity Range	40-80%RH, at 25-55°C
Humidity Accuracy	1% RH
Humidity Uniformity	±3%RH
Principle of Sensor	Capacitive
System	Direct Steam Injection
Humidifier Power	400W
Recovery (@70%RH)	10 mins (30 Seconds Door Opening)

\* Or without side cooling compartment, 1080\*870\*590mm

# Min. Operating Temperature: 15°C when Photosynthetic Lighting option is applied.

#### Password Door Lock System

Password screen prevents unauthorised changes of operational parameters as well as access to the valuable samples during long terms cultivation, enhancing the safety and reliability of the applications.

#### **Data Logging**

The units are equipped with USB Port as standard, so that operators could save all the operational parameters to the portable USB drive. The controller can save over 7,000 records of operation data internally when USB drive is not connected.

Options: 35cm & 50cm base stand, black filmed window.

#### **Complete Protection For Cell Culture**

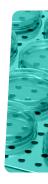
Designed with advanced features to ensure reliable performance and sample safety, giving you peace of mind.

- Automatic stop shaking motion, circulation fan and heating when the door is opened, minimising the impact on the chamber environment, as well as the safety of operators.
- Comprehensive alarms against door ajar, and sensor failures.
- Over-current and leakage protection.
- Non-volatile memory guarantees data integrity in the event of power interruption.
- Audible and visual alarm when parameter deviates from the set point.
- Independent temperature limit protection against over temperature.

	Shaking Unit
Drive Type	Multi Balanced Driving System
Tray Size	850 x 450mm
Maximum Load	25kg
Speed Range	30-300rpm
Speed Accuracy	±1rpm
Timer	0-9999 mins
Shaking Mode	Orbital
Shaking Diameter	Ø1-50mm Step-less Adjustment

	CO <sub>2</sub>
Principle of Sensor	Infrared, NDIR
CO <sub>2</sub> Range	0-20%
CO <sub>2</sub> Accuracy	±0.15 @ 5.0%
Temperature Range	25-55°C
CO <sub>2</sub> Recovery (@5%)	5 mins (30 Seconds Door Opening)

	Photosynthetic Lighting					
Part Number	P5011RB	P5011WW				
Light Type	LED, 50% Red, 50% Blue	LED, 100% Warm White				
Spectrum	Red: 640-660nm, Blue: 430-450nm	4000k:400-700nm				
Light Intensity	Up to 600µmol/(m²*s)	Up to 300µmol/(m <sup>2*</sup> s)				
Control	Yes, Individually, from 0-100% output	Yes, from 0-100% output				
Control Mode	Control Mode Fixed Value & Programmable					
Dimensions (WxDxH)	890 x 500 x 10mm					
Power	· 300W					



#### **Other Features**

- Internal chamber equipped with two halogen lighting ensure complete visibility, activated both automatically by door opening, and pressing a button/switch.
- Fully insulated chamber and door with double folded glass window optimise the energy efficiency.
- 2pcs of Ø50mm access ports.
- One piece of (P6022) predrilled shaking tray included as standard, clamps excluded.
- Base Options: 35cm cabinet base stand; 50cm Frame base stand.
- Sliding out shaking tray for easy loading of flasks and bottles.

#### **Order Information**

ZWYC-290A	ZWYC-290A, 257L x 1, Ultimate-Cell Stackable Shaking Incubator, 4°C - 60°C, 30-300rpm
P5011WW	LED Lighting Panel, for ZWYR-D2401/D2402/D2403, ZWYC-290A, Warm White
P5011RB	LED Lighting Panel, for ZWYR-D2401/D2402/D2403, ZWYC-290A, Red & Blue
P5012-35	Cabinet Base Stand for ZWYC-290A, H35cm
P5012-50	Frame Base Stand for ZWYC-290A, H50cm
P5013	Direct Steam Humidification Kit for ZWYC-290A
P5014	IR CO <sub>2</sub> Kit for ZWYC-290A
P5016	RS-485 Interface
P5029	Static Perforated Shelf for ZWYC-290A, H15cm
P6022	Tray for ZWYC-290A, Predrilled
P6023	Tray for ZWYC-290A, Plain
P7024	Universal Spring Pallet for ZWYC-290A
P8010	Tube Rack S/S
P8011	Tube Rack ABS Plastic
P8017	Sticky Mat, 20 x 20cm
P8021	O Clamp, S/S, for 50ml Flask, with Spring Retainer
P8022	O Clamp, S/S, for 100ml Flask, with Spring Retainer
P8023	O Clamp, S/S, for 250ml Flask, with Spring Retainer
P8024	O Clamp, S/S, for 500ml Flask, with Spring Retainer
P8025	O Clamp, S/S, for 750ml Flask, with Spring Retainer
P8026	O Clamp, S/S, for 1000ml Flask, with Spring Retainer
P8027	O Clamp, S/S, for 2000ml Flask, with Spring Retainer
P8028	O Clamp, S/S, for 3000ml Flask, with Spring Retainer
P8029	O Clamp, S/S, for 5000ml Flask, with Spring Retainer
P8032	Clamp for 96 Well Plate, S/S
	× C/C: Stainlass Staal

\* S/S: Stainless Steel



WYC-290A with P5012-35

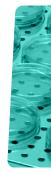
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### ULTRA COMPACT STACKABLE Shaking Incubator

The Ultra ZWYC-293G offers comprehensive solutions for shaking cultivations on small foot print, including active humidity and  $CO_2$  control technology, offering exceptional flexibility, allowing for traditional shaking incubations with flasks and tubes, as well as micro-volume high-throughput microbial screening with 96-well plates. Compact size for all-round applications, optimised controlling for reliability and procession, secured protections for precious samples, ZWYC-293G looks after all you care the most shaking incubations for microbial, mammalian, and plant cell cultures.



#### Features

### Intuitive Operation with Smart Controller

The new version features 7.0" large touch screen with resolution (800x480 Pixels) and brightness (250nit), making experiment programming and monitoring even more effortless.



Customize operational parameters and track real-time parameter, all at your fingertips, ensuring precise control over your samples' environment. PID microprocessor controller provide precise temperature control accuracy of 0.1°C. Programmable mode enables user to create personalized program to automate changes to multiple segments of different temperature and speeds set points.

#### Easy Cleaning Chamber and Contamination Control

The chamber is made of quality stainless steel with rounded corners, easy to clean and durable to use. ► The chamber bottom is designed to catch and drain excess water and liquid spills in case of any breakages through the outlet on the side.

► The UV lights sterilises the chamber with germicidal irradiation to maintain contamination-free conditions. Interlocked with door switch, the UV lights turns off automatically when door is opened to protect user's safety.



### Maximised Capacity with Minimised Footprint

Ideal for bench-top and under-bench, but still up to two ZWYC-293G can be stacked for maximised shaking capacity with minimized floor space. Each unit runs independently. There is no special tools or kits necessary for stacking operation. Compatible to stack with former Premium Compact ZWYR-293.

#### **Direct Beltless Driving System**

Direct belt-less driving system together with brushless DC motor provides quiet and vibration free shaking motion even when unit is operating at top speed with maximum workload.

#### **Flexible Shaking Diameter Options:**

**Ø1-50mm Stepless Adjustable (Standard):** Allowing to handle an extensive range of sample types and sizes, tailor the shaking conditions to your exact specifications, from small vials to large flasks or multi-well plates, from gentle swirling to vigorous agitation from 30-300rpm.

**Ø3mm for Microplates (Option):** Featuring optimal mixing of contents in microplates and deep well plates up to 1200rpm, achieving efficient oxygenation in each of the wells.

This model revolutionises cell culture technology by aligning with the trends of automation and high precision in handling and analytical work through high-throughput microbial screening.



Stepless Adjustable Shaking Diameter



Predrilled Tray

#### **Extended Chamber Capacity**

- ► The predrilled shaking tray is included as standard accessory, clamps are excluded.
- ► One piece of static shelf with adjustable positions (10-20cm from ceiling, 5 levels) included as standard, providing extra flexibility for static incubation.
- ▶ Plain shaking tray is also available as option for use together with stick mats (Max. 4 pcs).
- ▶ With internal height above the shaking tray of 415mm to the ceiling, the unit is compatible with 5L flasks even when the photosynthetic LED lighting panel is installed.

Capacity	<b>P8021</b> 50ml	<b>P8022</b> 100ml	<b>P8023</b> 250ml	<b>P8024</b> 500ml	<b>P8026</b> 1000ml	<b>P8027</b> 2000ml	<b>P8028</b> 3000ml	<b>P8029</b> 5000ml	<b>P8012</b> 96 Well Plate	<b>P8010</b> Tube Rack
Plain Tray	53	42	23	14	9	6	4	2	12	4
Predrilled Tray	48	33	23	14	9	6	4	2	12	4

#### **Photosynthetic LED Lighting**

► The photosynthetic LED lighting panel can be equipped for the cultivation of those phototrophic organisms, such as plant culture, algae, etc.

► Light panels with light intensity up to 400µmol/(m<sup>2</sup>\*s) guarantee even light distributions over the shaking tray.

- ► Available in Red & Blue, and Warm White.
- ► Easy programmable for day and night simulations.

► With height of 10mm, the light panel minimises the impact on the useable internal height above the shaking tray.



Photosynthetic Lighting (Option)

#### Advanced CO<sub>2</sub> controlling with Infrared (IR) sensor (Option)

For cultivations of mammalian cells and algae, well maintained CO<sub>2</sub> concentration is crucial to keep the pH value of the solution media at healthy level.

LABWIT incorporates a word class single beam, dual wavelength IR  $CO_2$  sensor, which guarantees superior performance and accuracy under all situations.



#### **Data Logging**

The units are equipped with USB Port as standard, so that operators could save all the operational parameters to the portable USB drive. The controller can save over 7,000 records of operation data internally when USB drive is not connected.



Option: RS-485 interface, Built-in printer, TCP/IP interface.



#### **Complete Protection For Cell Culture**

This model has been designed to include many features for the comprehensive of the application and the sample safety, hence providing you with added peace of mind.



- Password protection before entering the "SET" page, and preventing unauthorised changes of critical settings.
- ► Key lock prevents unauthorised access to the valuable samples during cultivations.
- Automatic stop shaking motion, circulation fan and Heating when the door is opened, minimising the impact on the chamber environment, as well as the safety of operators.
- Comprehensive alarms against door ajar, and sensor failures.
- ► Over-current and leakage protection.
- ► Non-volatile memory guarantees data integrity in the event of power interruption.
- Audible and visual alarm when parameter deviates from the set point.

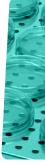
### Direct Injection Humidification System (Option)

Humidity is important for long term cell cultivations with flasks as well as where micro plates are used. Active controlled humidification system can effectively reduce evaporations during cultivation, hence, preventing the samples from drying out.



#### The humidification system of Ultra Compact features 140°C steam direct injection into the chamber and active PID control with world class humidity sensor for utmost accuracy of measurement.





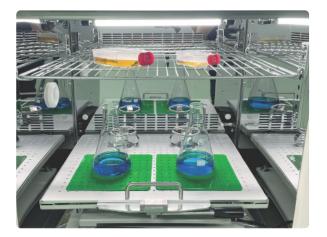
#### **Other Features**

- Internal chamber equipped with lighting ensure complete visibility.
- ► Fully insulated chamber and door with double folded glass window optimize the energy efficiency.
- ▶ H15cm base stand.
- ▶ Ø50mm access port



Options:

- H35cm cabinet base stand (Single unit & Double Stack);
- H50cm frame base stand (Single unit only)
- Black filmed window



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	Machine
Outside (WxDxH)	840 x 764 x 625mm
Inside (WxDxH)	570 x 505 x 418mm
Volume	120L
Net / Gross Weight	120kg/165kg
Control Panel	7" (800 x 480) TFT Touch Screen
Illumination	LED
Language	English
Ambient Temperature	5°C to 35°C
UV Light	254nm, 8W x 2 Pcs
Noise Level	<55 dB (1m above floor)
Power	765W
Electricity	AC 220-240 Volt, 50/60Hz
Data logging	USB port
Static Shelf	Standard, 1 piece
	Standard: H 15cm
Base Stand	Options: H 35cm or H 50cm
Key Lock	Yes, standard
	Shaking Unit
Drive Type	Direct Beltless Driving System
Tray Size (WxD)	500 x 400mm
Maximum Load	15kg
Speed Range	30-300 rpm
Speed Accuracy	±1rpm
Timer	0 - 9999 mins
Shaking Mode	Orbital
Shaking Diameter	Ø1-50mm Stepless Adjustment
	Temperature
Control Mode	Fixed Value & Program
Control Mode Temperature Range	Fixed Value & Program Ambient - 20 to 60°C (Min. 4°C)#
Temperature Range	-
Temperature Range Temperature Accuracy	Ambient - 20 to 60°C (Min. 4°C)#
Temperature Range Temperature Accuracy Temperature Uniformity	Ambient - 20 to 60°C (Min. 4°C)# ±0.1°C
Temperature Range Temperature Accuracy	Ambient - 20 to 60°C (Min. 4°C)# ±0.1°C ±0.3 @ 37°C
Temperature Range Temperature Accuracy Temperature Uniformity Principle of Sensor	Ambient - 20 to 60°C (Min. 4°C)# ±0.1°C ±0.3 @ 37°C PT100

	U
	Ø3mm Shaking Diameter (Option)
Part Number	P5052
Shaking Speed	100-1200rpm
Shaking Tray	96 Well Plate Tray (P6050)
Tray Size (WxD)	530 x 435mm
Max. Capacity	96 Deep Well Plate: 2x16 pcs



ZWYC-293G Stacked

Drive Type	Direct Beltless Driving System
Tray Size (WxD)	500 x 400mm
Maximum Load	15kg
Speed Range	30-300 rpm
Speed Accuracy	±1rpm
Timer	0 - 9999 mins
Shaking Mode	Orbital
Shaking Diameter	Ø1-50mm Stepless Adjustment

Specifications

	Humidity (Option)
Part Number	P5053
Humidity Range	40-80%RH, at 25-55°C
Humidity Accuracy	1%RH
Humidity Uniformity	±3%RH
Principle of Sensor	Capacitive
System	Direct Steam Injection

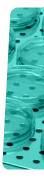
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Part Number	P5054
Principle of Sensor	Infrared, NDIR
CO <sub>2</sub> Range	0-20%
CO <sub>2</sub> Accuracy	±0.15@5.0%
Temperature Range	25-55°C
CO <sub>2</sub> Recovery (@5%)	5 mins (30 Seconds Door Opening)

#### Photosynthetic Lighting (Option)

Part Number	P5031RB	P5031WW					
Light Type	LED, 50% Red, 50% Blue	LED, 100% Warm White					
Spectrum	Red: 640-660nm, Blue: 430-450nm	4000k: 400-700nm					
Light Intensity	Up to 350µmol/(m²*s)	Up to 400µmol/(m <sup>2*</sup> s)					
Control	Yes, Individually, from 0-100% output	Yes, from 0-100% output					
Power	120W						
Control Mode	Fixed Value & Programmable						
Dimensions (WxDxH)	550 x 430 x 10mm						

# Min. 15°C when Photosynthetic Lighting option is applied. With P5020, temperature range upgrade to 4°C-80°C, no UV light.



#### **Order Information**

ZWYC-293G	ZWYC-293G, 120L, Ultra Compact Shaking Incubator, 4°C - 60°C
P4003	Built-in Printer
P5053	Direct Steam Humidification Kit for ZWYC-293G
P5054	IR CO <sub>2</sub> Kit for ZWYC-293G
P5016	RS-485 Interface
P5020	Temperature Upgrade, 80°C, for ZWYR-D2401; ZWYC/R-293
P5031RB	LED Lighting Panel and Control Kit, Red & Blue for ZWYC/R-293
P5031WW	LED Lighting Panel and Control Kit, Warm White for ZWYC/R-293
P5032-35	Cabinet Base Stand for ZWYR-293, ZWYC-293G, 840x710x350mm
P5032-50	Frame Base Stand for ZWYR-293, ZWYC-293G, 840x710x500mm
P5033	TCP/IP interface
P5052	Ø3mm Shaking Diameter for ZWYC-293G, 150-1200rpm, with P6050 x 1
P6040	Tray for ZWYC/R-293, 500x400mm, Predrilled
P6041	Tray for ZWYC/R-293, 500x400mm, Plain
P6050	96 Well Plate Tray for ZWYC-293G, 530x435mm
P7029	Universal Spring Pallet for: ZWYR-293, ZWYC-293G, 500x400mm
P8010	Tube Rack S/S
P8011	Tube Rack ABS Plastic
P8032	O Clamp for 96 Well Plate, S/S
P8017	Sticky Mat, 20 x 20cm
P8022	O Clamp, S/S, for 100ml Flask, with Spring Retainer
P8022	O Clamp, S/S, for 100ml Flask, with Spring Retainer
P8023	O Clamp, S/S, for 250ml Flask, with Spring Retainer
P8024	O Clamp, S/S, for 500ml Flask, with Spring Retainer
P8025	O Clamp, S/S, for 750ml Flask, with Spring Retainer
P8026	O Clamp, S/S, for 1000ml Flask, with Spring Retainer
P8027	O Clamp, S/S, for 2000ml Flask, with Spring Retainer
P8028	O Clamp, S/S, for 3000ml Flask, with Spring Retainer
P8029	O Clamp, S/S, for 5000ml Flask, with Spring Retainer







Following the success of the economic shaking incubator range, the upgraded premium shaking incubator range are introduced to offer the excellent basic functions same as the economic range, but with a bunch of advanced upgraded features to enhance the user experience as well as the functionality of this one of the most common type of equipment in modern labs.

- An intuitive LCD TFT touch screen panel achieves easy operation and clear display.
- ▶ Sophisticated cooling system ensures long term non-frost operation at low temperature (4°C).
- ► Under the new programmable control mode, the unit can now be programmed to operate according to personalized "ramp and soak" cycles of both temperature and shaking speed.
- > Built-in printer is included as standard to ensure continuous monitor over the operating parameters.
- UV light is equipped as standard (Except bench-top models), providing proactive contamination controls when needed.





# PREMIUM STACKABLE Shaking Incubators

ZWYR-D2401 with P5010-35 ZWYR-D2402 with



This ZWYR-D Series shaking incubators can be stacked up to three units high, providing laboratory professionals tripled culture capacity, while still only occupying the same "footprint" of a single shaker. All models feature an insulated, fold-down door with double-layer glass window for high visibility. On all refrigerating models, microprocessor controller provides unmatched versatility by enable users to create personalized program (with up to 9 segments, with cycling) to automate changes to function parameters.

► Stackable up to three units for maximum space savings.

► 7" (800 x 480) TFT touch screen panel clearly indicates all parameters in one page display and enables all complicated program settings intuitively just with finger tips.

► Password protection before entering the "SET" page, and preventing unauthorised changes of critical settings.

► Wide-view fold-down door with door handle, and ergonomic sliding-out shaking platform provide convenient access to your experiment products. Fold-up door option (#P5017) available for ZWYR-D2403 for easy loading on the top unit.

► Direct belt-less driving system is both durable and economical, maintenance free, allows extended speed ranges from 30 to 300rpm, ±1 rpm with minimized vibration, even when shakers are stacked of three high. The shaking diameter can be changed from Ø1-50mm for optimum oxygenation and nutrient mixing and agitation in from small to large flasks.

► The top of the casing can be further used as a work area for locating small items of lab equipment etc.

► The incubator casing is made of heavy-gauge cold-rolled steel; together with high graded #304 stainless steel inner chambers with coved corners make it easy to clean with mild detergent.Chamber is tall enough to hold 2L Erlenmeyer flasks.

► The ceiling of the unit can be upgraded and fitted with LED lighting kit for cultivation of phototrophic organisms. Mono/dual light colours are possible and the intensity of each colour can be independently controlled and programmed to simulate day/night cycles, perfect for plant cell culture.

► Robust brushless DC motor enables shaking motion quiet and smooth, even when unit is operating at top speed with maximum workload.

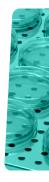
► Non-volatile memory saves settings during a power outage and automatically restarts the unit after power is restored.

► For data recording, the units are equipped with a built-in thermo printer as standard, so that operators could check how the performance parameters vary according to specified process without having to be on site.

- ► Predrilled platform as standard configuration, flask clamps excluded. Plain tray available for use with sticky mats (max. 8 pcs per ZYWR-D2401 unit).
- ► For a comfortable working height, the base stands are available in 35cm cabinet base stand (#P5010-35); 50cm Frame base stand (#P5010-50).

► UV light reduces the air burden, keeping the chamber contamination free.

Model	ZWYR-D2401	ZWYR-D2402	ZWYR-D2403			
Control	P.I.D Microprocessor					
Control Mode	Fix Value or Program					
Control Panel	LCD Touch Screen					
Air Convection	Forced					
Shaking Mode	Orbit					
Volume/ Compartment (L)	190					
Ambient Temperature	10°C - 35°C					
Shaking Speed (rpm)	30-300					
Stroke (mm)	Ø1-50 Step-less Adjustable					
Temperature Range	Ambient - 20°C to 60°C (Min.4'	°C)#				
Temperature Accuracy	±0.1°C	±0.1°C				
Temperature Uniformity	±1°C @ 37°C					
Timer	0 to 9999 mins					
Tray (mm) (WxD)	810x430					
Tray Included	1	2	3			
Inner Dimensions (mm) (WxDxH)	920x532x395					
Exterior Dimensions (mm) (WxDxH)	1300x930x735	1300x930x1315	1300x930x1895			
Packing Dimensions (mm) (WxDxH)	1390x1000x920	1390x1000x1490	1390x1000x2100			
Net/Gross Weight (kg)	250/290	450/540	650/750			
Power (W)	1200	2400 (1200*2)	3600 (1200*3)			
Electricity	220-240V 50/60 Hz					
Approval	CE, ISO					
Security	Over-temperature Protection, Compressor Overload Protection, Electrical Leakage Protection					
Additional	Built in Printer, RS485 Interface	(Option), LED Lighting Control Kit	(Option), Base Stand (Option)			
	# Min. Operating Temperature: 15°C when Photosynthetic Lighting option is applied.					



# Min. Operating Temperature: 15°C when Photosynthetic Lighting option is applied.

Capacity	<b>P8021</b> 50ml	<b>P8022</b> 100ml	<b>P8023</b> 250ml	<b>P8024</b> 500ml	<b>P8025</b> 750ml	<b>P8026</b> 1000ml	<b>P8027</b> 2000ml	<b>P8010</b> Tube Rack S/S	<b>P8012</b> 96 Well Plate
ZWYR-D2401	91	67	38	26	15	15	11	8	19
ZWYR-D2402	182	134	76	52	30	30	22	16	38
ZWYR-D2403	273	201	114	78	45	45	33	24	57

	Photosynthetic Lighting		
Part Number	P5011RB	P5011WW	
Light Type	LED, 50% Red, 50% Blue	LED, 100% Warm White	
Spectrums	Red: 640-660nm, Blue: 430-450nm	4000K:400-700nm	
Light Intensity	Up to 600µmol/(m²*s)	Up to 300µmol/(m <sup>2*</sup> s)	
Control	Yes, Individually, from 0-100% output	Yes, from 0-100% output	
Control Mode	Fixed Value & Programmable		
Dimensions	890x500x10mm		
Power	300W		
	# Min Operating Temperature: 1E9C when	Destocypthatic Lighting option is applied	

# Min. Operating Temperature: 15°C when Photosynthetic Lighting option is applied.

#### **Order Information**

	order mornadon
ZWYR-D2401	ZWYR-D2401, 190L x 1, Premium Stackable Shaking Incubator, Single, 4°C - 60°C, 30-300rpm
ZWYR-D2402	ZWYR-D2402, 190L x 2, Premium Stackable Shaking Incubator, Double, 4°C - 60°C, 30-300rpm
ZWYR-D2403	ZWYR-D2403, 190L x 3, Premium Stackable Shaking Incubator, Triple, 4°C - 60°C, 30-300rpm
P5010-35	Cabinet Base Stand for ZWYR-D2401/D2402, H35cm
P5010-50	Frame Base Stand for ZWYR-D2401, H50cm
P5011WW	LED Lighting Panel, for ZWYR-D2401/D2402/D2403, ZWYC-290A, Warm White
P5011RB	LED Lighting Panel, for ZWYR-D2401/D2402/D2403, ZWYC-290A, Red & Blue
P5016	RS-485 Interface
P5017	Upward Door Opening for ZWYR-D2401/D2402/D2403
P6024	Predrilled Tray for ZWYR-D2401/2402/2403
P6025	Tray for ZWYR-D2401/2402/2403, Plain
P7004	Universal Spring Pallet for ZWYR-D2401
P8010	Tube Rack S/S
P8011	Tube Rack ABS Plastic
P8017	Sticky Mat, 20 x 20cm
P8021	O Clamp, S/S, for 50ml Flask, with Spring Retainer
P8022	O Clamp, S/S, for 100ml Flask, with Spring Retainer
P8023	O Clamp, S/S, for 250ml Flask, with Spring Retainer
P8024	O Clamp, S/S, for 500ml Flask, with Spring Retainer
P8025	O Clamp, S/S, for 750ml Flask, with Spring Retainer
P8026	O Clamp, S/S, for 1000ml Flask, with Spring Retainer
P8027	O Clamp, S/S, for 2000ml Flask, with Spring Retainer
P8032	Clamp for 96 Well Plate, S/S
	x 2/2، 9 المعام 19 مع

**∗** S/S: Stainless Steel





ZWYR-D2401 with P5010-35



ZWYR-D2402

ZWYR-D2401 with P5010-50







### PREMIUM COMPACT STACKABLE Shaking Incubators

The new ZWYR-293 represents a significant advancement in research technology, offering a range of new upgrades designed to streamline your experiments and elevate your scientific discoveries. With this cutting-edge instrument, we are confident that you will achieve unparalleled precision, efficiency, and reproducibility in your research endeavours.

### Maximised Capacity with Minimized Footprint

Ideal for benchtop and under-bench, but still up to two ZWYR-293 can be stacked for maximised shaking capacity with minimized floor space. Each unit runs independently. There is no special tools or kits necessary for stacking operation.

#### Intuitive Operation with Smart Controller

7.0" large touch screen with higher resolution (800x480 Pixel) and brightness (250nit), making experiment programming and monitoring even more effortless.

Customize operational parameters and track real-time parameter, all at your fingertips, ensuring precise control over your samples' environment.

#### **Direct Beltless Driving System**

Direct beltless driving system together with brushless DC motor provides quiet and vibration free shaking motion, allows extended speed ranges from 30 to 300rpm,  $\pm$ 1rpm, even when unit is operating at top speed with maximum workload.



#### **Stepless Adjustable Shaking Diameter**

The shaking diameter can be changed from Ø1-50mm, allowing to handle an even more extensive range of sample types and sizes, tailor the shaking conditions to your exact specifications, from small vials to large flasks or multi-well plates, from gentle swirling to vigorous agitation.

#### **Extended Chamber Capacity**

- ► The predrilled shaking tray (500x400mm) is included as standard accessory, taking up to 9 pcs of 1L Erlenmeyer flasks.
- ► One piece of static shelf with adjustable positions (10-20cm from ceiling, 5 levels) included as standard, providing extra flexibility for static incubation
- ▶ Plain shaking tray is also available as option for use together with stick mats (Max. 4pcs).
- ► With internal height above the shaking tray of 415mm to the ceiling, the unit is compatible with 5L flasks even when the photosynthetic LED lighting panel is installed.

	<b>P8021</b> 50ml	<b>P8022</b> 100ml	<b>P8023</b> 250ml	<b>P8024</b> 500ml	<b>P8026</b> 1000ml	<b>P8027</b> 2000ml	<b>P8028</b> 3000ml	<b>P8029</b> 5000ml	<b>P8012</b> 96 Well Plate	<b>P8010</b> Tube Rack
Plain Tray	53	42	23	14	9	6	4	2	12	4
Predrilled Tray	33	33	23	14	9	6	4	2	12	4

#### Easy Cleaning Chamber and Contamination Control

► The chamber is made of quality stainless steel, easy to clean and durable to use.

► The chamber bottom is designed to catch and drain excess water and liquid spills in case of any breakages through the outlet on the side.

► The UV sterilisation system is isolated from the samples, sterilises chamber air in the back chamber wall to maintain contamination-free conditions within the chamber even when chamber is loaded.

#### Photosynthetic LED Lighting

The photosynthetic LED lighting panel can be equipped for the cultivation of those phototrophic organisms, such as plant culture, algae, etc. Light panels available in warm white and blue & red, with light intensity up to 400µmol/ (m<sup>2</sup>\*s). Even light distributions over the shaking tray. Easy programmable for day and night simulations. With height of 10mm, the light panel minimises the impact on the useable internal height above the shaking tray.

#### **Complete Protection For Cell Culture**

This model has been designed to include many features for the comprehensive of the application and the sample safety, hence providing you with added peace of mind.

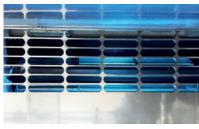
► Password protection before entering the "SET" page, and preventing unauthorized changes of critical settings.

- ► Key lock prevents unauthorized access to the valuable samples during cultivations.
- ► Automatic stop shaking motion, heating and cooling control when the door is opened.
- Sensor failure, door ajar alarm.
- ► Over-current and leakage protection.
- ► Non-volatile memory guarantees data integrity in the event of power interruption.

► Audible and visual alarm when parameter deviates from the set point.

#### **Data Logging**

The units are equipped with USB Port as standard, so that operators could save all the operational parameters to a portable USB drive. The controller can save up to 5 days of data internally when USB drive is not connected. Option: RS-485 interface, Built-in printer, TCP/IP interface.



UV Light



Photosynthetic Lighting (Option)

#### **Other Features**

- ► Internal chamber equipped with lighting ensure complete visibility.
- ► Fully insulated chamber and door with double folded glass window optimise the energy efficiency.
- ▶ Ø50mm access port
- ► One piece of predrilled shaking tray included as standard; clamps excluded.

#### Options:

H35cm cabinet base stand (Single unit & Double Stack) H50cm frame base stand (Single unit only)



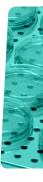
	Specifications		
	Machine		Shaking Unit
Outside (WxDxH)	840 x 764 x 625mm	Drive Type	Direct Beltless Driving System
Inside (WxDxH)	570 x 505 x 418mm	Tray Size (WxD)	500 x 400mm
Volume	120L	Maximum Load	15kg
Net / Gross Weight	120kg/165kg	Speed Range	30 - 300rpm
Control Panel	7" (800 x 480) TFT Touch Screen	Speed Accuracy	±1rpm
Illumination	LED	Timer	0 - 9999 mins
Language	English	Shaking Mode	Orbital
Ambient Temperature	5°C to 35°C	Shaking Diameter	Ø1-50mm Stepless Adjustment
UV Light	254nm, 11W		·
Noise Level	<55 dB (1m above floor)		
Power	765W		
Electricity	AC 220-240 Volt, 50/60Hz		Temperature
Data logging	USB port	Control Mode	Fixed Value & Program
Static Shelf	Standard, 1 piece	Temperature Range	Ambient - 20°C to 60°C
			(Min. 4°C)#
Base Stand	Standard: H 15cm	Temperature Accuracy	±0.1°C
	Options: H 35cm or H 50cm	Temperature Uniformity	±0.5°C@37°C
Key Lock	Yes, standard	Principle of Sensor	PT100
		Air Circulation	360m³/Hour

Recovery (@37°C)

8 mins (30 Seconds Door Opening)

	Photosynthetic Lighting (Option)				
Part Number	P5031RB	P5031WW			
Light Type	LED, 50% Red, 50% Blue	LED, 100% Warm White			
Spectrum	Red: 640-660nm, Blue: 430-450nm	4000k: 400-700nm			
Light Intensity	Up to 350µmol/(m²*s)	Up to 400µmol/(m²*s)			
Control	Yes, Individually, from 0-100% output	Yes, from 0-100% output			
Power	120W				
Control Mode	Fixed Value & Programmable				
Dimensions (WxDxH)	550 x 430 x 10mm				
	# Min. 15°C when Photosynthetic Lighting option is applied.				

# MIN. 15°C when Photosynthetic Lighting option is applied. With P5020, temperature range upgrade to 4-80°C, no UV light



	Order Information
ZWYR-293	120L, Premium Compact Shaking Incubator, 4°C - 60°C, 30-300rpm
P5020	Temperature Upgrade, 80°C, for ZWYR-D2401; ZWYR-293
P5031RB	LED Lighting Panel and Control Kit, Red & Blue for ZWYR-293
P5031WW	LED Lighting Panel and Control Kit, Warm White for ZWYR-293
P5032-35	Cabinet Base Stand for ZWYR-293, 840x710x350mm
P5032-50	Frame Base Stand for ZWYR-293, 840x710x500mm
P6040	Tray for ZWYR-293, 500x400mm, Predrilled
P6041	Tray for ZWYR-293, 500x400mm, Plain
P7029	Universal Spring Pallet for ZWYR-293, 500x400mm
P8010	Tube Rack S/S
P8011	Tube Rack ABS Plastic
P8032	O Clamp for 96 Well Plate, S/S
P8017	Sticky Mat, 20 x 20cm
P8021	O Clamp, S/S, for 50ml Flask, with Spring Retainer
P8022	O Clamp, S/S, for 100ml Flask, with Spring Retainer
P8023	O Clamp, S/S, for 250ml Flask, with Spring Retainer
P8024	O Clamp, S/S, for 500ml Flask, with Spring Retainer
P8025	O Clamp, S/S, for 750ml Flask, with Spring Retainer
P8026	O Clamp, S/S, for 1000ml Flask, with Spring Retainer
P8027	O Clamp, S/S, for 2000ml Flask, with Spring Retainer
P8028	O Clamp, S/S, for 3000ml Flask, with Spring Retainer
P8029	O Clamp, S/S, for 5000ml Flask, with Spring Retainer
P4003	Built-in Printer
P5016	RS-485 Interface
P5033	TCP/IP interface







### PREMIUM BENCHTOP Shaking Incubators



This new premium benchtop shaking incubators provided by LABWIT offer conditions of time, broad temperature and orbital or reciprocal agitation capabilities for meeting comprehensive requirement of the growth of biological organisms. The P.I.D microprocessor controlled shakers have a number of advanced features that are unique in bench top models. This unique benchtop model with shaking diameter step-less adjustable from Ø1-50mm provides unmatched flexibility for meeting comprehensive application requirements. The sophisticated PID controller provides these units with choices of not only constant controlling one fixed temperature and speed, but also programmed controlling with a series of "ramps and soaks" segments on time basis. For data recording, the units are equipped with a built-in thermo printer as standard, so that operators could check how the performance parameters vary according to specified process without having to be on site.

► 4.3" LCD 480x272 touch screen panel clearly indicates all parameters in one page display and makes it easy to change the operating parameters settings, even those multi set points under programmable mode intuitively.

- ▶ P.I.D microprocessor controller provides unmatched versatility by enable users to create personalized program (with up to 9 segments, with cycling) to automate changes to function parameters.
- ► Inner chamber and tray from high graded #304 electro-polished stainless steel.

► Robust single eccentric counterbalanced drive in cast iron housing provides vibration and trouble free operation with high shaking speed up to 600rpm.

► The versatility of the driving system allows stroke continuous adjustment from 1 to 50 mm for optimum oxygenation, nutrient mixing and agitation in from small to large flasks.

▶ Timer up to 9999 mins under fixed value control mode.

- ► Quality brushless AC inductive motor supports reliable, quiet and smooth shaking movements up to top speed.
- ► Auto-defrosting system, ensuring long-terms non-frosting operation with low temperature set-points.

► Non-volatile memory saves settings during a power outage and automatically restarts the unit after power is restored.

- ► Audible and visual alarms on over temperature and motor overheating, and automatically cut off the power.
- ► Soft start and smooth acceleration when lid is closed after short opens.

► For data recording, the units are equipped with a built-in thermo printer as standard, so that operators could check how the performance parameters vary according to specified process without having to be on site.

Predrilled standard tray included, without clamps.

Model	ZWYR-200D	ZWYR-240	ZWFR-200					
Control	P.I.D Microprocessor	P.I.D Microprocessor						
Control Mode	Fix Value or Program	Fix Value or Program (up to 9 Segments)						
Control Panel	4.3" LCD Touch Screet	1.3" LCD Touch Screen						
Volume (L)	69	j9						
Shaking Speed (rpm)	30-600	30-600 30-400 30-240						
Stroke (mm)	1-50 Step-less Adjust	nent						
Shaking Mode	Orbital	Drbital Reciprocal						
Tray (mm) (WxD)	400x370	400x370 435x420						
Ambient Temperature	5°C - 25°C							
Temperature Range	Ambient - 20°C to 60	°C (Min.4°C)						
Temperature Accuracy	±0.1°C	±0.1°C						
Temperature Uniformity	±0.5 @ 37°C							
Timer	0 to 9999 mins							
Inner Dimensions (mm) (WxDxH)	490x470x320	490x470x335	490x470x320					
Exterior Dimensions (mm) (WxDxH)	774x740x610							
Packing Dimensions (mm) (WxDxH)	860x850x760	860x850x760						
Net/Gross Weight (kg)	100/132							
Power (W)	700							
Electricity	220-240V 50/60 Hz							
Approval	CE, ISO							
Security	Over-temperature Pro	tection, Compressor Overload P	Protection, Electrical Leakage Protection					
Additional	Built-in Printer, RS48	5 COM Kit (Option)						

Capacity	<b>P8001</b> 50ml	<b>P8002</b> 100ml	<b>P8003</b> 250ml	<b>P8004</b> 500ml	<b>P8005</b> 750ml	<b>P8006</b> 1000ml	<b>P8007</b> 2000ml	<b>P8010</b> Tube Rack S/S	<b>P8012</b> 96 Well Plate
ZWYR-200D	30	23	12	9	7	7	4	3	8
ZWYR-240	30	23	12	9	7	7	4	3	8
ZWFR-200	47	28	15	11	9	9	4	3	8

	Order Information
ZWYR-200D	ZWYR-200D, 69L, Premium Orbital Shaking Incubator 4°C-60°C, 30-600rpm
ZWYR-240	ZWYR-240, 69L, Premium Orbital Shaking Incubator 4°C-60°C, 30-400rpm
ZWFR-200	ZWFR-200, 69L, Premium Reciprocal Shaking Incubator 4°C-60°C, 30-240rpm

P5016	RS-485 Interface	P8013	T Clamp, S/S, for 150ml Flask, with Spring Retainer
P5030	Fluorescent Light for ZWYR-240/200D, ZWY-240/200D	P8003	T Clamp, S/S, for 250ml Flask, with Spring Retainer
P5047	Stationary Shelf for ZWYR-240 (Max loading weight: 2kg)	P8014	T Clamp, S/S, for 300ml Flask, with Spring Retainer
P6034	Plain Tray for ZWY-240/200D; ZWYR-240/200D	P8004	T Clamp, S/S, for 500ml Flask, with Spring Retainer
P6004	Predrilled Tray for ZWYR-240/200D, ZWY-240/200D, S/S 🛪	P8005	T Clamp, S/S, for 750ml Flask, with Spring Retainer
P6005	Predrilled Tray for ZWFR-200, ZWF-200, S/S	P8006	T Clamp, S/S, for 1000ml Flask, with Spring Retainer
P7003	Universal Spring Pallet for ZWYR-240/200D, ZWY-240/200D	P8007	T Clamp, S/S, for 2000ml Flask, with Spring Retainer
P7005	Universal Spring Pallet for ZWFR-200, ZWF-200	P8010	Tube Rack S/S
P8001	T Clamp, S/S, for 50ml Flask, with Spring Retainer	P8011	Tube Rack ABS Plastic
P8002	T Clamp, S/S, for 100ml Flask, with Spring Retainer	P8012	Clamp for 96 Well Plate, S/S
P8003	T Clamp, S/S, for 100ml Flask, with Spring Retainer	P8017	Sticky Mat, 20 x 20cm
	·		C/C: Ctaiplace Ctaal

**★** S/S: Stainless Steel



These new premium horizontal floor shaking incubators are developed for the modern biological engineering departments; large capacity of smaller size flasks, or for large volume flasks up to of 5L. The units are widely used in

applications of germ culture, fermentation, hybridisation, biochemical research, enzyme and cellular tissues.

### PREMIUM HORIZONTAL Shaking Incubators



► 4.3" LCD 480x272 touch screen panel clearly indicates all parameters in one page display and makes it easy to change the operating parameters settings, even those multi set points under programmable mode intuitively.

▶ P.I.D microprocessor controller provides unmatched versatility by enable users to create personalized program (with up to 9 segments, with cycling) to automate changes to function parameters.

► Large double fold tempered glass window and fluorescent light provide complete visibility of chamber interior.

► ZWYR-211D is equipped with foot pedal for lid opening even when carrying full loads in both hands.

► Inner chamber with coved corners of high graded #304 electro-polished stainless steel features excellent durability as well as ease of cleaning.

► Robust triple eccentric counterbalanced drive in cast iron housing provides vibration and trouble free operation with high shaking speed up to 300rpm.

▶ Timer up to 9999 mins under fixed value control mode.

► Quality brushless AC inductive motor supports reliable, quiet and smooth shaking movements up to top speed.

- ► Auto-defrosting system, ensuring long-terms non-frosting operation with low temperature set-points.
- ► Non-volatile memory saves settings during a power outage and automatically restarts the unit after power is restored.
- ► Audible and visual alarms on over temperature and motor overheating, and automatically cut off the power.
- ► Soft start and smooth acceleration when lid is closed after short opens.

► For data recording, the units are equipped with a built-in thermo printer as standard, so that operators could check how the performance parameters vary according to specified process without having to be on site.

- ▶ Predrilled standard tray included, without clamps.
- ► UV light reduces the air burden, keeping the chamber contamination free.

Model	ZWYR-211C	ZWYR-211D	ZWFR-211					
Control	P.I.D Microprocessor	21.D Microprocessor						
Control Mode	Fix Value or Program (up	ix Value or Program (up to 9 Segments)						
Control Panel	4.3" LCD Touch Screen							
Door Opening Mode	Hand Hold	Foot Pedal	Hand Hold					
Volume (L)	260	300	275					
Working Temperature	10°C - 35°C		·					
Shaking Speed (rpm)	30-300		30-240					
Stroke (mm)	Ø26	1-50 Stepless Adjustment						
Shaking Mode	Orbital		Reciprocal					
Tray (mm) (WxD)	920x500	940x584	896x530					
Temperature Range	Ambient - 20°C to 60°C (Min.4°C)							
Temperature Accuracy	±0.1°C							
Temperature Uniformity	±0.5@37°C	±0.5 @ 37°C						
Timer	0 to 9999 mins							
Inner Dimensions (mm)(WxDxH)	975x565x465	1040x655x465	975x565x465					
Exterior Dimensions (mm)(WxDxH)	1230x730x1065	1290x820x1065	1230x730x1065					
Packing Dimensions (mm)(WxDxH)	1310x860x1230	1370x960x1230	1310x860x1230					
Net/Gross Weight (kg)	255/308	263/325	290/354					
Power (W)	1150	1800	1150					
Electricity	220-240V 50/60 Hz							
Approval	CE, ISO							
Security	Over-temperature Protect	ion, Compressor Overload Protection	, Electrical Leakage Protection					
Additional	Built in Printer, RS485 Int	erface (Option)						

#### **Order Information**

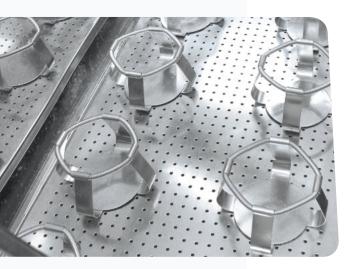
ZWYR-211C	ZWYR-211C, 260L, Premium Horizontal Shaking Incubator 4°C-60°C, 30-300rpm
ZWYR-211D	ZWYR-211D, 300L, Premium Horizontal Shaking Incubator 4°C-60°C, 30-300rpm
ZWFR-211	ZWFR-211, 300L, Premium Reciprocal Horizontal Shaking Incubator 4°C-60°C, 30-240rpm
P5016	RS-485 Interface
P6006	Predrilled Tray for ZWY-111B/211B/111C/211C/ZWYR-211C, S/S 🛪
P6007	Predrilled Tray for ZWYR-211D, S/S
P6008	Predrilled Tray for ZWF-111/211/ZWFR-211, S/S
P6043	Plain Tray for ZWY-111B/211B/111C/211C, ZWYR-211C, S/S
P6044	Plain Tray for ZWY-111D/211D, ZWYR-211D, S/S
P6045	Plain Tray for ZWF-111/211, ZWFR-211, S/S
P7007	Universal Spring Pallet for ZWY-111B/211B/111C/211C/ZWYR-211C, Full Pcs
P7008	Universal Spring Pallet for ZWYR-211D, Full Pcs
P7009	Universal Spring Pallet for ZWF-111/211, ZWFR-211, Full Pcs
P7022	Universal Spring Pallet for All Horizontal Model, 1/2 Pcs
	* S/S: Stainless Steel

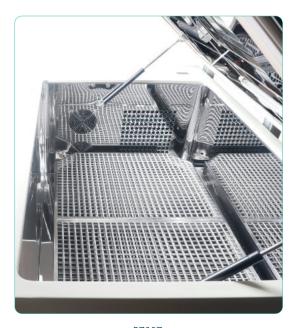


	Order Information
P8001	T Clamp, S/S, for 50ml Flask, with Spring Retainer
P8002	T Clamp, S/S, for 100ml Flask, with Spring Retainer
P8013	T Clamp, S/S, for 150ml Flask, with Spring Retainer
P8003	T Clamp, S/S, for 250ml Flask, with Spring Retainer
P8014	T Clamp, S/S, for 300ml Flask, with Spring Retainer
P8004	T Clamp, S/S, for 500ml Flask, with Spring Retainer
P8005	T Clamp, S/S, for 750ml Flask, with Spring Retainer
P8006	T Clamp, S/S, for 1000ml Flask, with Spring Retainer
P8007	T Clamp, Spring S/S, for 2000ml Flask, with Spring Retainer
P8008	T Clamp, Spring S/S, for 3000ml Flask, with Spring Retainer
P8009	T Clamp, Spring S/S, for 5000ml Flask, with Spring Retainer
P8010	Tube Rack S/S
P8011	Tube Rack ABS Plastic
P8012	Clamp for 96 Well Plate, S/S
P8017	Sticky Mat, 20 x 20cm
	laat2 220 (2.2 x

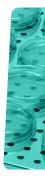
\* S/S: Stainless Steel

Capacity	<b>8001</b> 50ml	<b>P8002</b> 100ml	<b>P8003</b> 250ml	<b>P8004</b> 500ml	<b>P8005</b> 750ml	<b>P8006</b> 1000ml	<b>P8007</b> 2000ml	<b>P8008</b> 3000ml	<b>P8009</b> 5000ml	<b>P8010</b> Tube Rack S/S	<b>P8012</b> 96 Well Plate
ZWYR-211C	116	82	42	33	24	18	14	10	6	10	28
ZWYR-211D	131	92	52	38	26	24	15	11	8	12	32
ZWFR-211	111	84	43	33	24	20	13	8	6	9	31





P7007 Universal Spring Pallet for: ZWY-111B/211B/111C/211C/ZWYR-211C







# PREMIUM DOUBLE LAYER Shaking Incubators

ZWYR-2102

ZWYR-2112B



The new double layer shaking incubators in a class of their own, are specially developed a cost effective and space-saving solution for the modern biological engineering departments; the units are widely used in the applications of germ culture, hybridisation, biochemical research, enzyme and cellular tissues.

These incubators have a smooth compact design, which are very efficient and have an excellent floor space/performance factor. The double layer shaking frame supports two trays above each other, doubles the capacity for smaller flasks, while after removing the top tray (Shaking frame upgrade required).

► 4.3"/5.6" LCD touch screen panel clearly indicates all parameters in one page display and makes it easy to change the operating parameters settings, even those multi set points under programmable mode intuitively.

▶ P.I.D microprocessor controller provides unmatched versatility by enable users to create personalized program (with up to 9 segments, with cycling) to automate changes to function parameters.

► Large double fold tempered glass window on the front doors together with the fluorescent light provide complete visibility of chamber interior.

► Mirror-finished high quality #304 stainless steel for excellent durability of interiors.

► Non-volatile memory for set point retention after power interruption.

► Robust triple eccentric counterbalanced drive in cast iron housing provides vibration and trouble free operation with high shaking speed up to 300rpm even when both layers are fully loaded.

► UV light reduces the air burden, keeping the chamber contamination free.

► Quality brushless AC inductive motor supports reliable, quiet and smooth shaking movements up to top speed even when fully loaded with 90 pieces of 250ml flasks (ZWYR-2112B, ZWFR-2112).

► Auto-defrosting system, ensuring long-term frost-free operation at low temperature set points."

► Non-volatile memory saves settings during a power outage and automatically restarts the unit after power is restored.

► Audible and visual alarms on over temperature and motor overheating, and automatically cut off the power. Soft start and smooth acceleration when doors are closed after short opens.

► Dedicated single layer shaking frame is available for the ease of using large flasks.

► For data recording, the units are equipped with a built-in thermo printer as standard, so that operators could check how the performance parameters vary according to specified process without having to be on site.

► Timer up to 9999 mins under fixed value control mode.

▶ Predrilled standard tray included, without clamps.

Capacity	<b>P8001</b> 50ml	<b>P8002</b> 100ml	<b>P8003</b> 250ml	<b>P8004</b> 500ml	<b>P8005</b> 750ml	<b>P8006</b> 1000ml	<b>P8007</b> 2000ml	<b>P8008</b> 3000ml	<b>P8009</b> 5000ml	<b>P8010</b> Tube Rack S/S	<b>P8012</b> 96 Well Plate
ZWYR-2102C	78	56	36	24	18	6*	4*	3*	2*	8	18
ZWYR-2102	118	104	64	54	30	30	8*	7*	4*	16	38
ZWYR-2112B	262	200	110	76	52	44	15*	10*	8*	22	60
ZWFR-2112	252	190	118	80	48	40	15*	10*	7*	20	64

\* Applies only when single layer shaking frame is equipped.

Model	ZWYR-2102C	ZWYR-2102	ZWYR-2112B	ZWFR-2112				
Control	P.I.D Microprocessor	?I.D Microprocessor						
Control Mode	Fix Value or Program (up	to 9 Segments)						
Control Panel	LCD Touch Screen							
Volume (L)	170	330	580	580				
Working Temperature	5°C - 25°C							
Shaking Speed (rpm)	30-300			30-240				
Stroke (mm)	26		35	1 to 50 Step-less Adjustment				
Shaking Mode	Orbital			Reciprocal				
Temperature	Ambient - 20 to 60°C (N	lin.4°C)						
Temperature Accuracy	±0.1°C							
Temperature Uniformity	±0.5 @ 37°C							
Timer	0 to 9999 mins							
Tray (mm) (WxD)	496x350	734x458	970x560	940x580				
Inner dimensions (mm) (WxDxH)	615x450x640	845x530x765	1105x850x664	1105x850x664				
Exterior dimensions (mm) (WxDxH)	720x685x1310	950x755x1445	1430x880x1700	1430x880x1700				
Packing dimensions (mm) (WxDxH)	800x770x1490	1030x870x1640	1540x1000x1910	1500x950x1860				
Net/Gross Weight (kg)	195/238	255/330	460/590	486/562				
Power (W)	1000	1050	1600	1600				
Electricity	220-240V 50/60 Hz							
Approval	CE, ISO							
Security	Over-temperature Protect	ction, Compressor Overload Prote	ction, Electrical Leakage Protection	1				
Additional	Built in Printer, RS-485 I	nterface (Option)						

	Order Information
ZWYR-2102C	ZWYR-2102C, 170L, Premium Double Layer Shaking Incubator 4°C-60°C, 30-300rpm
ZWYR-2102	ZWYR-2102, 330L, Premium Double Layer Shaking Incubator 4°C-60°C, 30-300rpm
ZWYR-2112B	ZWYR-2112B, 580L, Premium Double Layer Shaking Incubator 4°C-60°C, 30-300rpm
ZWFR-2112	ZWFR-2112, 580L, Premium Reciprocal Double Layer Shaking Incubator 4°C-60°C, 30-240rpm



P5001     Single Layer Shaking Frame for ZWI-1102C/2102C, ZWIR-2102C, Stl S/C#       P5002     Single Layer Shaking Frame for ZWI-1102/2102, ZWIR-2102, Stl S/C       P5003     Single Layer Shaking Frame for ZWI-1102/2102, ZWIR-2102, Stl S/C       P5016     RS-485 Interface       P6010     Predrilled Tray for ZWI-1102C/2102C/ZWIR-2102, S/S *       P6011     Predrilled Tray for ZWI-1102/2102/ZWIR-2102, S/S *       P6012     Predrilled Tray for ZWI-1102/2102/ZWIR-2102, S/S       P6013     Predrilled Tray for ZWI-1102/2102/ZWIR-2102, S/S       P6014     Predrilled Tray for ZWI-1102/2102/ZWIR-2102, S/S       P6015     Predrilled Tray for ZWI-1102/2102/ZWIR-2102, S/S       P6016     Predrilled Tray for ZWI-1102/2102/ZWIR-2112, S/S       P6037     Plain tray for ZWI-1102/2102, ZWIR-2102       P6048     Plain tray for ZWI-1102/2102, ZWIR-2102       P6046     Plain Tray for ZWI-1102/2102/ZWIR-2102, Full Pcs       P7011     Universal Spring Pallet for ZWI-1102/2102/ZWIR-2102, Full Pcs       P7012     Universal Spring Pallet for ZWI-1112B/2112B/ZWIR-2112, Full Pcs       P7014     Universal Spring Pallet for ZWI-1112B/2112B/ZWIR-2112, Full Pcs       P7014     Universal Spring Pallet for ZWI-1112B/2112B/ZWIR-2112, Full Pcs       P80017		Order Information					
P5003     Single Layer Shaking Frame for ZWV-1112B/2112B, ZWRR-2112B, Stl S/C       P5016     R-485 Interface       P6010     Predrilled Tray for ZWV-1102/C2102/ZWRR-2102, S/S *       P6011     Predrilled Tray for ZWV-1102/2102/ZWR-2102, S/S       P6012     Predrilled Tray for ZWV-1102/2102/ZWR-2102, S/S       P6013     Predrilled Tray for ZWV-1102/2102/ZWR-2112B, S/S       P6014     Predrilled Tray for ZWV-1102/2102/ZWR-2112B, S/S       P6015     Predrilled Tray for ZWV-1102/2102/ZWR-2112B, S/S       P6037     Plain tray for ZWV-1102/2102/ZWR-2102       P6038     Plain tray for ZWV-1102/2102/ZWR-2102       P6046     Plain Tray for ZWV-1102/2102/ZWR-2102       P6047     Plain Tray for ZWV-1102/2102/ZWR-2102       P6048     Plain Tray for ZWV-1102/2102/ZWR-2102       P6049     Plain Tray for ZWV-1102/2102/ZWR-2102       P7011     Universal Spring Pallet for ZWF-1112/2112/ZWR-2102, Full Pcs       P7013     Universal Spring Pallet for ZWF-1112/2112/ZWR-2102, Full Pcs       P7014     Universal Spring Pallet for ZWF-1112/2112/ZWR-2112, Full Pcs       P7014     Universal Spring Pallet for ZWF-1112/2112/ZWR-2112, Full Pcs       P7014     Universal Spring Pallet for ZWF-1112/2112/ZWR-2112, Full Pcs	P5001	Single Layer Shaking Frame for ZWY-1102C/2102C, ZWYR-2102C, Stl S/C#					
P5016     RS-485 Interface       P6010     Predrilled Tray for ZWV-1102//2102/ZWYR-2102C, S/S *       P6011     Predrilled Tray for ZWV-1102/2102/ZWYR-2102, S/S       P6012     Predrilled Tray for ZWV-1102/2102/ZWYR-2102, S/S       P6013     Predrilled Tray for ZWV-1102/2102/ZWYR-2112B, S/S       P6014     Predrilled Tray for ZWV-1102/2102, ZWYR-2112B, S/S       P6015     Predrilled Tray for ZWV-1102/2102, ZWYR-2102       P6038     Plain Tray for ZWV-1102/2102, ZWYR-2102       P6046     Plain Tray for ZWV-1102/2102, ZWYR-2102       P6047     Predrilled Tray for ZWV-1102/2102, ZWYR-2102       P6048     Plain Tray for ZWV-1102/2102, ZWYR-2102       P6049     Plain Tray for ZWV-1102/2102, ZWYR-2102, Full Pcs       P7011     Universal Spring Pallet for ZWV-1102/2102/ZWYR-2102, Full Pcs       P7012     Universal Spring Pallet for ZWV-1102/2102/ZWYR-2112B, Full Pcs       P7014     Universal Spring Pallet for ZWV-1112B/2112B/ZWYR-2112, Full Pcs       P7014     Universal Spring Pallet for ZWV-1112B/2112B/ZWYR-2112, Full Pcs       P7014     Universal Spring Pallet for ZWV-1112B/2112B/ZWYR-2112, Full Pcs       P8005     T Clamp, S/S, for 150ml Flask, with Spring Retainer       P8004     T Clamp, S/S, for 300ml Flask, with Spri	P5002	Single Layer Shaking Frame for ZWY-1102/2102, ZWYR-2102, Stl S/C					
P6010     Predrilled Tray for ZWY-1102C/2102C/ZWYR-2102C, S/S *       P6011     Predrilled Tray for ZWY-1102/2102/ZWYR-2102, S/S       P6012     Predrilled Tray for ZWY-1112B/2112B/ZWYR-2112B, S/S       P6013     Predrilled Tray for ZWY-1112B/2112/ZWFR-2112, S/S       P6014     Predrilled Tray for ZWY-1102/2102, ZWYR-2112, S/S       P6015     Predrilled Tray for ZWY-1102/2102, ZWYR-2102       P6038     Plain Tray for ZWY-1102/2102, ZWYR-2102       P6046     Plain Tray for ZWY-1102/2102, ZWYR-2102       P6047     Plain Tray for ZWY-1102/2102, ZWYR-2102       P6048     Plain Tray for ZWY-1102/2102/ZWYR-2102       P6049     Plain Tray for ZWY-1112B/Z112B, ZWYR-2102, Full Pcs       P7011     Universal Spring Pallet for ZWY-1102/2102/ZWYR-2102, Full Pcs       P7012     Universal Spring Pallet for ZWY-1112B/2112B/ZWYR-2112B, Full Pcs       P7014     Universal Spring Pallet for ZWY-1112B/2112B/ZWYR-2112B, Full Pcs       P7014     Universal Spring Pallet for ZWY-1112/2112/ZWFR-2112B, Full Pcs       P8005     T Clamp, S/S, for 100ml Flask, with Spring Retainer       P8004     T Clamp, S/S, for 300ml Flask, with Spring Retainer       P8005     T Clamp, S/S, for 300ml Flask, with Spring Retainer       P8006     T Clamp, S/S, fo	P5003	Single Layer Shaking Frame for ZWY-1112B/2112B, ZWYR-2112B, Stl S/C					
People     Predrilled Tray for ZWY-1102/2102/ZWYR-2102, S/S       People     Predrilled Tray for ZWY-1102/2102/ZWYR-2102, S/S       People     Predrilled Tray for ZWY-1112B/2112B/ZWYR-2112B, S/S       People     Plain tray for ZWY-1102/2102, ZWYR-2102       Pf011     Universal Spring Pallet for ZWY-1102/2102/ZWYR-2102, Full Pcs       Pf013     Universal Spring Pallet for ZWY-1102/2102/ZWYR-2112B, Full Pcs       Pf014     Universal Spring Pallet for ZWY-1112B/2112B/ZWYR-2112B, Full Pcs       Pf013     Universal Spring Pallet for ZWY-1112/2112/ZWFR-2112B, Full Pcs       Pf014     Universal Spring Pallet for ZWY-1102/2102/ZWYR-2112B, Full Pcs       Pf013     Universal Spring Pallet for ZWY-1102/2102/ZWYR-2112B, Full Pcs       Pf014     Universal Spring Pallet for ZWY-1102/Z102/ZWYR-2112B, Full Pcs       Pf015     T Clamp, S/S, for 100ml Flask, with Spring Retainer       P8004     T Cl	P5016	RS-485 Interface					
P6012     Predrilled Tray for ZWY-1112B/2112B/ZWYR-2112B, S/S       P6013     Predrilled Tray for ZWY-1112L/2112/ZWFR-2112, S/S       P6031     Plain tray for ZWY-1102/2102, ZWYR-2102       P6033     Plain Tray for ZWY-1102C/2102, ZWYR-2102       P6046     Plain Tray for ZWY-1102C/2102, ZWYR-2102C       P6046     Plain Tray for ZWY-1112B/2112B, ZWYR-2112B, S/S       P7011     Universal Spring Pallet for ZWY-1102C/2102/ZWYR-2102C       P7012     Universal Spring Pallet for ZWY-1102/2102/ZWYR-2102, Full Pcs       P7013     Universal Spring Pallet for ZWY-1112B/2112B/ZWWR-2112B, Full Pcs       P7014     Universal Spring Pallet for ZWF-1112/2112/ZWFR-2112, Full Pcs       P8002     T Clamp, S/S, for 100ml Flask, with Spring Retainer       P8003     T Clamp, S/S, for 200ml Flask, with Spring Retainer       P8004     T Clamp, S/S, for 500ml Flask, with Spring Retainer       P8005     T Clamp, S/S, for 2000ml Flask, with Spring Retainer       P8006     T Clamp, S/S, for 2000ml Flask, with Spring Retainer       P8007     T Clamp, S/S, for 2000ml Flask, with Spring Retainer       P8007     T Clamp, S/S, for 2000ml Flask, with Spring Retainer       P8008     T Clamp, S/S, for 2000ml Flask, with Spring Retainer       P8009     T	P6010	Predrilled Tray for ZWY-1102C/2102C/ZWYR-2102C, S/S 🛠					
P6013     Predrilled Tray for ZWF-1112/2112/ZWFR-2112, S/S       P6031     Plain tray for ZWF-1112/2102, ZWR-2102       P6038     Plain Tray for ZWF-1102//2102, ZWR-2102C       P6046     Plain Tray for ZWF-1112B/2112B, ZWR-2112B, S/S       P7011     Universal Spring Pallet for ZWF-1102/2102/ZWR-2102C       P7012     Universal Spring Pallet for ZWF-1102/2102/ZWR-2102, Full Pcs       P7013     Universal Spring Pallet for ZWF-1112B/2112B/ZWRR-2112B, Full Pcs       P7014     Universal Spring Pallet for ZWF-1112/2112P/ZWRR-2112B, Full Pcs       P7014     Universal Spring Pallet for ZWF-1112/2112P/ZWRR-2112B, Full Pcs       P8002     T Clamp, S/S, for 100ml Flask, with Spring Retainer       P8003     T Clamp, S/S, for 150ml Flask, with Spring Retainer       P8004     T Clamp, S/S, for 300ml Flask, with Spring Retainer       P8004     T Clamp, S/S, for 500ml Flask, with Spring Retainer       P8005     T Clamp, S/S, for 7500ml Flask, with Spring Retainer       P8006     T Clamp, S/S, for 1000ml Flask, with Spring Retainer       P8007     T Clamp, S/S, for 7000ml Flask, with Spring Retainer       P8008     T Clamp, S/S, for 3000ml Flask, with Spring Retainer       P8009     T Clamp, Spring S/S, for 3000ml Flask, with Spring Retainer <th< td=""><th>P6011</th><td>Predrilled Tray for ZWY-1102/2102/ZWYR-2102, S/S</td></th<>	P6011	Predrilled Tray for ZWY-1102/2102/ZWYR-2102, S/S					
P6031Plain tray for ZWY-1102/2102, ZWYR-2102P6038Plain Tray for ZWY-1102C/2102C, ZWYR-2102CP6046Plain Tray for ZWY-1112B/2112B, ZWYR-2112B, S/SP7011Universal Spring Pallet for ZWY-1102C/2102/ZWYR-2102CP7012Universal Spring Pallet for ZWY-1102/2102/ZWYR-2102, Full PcsP7013Universal Spring Pallet for ZWY-1112B/2112B/ZWYR-2112B, Full PcsP7014Universal Spring Pallet for ZWY-1112B/2112B/ZWYR-2112B, Full PcsP8002T Clamp, S/S, for 100ml Flask, with Spring RetainerP8003T Clamp, S/S, for 100ml Flask, with Spring RetainerP8004T Clamp, S/S, for 300ml Flask, with Spring RetainerP8005T Clamp, S/S, for 500ml Flask, with Spring RetainerP8006T Clamp, S/S, for 750ml Flask, with Spring RetainerP8007T Clamp, S/S, for 3000ml Flask, with Spring RetainerP8008T Clamp, S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, S/S, for 3000ml Flask, with Spring RetainerP8008T Clamp, S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml Flask, with Spri	P6012	Predrilled Tray for ZWY-1112B/2112B/ZWYR-2112B, S/S					
P6038Plain Tray for ZWY-1102C/2102C, ZWR-2102CP6046Plain Tray for ZWY-1102B/2112B, ZWYR-2112B, S/SP7011Universal Spring Pallet for ZWY-1102C/2102C/ZWYR-2102CP7012Universal Spring Pallet for ZWY-1102/2102/ZWYR-2102, Full PcsP7013Universal Spring Pallet for ZWY-1112B/2112B/ZWYR-2112B, Full PcsP7014Universal Spring Pallet for ZWF-1112/2112/ZWFR-2112, Full PcsP8002T Clamp, S/S, for 100ml Flask, with Spring RetainerP8013T Clamp, S/S, for 250ml Flask, with Spring RetainerP8004T Clamp, S/S, for 300ml Flask, with Spring RetainerP8005T Clamp, S/S, for 750ml Flask, with Spring RetainerP8006T Clamp, S/S, for 100ml Flask, with Spring RetainerP8007T Clamp, S/S, for 300ml Flask, with Spring RetainerP8008T Clamp, S/S, for 300ml Flask, with Spring RetainerP8009T Clamp, S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml F	P6013	Predrilled Tray for ZWF-1112/2112/ZWFR-2112, S/S					
P6046Plain Tray for ZWY-1112B/2112B, ZWYR-2112B, S/SP7011Universal Spring Pallet for ZWY-1102C/2102C/ZWYR-2102CP7012Universal Spring Pallet for ZWY-1102/2102/ZWYR-2102, Full PcsP7013Universal Spring Pallet for ZWY-1112B/2112B/ZWYR-2112B, Full PcsP7014Universal Spring Pallet for ZWF-1112/2112/ZWFR-2112, Full PcsP8002T Clamp, S/S, for 100ml Flask, with Spring RetainerP8003T Clamp, S/S, for 150ml Flask, with Spring RetainerP8004T Clamp, S/S, for 250ml Flask, with Spring RetainerP8005T Clamp, S/S, for 500ml Flask, with Spring RetainerP8006T Clamp, S/S, for 100ml Flask, with Spring RetainerP8007T Clamp, S/S, for 200ml Flask, with Spring RetainerP8008T Clamp, S/S, for 200ml Flask, with Spring RetainerP8009T Clamp, S/S, for 300ml Flask, with Spring RetainerP8009T Clamp, S/S, for 200ml Flask, with Spring RetainerP8009T Clamp, S/S, for 300ml Flask, with Spring RetainerP8009T Clamp, S/S, for 300ml Flask, with Spring RetainerP8009T Clamp, S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5	P6031	Plain tray for ZWY-1102/2102, ZWYR-2102					
P7011Universal Spring Pallet for ZWY-1102C/2102C/ZWYR-2102CP7012Universal Spring Pallet for ZWY-1102/2102/ZWYR-2102, Full PcsP7013Universal Spring Pallet for ZWY-1112B/2112B/ZWYR-2112B, Full PcsP7014Universal Spring Pallet for ZWF-1112/2112/ZWFR-2112, Full PcsP8002T Clamp, S/S, for 100ml Flask, with Spring RetainerP8013T Clamp, S/S, for 150ml Flask, with Spring RetainerP8004T Clamp, S/S, for 250ml Flask, with Spring RetainerP8014T Clamp, S/S, for 300ml Flask, with Spring RetainerP8005T Clamp, S/S, for 500ml Flask, with Spring RetainerP8006T Clamp, S/S, for 750ml Flask, with Spring RetainerP8007T Clamp, S/S, for 200ml Flask, with Spring RetainerP8008T Clamp, S/S, for 200ml Flask, with Spring RetainerP8009T Clamp, S/S, for 200ml Flask, with Spring RetainerP8009T Clamp, S/S, for 300ml Flask, with Spring RetainerP8009T Clamp, S/S, for 300ml Flask, with Spring RetainerP8009T Clamp, S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 3000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S, for 5000ml Flask, with Spring RetainerP8009T Clamp, Spring S/S,	P6038	Plain Tray for ZWY-1102C/2102C, ZWYR-2102C					
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P8006   T Clamp, S/S, for 1000ml Flask, with Spring Retainer     P8007   T Clamp, Spring S/S, for 2000ml Flask, with Spring Retainer     P8008   T Clamp, Spring S/S, for 3000ml Flask, with Spring Retainer     P8009   T Clamp, Spring S/S, for 5000ml Flask, with Spring Retainer     P8010   Tube Rack S/S	P8004	T Clamp, S/S, for 500ml Flask, with Spring Retainer					
P8007   T Clamp, Spring S/S, for 2000ml Flask, with Spring Retainer     P8008   T Clamp, Spring S/S, for 3000ml Flask, with Spring Retainer     P8009   T Clamp, Spring S/S, for 5000ml Flask, with Spring Retainer     P8010   Tube Rack S/S	P8005	T Clamp, S/S, for 750ml Flask, with Spring Retainer					
P8008   T Clamp, Spring S/S, for 3000ml Flask, with Spring Retainer     P8009   T Clamp, Spring S/S, for 5000ml Flask, with Spring Retainer     P8010   Tube Rack S/S	P8006	T Clamp, S/S, for 1000ml Flask, with Spring Retainer					
P8009 T Clamp, Spring S/S, for 5000ml Flask, with Spring Retainer   P8010 Tube Rack S/S	P8007	T Clamp, Spring S/S, for 2000ml Flask, with Spring Retainer					
P8010     Tube Rack S/S	P8008	T Clamp, Spring S/S, for 3000ml Flask, with Spring Retainer					
	P8009	T Clamp, Spring S/S, for 5000ml Flask, with Spring Retainer					
P8011 Tube Rack ABS Plastic	P8010	Tube Rack S/S					
	P8011	Tube Rack ABS Plastic					
P8012 Clamp for 96 Well Plate, S/S	P8012	Clamp for 96 Well Plate, S/S					

Sticky Mat, 20 x 20cm

# Stl S/C:Spray Coated Steel, \* S/S: Stainless Steel



P8017

Units are equipped with a built-in thermo printer as standard.



The double layer shaking frame on the units supports two trays above each other, optimising the capacity for smaller flasks.

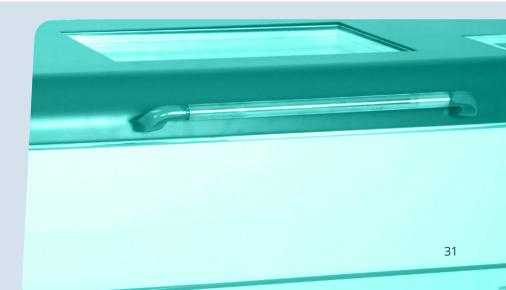
30

# SHAKING INCUBATORS



As the classic version of LABWIT shaking incubators, the economic models have been tested and renowned for its quality and the reliable performances in the last decades. LABWIT continues to offer the diversity to its shaking incubator range by providing the solutions for basic daily applications. The robust eccentric counterbalanced shaking mechanisms together with quality heavy duty motors ensure quiet and smooth shaking movement throughout the whole speed range.

P.I.D microprocessor controller creates optimum, reproducible incubation conditions for cell cultures of the applications. Moreover, all economic models are now equipped with auto-defrosting system as standard, providing more comprehensive solutions for wider range of applications.





ZWY-240

ZWY-100H

# ECONOMIC BENCHTOP Shaking Incubators

The benchtop orbital shaking incubators provided by LABWIT offer for small to medium capacity conditions of time, temperature and orbital agitation for the growth of biological organisms. These microprocessor controlled shakers have a number of advanced features that are really unique in bench top models, such as cooling capacity and step-less shaking diameter adjustment.

ZWY-103D

LABWIT shaking incubators are lab workhorses and provide "set and forget" programmable operating conditions and precise temperature performance for a variety of molecular biology techniques. The inner chamber is clearly visible from all angles across the room. The audible and visual alarms will alert the operator for set point deviations. The refrigerated models use CFC-free refrigerant, ozone layer friendly.

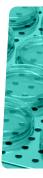
- ▶ Various chamber sizes available from 34L, 63L to 69L
- Smooth and easy to clean design with tempered observation glass window.
- Inner chamber and tray from electro-polished stainless steel.
- ► Special low noise induction motor system enables high rotation speed up to 400rpm or 600rpm.
- Patented driver system allows stroke continuous adjustment from Ø1-50mm.
- ► AC inductive motor, brushless and maintenance free.
- Auto defrosting system, ensuring long terms non frosting operation with low temperature set-points.

- ► The combination of high speed and small diameter make ZWY-103D, ZWY-100D and ZWY-200D suitable for many applications involving microtitre plates.
- Microprocessor control with large LCD screen, showing set and actual parameters.
- Password protection against unauthorised change of parameters.
- Audible and visual alarms on over temperature and motor overheating.
- ▶ Soft start and smooth acceleration after lid opening.
- ▶ Timer up to 9999 mins and continuous mode.
- ▶ Predrilled standard tray included, without clamps.

Model	ZWY-103D	ZWY- 100H	ZWY- 100D	ZWF-100	ZWF-200	ZWY-240	ZWY-200D	
Volume (L)	34	63	63	63	69	69	69	
Shaking Speed (rpm)	30-600	30-400	30-600	30-240	30-240	30-400	30-600	
Stroke	Ø1-50mm Stepl	ess Adjustment		40mm		Ø1-50mm Stepless Adjustment		
Shaking Mode	Orbital			Reciprocal	Reciprocal		Orbital	
Tray (mm) (WxD)	280x220	340x370	340x370	346x400	435x420	400x370	400x370	
Temperature Range	A +5°C to 60°C				Ambient - 20 to 60°C (Min.4°C)			
Temperature Accuracy	±0.1°C							
Temperature Uniformity	≤±0.5@37°C							
Timer	0 - 9999 mins							
Flask Configurations	*Glass dimensio	nensions may reduce max. capacity						
50 ml	16	30	30	30	47	30	30	
100 ml	9	20	20	23	28	23	23	
250 ml	6	11	11	11	15	12	12	
500 ml	-	9	9	9	11	9	9	
750 ml	-	5	5	6	9	7	7	
1000 ml	-	5	5	5	9	7	7	
2000 ml	-	-	-	-	4	4	4	
Tube Rack S/S	-	3	3	3	3	3	3	
96 Well Plate	4	4	4	6	10	8	8	
Inner Dimensions (mm) (WxDxH)	340x300x175	410x440x295			490x470x320			
Exterior Dimensions (mm) (WxDxH)	440x410x400	600x580x520			730x740x560			
Packing Dimensions (mm) (WxDxH)	530x520x560	690x680x700			810x850x760			
Net / Gross Weight (kg)	42/57	72/92	72/97	77/97	100/132	100/132	100/132	
Power (W)	280	550	550	550	700	700	700	
Electricity	220-240V 50/60 Hz							
Approval	CE, ISO							

#### **Order Information**

ZWY-103D	ZWY-103D, 34L, Economic Orbital Shaking Incubator A +5°C-60°C, 30-600rpm
ZWY-100H	ZWY-100H, 63L, Economic Orbital Shaking Incubator A +5°C-60°C, 30-400rpm
ZWY-100D	ZWY-100D, 63L, Economic Orbital Shaking Incubator A +5°C-60°C, 30-600rpm
ZWY-240	ZWY-240, 69L, Economic Orbital Shaking Incubator 4°C-60°C, 30-400rpm
ZWY-200D	ZWY-200D, 69L, Economic Orbital Shaking Incubator 4°C-60°C, 30-600rpm
ZWF-100	ZWF-100, 63L, Economic Reciprocal Shaking Incubator A +5°C-60°C, 30-240rpm
ZWF-200	ZWF-200, 69L, Economic Reciprocal Shaking Incubator A +5°C-60°C, 30-240rpm



	Order Information
P6001	Predrilled Tray for ZWY-103B/D, S/S 🛠
P6002	Predrilled Tray for ZWY-100H/100D, S/S
P6003	Predrilled Tray for ZWF-100, S/S
P6004	Predrilled Tray for ZWYR-240/200D, ZWY-240/200D, S/S*
P6005	Predrilled Tray for ZWFR-200, ZWF-200, S/S
P6034	Plain tray for ZWY-240/200D; ZWYR-240/200D
P6042	Plain Tray for ZWY-100H/100D, S/S
P6051	Plain Tray for ZWY-103B/D, S/S
P7001	Universal Spring Pallet for ZWY-103B/103D
P7002	Universal Spring Pallet for ZWY-100H/100D
P7003	Universal Spring Pallet for ZWYR-240/200D, ZWY-240/200D
P7004	Universal Spring Pallet for ZWF-100
P7005	Universal Spring Pallet for ZWFR-200, ZWF-200
P8001	T Clamp, S/S, for 50ml Flask, with Spring Retainer
P8002	T Clamp, S/S, for 100ml Flask, with Spring Retainer
P8013	T Clamp, S/S, for 150ml Flask, with Spring Retainer
P8003	T Clamp, S/S, for 250ml Flask, with Spring Retainer
P8014	T Clamp, S/S, for 300ml Flask, with Spring Retainer
P8004	T Clamp, Spring S/S, for 500ml Flask, with Spring Retainer
P8005	T Clamp, S/S, for 750ml Flask, with Spring Retainer
P8006	T Clamp, S/S, for 1000ml Flask, with Spring Retainer
P8007	T Clamp, S/S, for 2000ml Flask, with Spring Retainer
P8010	Tube Rack S/S
P8011	Tube Rack ABS Plastic
P8012	Clamp for 96 Well Plate, S/S
P8017	Sticky Mat, 20 x 20cm

\* S/S: Stainless Steel









ZWY-211C

### ECONOMIC HORIZONTAL **Shaking Incubators**



These economic horizontal floor shaking incubators are specially developed for the modern biological engineering departments; huge capacity for various sizes of flasks, up to 5L.

LABWIT offers both orbital and reciprocal models, with and without refrigeration to be used in almost all laboratories. All models have large glass viewing windows and gas spring transmission for smooth and convenient lid opening. Temperature uniformity – through a fan driven high velocity circulation system, is ±1.0°C @ 37°C, while the temperature accuracy is 0.1°C. All models are equipped with an electronic timer of 0 – 9999 mins. Heavy duty triple counterbalanced drive system provides a shaking range that can handle virtually any culturing task.

- ▶ Various chamber sizes available from 170L, 260L to 300L.
- ► Microprocessor controller with audible and visual alarms maintain precise temperature and speed.
- ▶ CFC-free refrigerant which causes no damage to ozone layer. (Applies on ZWY/F-2XX models)

► Large double-fold tempered glass window and fluorescent light, provide complete visibility of chamber interior.

- ▶ LCD display presents all actual and preset parameters.
- ► Electronic timer from 0 9999 mins, automatic stop, audio/ visual alarm.
- ▶ Password protection against unauthorised change of parameters.
- ▶ Audible and visual alarms for motor temperature and set point deviations.

- ▶ Non-volatile memory for set point retention after power interruption.
- ► Long-Life brushless AC motor creates smooth, quiet and uniformed shaking motion.
- ► Auto defrosting system, ensuring long terms non frosting operation with low temperature setpoints.
- ▶ Mirror-finished high quality #304 stainless steel for excellent durability of interiors.
- ▶ Units delivered with standard stainless steel tray, clamps excluded.
- ▶ High capacity for up to 5L flasks (except ZWY-111B/211B)
- ▶ UV light reduces the air burden, keeping the chamber contamination free.

Model	ZWY-111B	ZWY-211B	ZWY-111C	ZWY-211C	ZWF-111	ZWF-211	
Volume (L)	170		260		300		
Shaking Mode	Orbital		Orbital		Reciprocal		
Stroke (mm)	Ø26	Ø26			Ø1-50 mm Steples	is Adjustment	
Temperature Range	A +5°C to 60°C	Ambient - 20°C to 60°C (Min.4)	A +5°C to 60°C	Ambient - 20°C to 60°C (Min.4)	A +5°C to 60°C	Ambient - 20°C to 60°C (Min.4)	
Temperature Accuracy	±0.1°C						
Temperature Uniformity	≤±0.5 @ 37°C						
Shaking Speed (rpm)	30-300		30-300		30-240		
Tray Dimension (mm)	920x500		920x500	920x500			
Flask Configuration *	*Glass dimension	s may reduce max. capa	city				
50ml	116		116		111		
100 ml	82		82		84		
250 ml	42	42		42		43	
500 ml	33		33		33		
750 ml	23		23		24		
1000 ml	18		18		20		
2000 ml	-		14		13		
3000 ml	-		10		8		
5000 ml	-		б		6		
Tube Rack S/S	10	10		10		9	
96 Well Plate	28		28		31		
Inner Dimensions (mm) (WxDxH)	975x565x305		975x565x465		975x565x465		
Exterior Dimensions (mm) (WxDxH)	1200x740x820		1230x730x1065		1230x730x1065		
Packing Dimensions (mm) (WxDxH)	1290x840x1000		1310x860x1230		1310x860x1230		
Net/Gross Weight (kg)	159/219	174/233	240/293	255/308	270/334	290/354	
Power (W)	800	1050	950	1150	950	1150	
Electricity	220-240V 50/60 H	łz					
Approval	CE, ISO						

ZWY-111B	ZWY-111B, 170L, Economic Horizontal Shaking Incubator A +5°C-60°C, 30-300rpm
ZWY-211B	ZWY-211B, 170L, Economic Horizontal Shaking Incubator 4°C-60°C, 30-300rpm
ZWY-111C	ZWY-111C, 260L, Economic Horizontal Shaking Incubator A +5°C-60°C, 30-300rpm
ZWY-211C	ZWY-211C, 260L, Economic Horizontal Shaking Incubator 4°C-60°C, 30-300rpm
ZWF-111	ZWF-111, 300L, Economic Reciprocal Horizontal Shaking Incubator A +5°C-60°C, 30-240rpm
ZWF-211	ZWF-211, 300L, Economic Reciprocal Horizontal Shaking Incubator 4°C-60°C, 30-240rpm
P6006	Predrilled Tray for ZWY-111B/211B/111C/211C/ZWYR-211C, S/S 🗴
P6008	Predrilled Tray for ZWF-111/211/ZWFR-211, S/S
P6043	Plain Tray for ZWY-111B/211B/111C/211C, ZWYR-211C, S/S
P6045	Plain Tray for ZWF-111/211, ZWFR-211, S/S
P7007	Universal Spring Pallet for: ZWY-111B/211B/111C/211C/ZWYR-211C, Full Pcs
P7009	Universal Spring Pallet for ZWF-111/211, ZWFR-211, Full Pcs
P7022	Universal Spring Pallet for All Horizontal Model, 1/2 Pcs
P8001	T Clamp, S/S, for 50ml Flask, with Spring Retainer
P8002	T Clamp, S/S, for 100ml Flask, with Spring Retainer
P8013	T Clamp, S/S, for 150ml Flask, with Spring Retainer
P8003	T Clamp, S/S, for 250ml Flask, with Spring Retainer
P8014	T Clamp, S/S, for 300ml Flask, with Spring Retainer
P8004	T Clamp, S/S, for 500ml Flask, with Spring Retainer
P8005	T Clamp, S/S, for 750ml Flask, with Spring Retainer
P8006	T Clamp, S/S, for 1000ml Flask, with Spring Retainer
P8007	T Clamp, Spring S/S, for 2000ml Flask, with Spring Retainer
P8008	T Clamp, Spring S/S, for 3000ml Flask, with Spring Retainer
P8009	T Clamp, Spring S/S, for 5000ml Flask, with Spring Retainer
P8010	Tube Rack S/S
P8011	Tube Rack ABS Plastic
P8012	Clamp for 96 Well Micro Plate, S/S
P8017	Sticky Mat, 20 x 20cm

**☆** S/S: Stainless Steel



ZWF-211





# ECONOMIC DOUBLE LAYER Shaking Incubators



ZWY-2102C

These LABWIT double layer shaking incubators are specially developed for the modern biological engineering departments; a big capacity of flasks but with small footprint.

These incubators have a smooth compact design. They are very efficient and have an excellent floor space/performance factor. Two trays above each other, double the capacity for smaller flasks, while after removing the top tray, big flasks can also be used on the bottom tray (Shaking frame upgrade required). These units are particularly ideal for fermentation and pharmacy experiments and are widely used where a big amount of liquid needed to be mixed at with constant temperature.

- Microprocessor controller with audible and visual alarms maintains precise temperature and speed control.
- User friendly control panel allows easy digital setting of time, temperature and speed.
- ► Large LCD display presents all actual and preset parameters.
- ► Electronic timer, from 0 9999 mins, automatic stop, audio/ visual alarm.
- Password protection against unauthorised change of parameters.
- Audible and visual alarms for over-temperature and set point deviations.
- Non-volatile memory for set point retention after a power interruption.
- Auto defrosting system, ensuring long terms non frosting operation with low temperature setpoint.

- ► Large double-fold tempered glass window, together with fluorescent lights provides complete visibility of chamber interior.
- ► Long-Life brushless AC motor creates a smooth, quiet and uniformed shaking motion.
- Mirror-finished high quality #304 stainless steel for excellent durability of interiors.
- Standard shaking frame and standard stainless steel tray included, but without clamps.
- Vertical double trays for big capacity, though small footprint.
- Lockable outer door (on ZWY-1112B/2112B. ZWF-1112/2112) protects the materials against unauthorised access at all times.
- ► UV light reduces the air burden, keeping the chamber contamination free.

Model	ZWY-1102C	ZWY-2102C	ZWY-1102	ZWY-2102	ZWY-1112B	ZWY-2112B	ZWF-1112	ZWF-2112
Volume (L)	170		330		580		580	1
Shaking Mode	Orbital Orbit		Orbital		Orbital		Reciprocal	
Temperature	A +5°C to 60°C	Ambient - 20°C to 60°C (Min.4)	A +5°C to 60°C	Ambient - 20°C to 60°C (Min.4)	A +5°C to 60°C	Ambient - 20°C to 60°C (Min.4)	A +5°C to 60°C	Ambient - 20°C to 60°C (Min.4)
Temperature Accuracy	±0.1°C	,			,			
Temp. Uniformity	≤±0.5 @ 37°C							
Stroke (mm)	26		26		35		1 to 50 Stepless A	djustment
Speed (rpm)	30-300		30-300		30-300		30-240	
Tray (mm) (WxD)	496x350		734x458		970x560		940x580	
Capacity	*Glass dimensior	is may reduce max.	capacity					
50 ml	78	78			262		252	
100 ml	56		104		200		190	
250 ml	36		64		110		118	
500 ml	24		54		76		80	
750 ml	18		30		52		48	
1000 ml	6*		30		44		40	
2000 ml	4*		8*		15*		15*	
3000 ml	3*		7*		10*		10*	
5000 ml	2*		4*		8*		7*	
Tube Rack S/S	8		16		22		20	
96 Well Plate	18		38		60		64	
Inner dim. (mm)	615x450x640 (WxDxH)		845x530x765 (W	/xDxH)	1105x850x664 (WxDxH)		1105x850x664 (WxDxH)	
Exterior dim. (mm)	720x685x1310 (WxDxH)		950x755x1445 (\	WxDxH)	1430x880x1700 (WxDxH)		1430x880x1700 (WxDxH)	
Packing dim. (mm)	800x770x1490 (WxDxH)		1030x870 x1640	(WxDxH)	1540x1000x1910 (WxDxH)		1500x950x1860 (WxDxH)	
Net/Gross Weight (kg)	180/223	195/238	235/305	255/330	445/555	460/590	470/580	486/596
Power (W)	1000	1250	1050	1300	1600	1950	1600	1950
Electricity	220-240V 50/60 H	Hz						
Approval	CE, ISO							

\* Applies only when single layer shaking frame is equipped.

ZWY-1102C	ZWY-1102C, 170L, Economic Double Layer Shaking Incubator A +5°C-60°C, 30-300rpm
ZWY-2102C	ZWY-2102C, 170L, Economic Double Layer Shaking Incubator 4°C-60°C, 30-300rpm
ZWY-1102	ZWY-1102, 330L, Economic Double Layer Shaking Incubator A +5°C-60°C, 30-300rpm
ZWY-2102	ZWY-2102, 330L, Economic Double Layer Shaking Incubator 4°C-60°C, 30-300rpm
ZWY-1112B	ZWY-1112B, 580L, Economic Double Layer Shaking Incubator A +5°C-60°C, 30-300rpm
ZWY-2112B	ZWY-2112B, 580L, Economic Double Layer Shaking Incubator 4°C-60°C, 30-300rpm
ZWF-1112	ZWF-1112, 580L, Economic Reciprocal Double Layer Shaking Incubator A +5°C-60°C, 30-240rpm
ZWF-2112	ZWF-2112, 580L, Economic Reciprocal Double Layer Shaking Incubator 4°C-60°C, 30-240rpm
P5001	Frame for ZWY-1102C/2102C, ZWYR-2102C, Stl S/C #
P5002	Frame for ZWY-1102/2102, ZWYR-2102, S/C
P5003	Frame for ZWY-1112B/2112B, ZWYR-2112B, Stl S/C
P6010	Predrilled Tray for ZWY-1102C/2102C, ZWYR-2102C, S/S 🛪
P6011	Predrilled Tray for ZWY-1102/2102, ZWYR-2102, S/S
P6012	Predrilled Tray for ZWY-1112B/2112B, ZWYR-2112B, S/S
P6013	Predrilled Tray for ZWF-1112/2112, ZWFR-2112, S/S
P6031	Plain tray for ZWY-1102/2102, ZWYR-2102
P6038	Plain Tray for ZWY-1102C/2102C, ZWYR-2102C
P6046	Plain Tray for ZWY-1112B/2112B, ZWYR-2112B, S/S
P6047	Plain Tray for ZWF-1112/2112, ZWFR-2112, S/S
P7011	Universal Spring Pallet for ZWY-1102C/2102C, ZWYR-2102C
P7012	Universal Spring Pallet for ZWY-1102/2102, ZWYR-2102, Full Pcs
P7013	Universal Spring Pallet for ZWY-1112B/2112B, ZWYR-2112B, Full Pcs
P7014	Universal Spring Pallet for ZWF-1112/2112, ZWFR-2112, Full Pcs
P7023	Universal Spring Pallet for All Double Layer Model, 1/2 Pcs
P8001	T Clamp, S/S, for 50ml Flask, with Spring Retainer
P8002	T Clamp, S/S, for 100ml Flask, with Spring Retainer
P8013	T Clamp, S/S, for 150ml Flask, with Spring Retainer
P8003	T Clamp, S/S, for 250ml Flask, with Spring Retainer
P8014	T Clamp, S/S, for 300ml Flask, with Spring Retainer
P8004	T Clamp, S/S, for 500ml Flask, with Spring Retainer
P8005	T Clamp, S/S, for 750ml Flask, with Spring Retainer
P8006	T Clamp, S/S, for 1000ml Flask, with Spring Retainer
P8007	T Clamp, Spring S/S, for 2000ml Flask, with Spring Retainer
P8008	T Clamp, Spring S/S, for 3000ml Flask, with Spring Retainer
P8009	T Clamp, Spring S/S, for 5000ml Flask, with Spring Retainer
P8010	Tube Rack S/S
P8011	Tube Rack ABS Plastic
P8012	Clamp for 96 Well MicroPlate, S/S
P8017	Sticky Mat, 20 x 20cm
	# Ltl V // Control Ctool # C/C: Ctoinloss Ctool

# Stl S/C:Spray Coated Steel, \* S/S: Stainless Steel



# SHAKERS & ROCKERS

Shakers and rockers are ideal for almost any vessels from tubes through petri dishes and microtitre plates to conical flasks. Shakers are available with either an orbital action where the platform moves in a circular orbit or a reciprocal linear movement where the platform moves back and forth horizontally. An orbital action provides a swirling action on the sample, ideal for aeration. A linear shaker is more aggressive making it ideal for applications such as extractions. A see saw rocking action provides a wave motion in the sample, ideal for washing.







# BENCHTOP Shakers & Rockers



LABWIT offers a comprehensive range of benchtop shakers and rockers, units are available with three actions, orbital, linear and see-saw, and two sizes.

# **Benchtop Orbital Shaker**

- ► The ZWY-304 provides a smooth uniform circular motion with an orbit of 30mm. The shaker can be used in incubators and warm room if the temperature is not higher than 50°C.
- The standard cradle platform can turn ZWY-304 unit into a very effective mini platform shaker, which allows for different combinations of vessels offering maximum versatility. Alternatively, the tray is interchangeable with flask clamp tray (ZWF-334) or non-slip mat tray (ZWQ-344).
- ► Speed is variable from 30 to 300rpm, with shaking times can be set to run from 0 to 500 hours, or set for continuous operation. The non-volatile memory restores all settings after power failure.

### **Benchtop Reciprocal Shaker**

- ► The ZWF-334 lab scale platform shaker has a powerful yet quiet shaking mechanism that has been designed for problem free continuous use. This unit provides a versatile linear shaking action with unique 4 level stroke adjustment from 20, 24, 30 to 40mm, ideal for most extracting applications.
- Speed is fully variable from 30-300rpm, and is set digitally for consistency. The speed is microprocessor controlled and accurately maintained even over long runs. The built-in timer can be set from 0 to 500 hours. After the timer has counted down, the shaker stops and sounds an alert. The flask clamp tray is fitted as standard, while can be interchanged with non-slip mat tray or cradle platform.

### **Benchtop See-Saw Rocker**

► ZWQ-344 has a see-saw rocking action that creates a wave motion within vessels such as culture flask, petri dishes etc. A unique feature of the ZWQ-344 unit provides 4 level of tilt angles from 5°, 8°, 10° and 12°, ideal for washing.

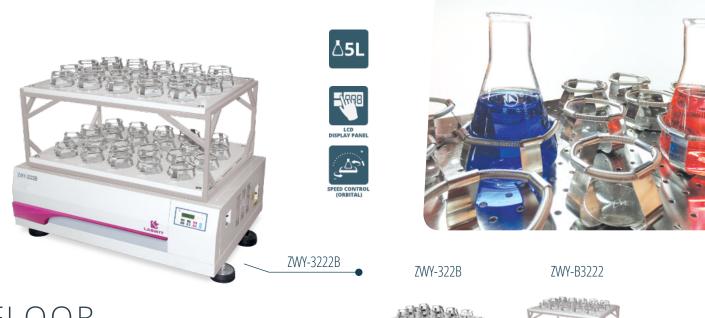
► The speed is microprocessor controlled, variable from 20-80rpm. The model is supplied with a non-slip mat. The large LCD screen with user-friendly digital keypad ensures clear readout and easy operation. Like all other benchtop shakers, all settings of speed and time are encrypted to prevent unauthorised changes.

Model	ZWY-304	ZWF- 334	ZWQ- 344			
Action Mode	Orbital	Reciprocal	Rocker			
Speed Range (/min)	30-300 rounds	30-300 strokes	20-80 tilts			
Speed Variation (/min)	±1 round	±1 stroke	±1 tilt			
Stroke	Ø30 mm	20, 24, 30, 40 mm	5°, 8°, 10°, 12°			
Tray Dimensions (mm)	330x350	330x350	330x350			
Accessory Included	Rubber Bar Tray	Clamp Tray	Tray with non-slip mat			
Timer	0 to 500 hours					
Maximum Load (kg)	3.5	3.5	4			
Overall Dimensions (mm) (WxDxH)	400x350x235	400x350x160	400x360x185			
Packing Dimensions (mm) (WxDxH)	490x490x420	480x430x400	480x430x400			
Net / Gross Weight (kg)	25/37	21/31	10/20			
Safety Features	Non-volatile Memory, Power-off Recovery, Timer					
Power (W)	50					
Electricity	220-240V 50/60 Hz					
Approval	CE, ISO					

Clamp Tray	<b>P8001</b>	<b>P8002</b>	<b>P8003</b>	<b>P8004</b>	<b>P8005</b>	<b>P8006</b>	<b>P8007</b>	<b>P8008</b>	<b>P8009</b>	<b>P8010</b>	<b>P8012</b>
	50ml	100ml	250ml	500ml	750ml	1000ml	2000ml	3000ml	5000ml	Tube Rack S/S	96 WellPlate
P6016	24	17	9	7	-	-	-	-	-	3	6

Order Information		
ZWY-304 Orbital Benchtop Shaker, 30-300rpm	P8013	T Clamp, S/S, for 150ml Flask, with Spring Retainer
ZWF-334 Reciprocal Benchtop Shaker, 30-300rpm		T Clamp, S/S, for 250ml Flask, with Spring Retainer
ZWQ-344 Rocking Benchtop Shaker, 20-80rpm		T Clamp, S/S, for 300ml Flask, with Spring Retainer
Tray for ZWY-304/ZWF-334, S/S 🛠 Clamp Tray	P8004	T Clamp, S/S, for 500ml Flask, with Spring Retainer
Tray for ZWY-304/ZWF-334, S/S Bar Tray x 1, Rubber Bar x 4, Knob x8	P8010	Tube Rack S/S
Tray for ZWQ-344, Stl S/C# Tray x 1, Spring x 4, Rubber Mat x 1		Tube Rack ABS Plastic
Universal Spring Tray for ZWY-304/ZWF-334	P8012	Clamp for 96 Well Plate, S/S
T Clamp, S/S, for 50ml Flask, with Spring Retainer	P8017	Sticky Mat, 20 x 20cm
T Clamp, S/S, for 100ml Flask, with Spring Retainer		* S/S: Stainless Steel #Stl S/C:Spray Coated Steel
	ZWY-304 Orbital Benchtop Shaker, 30-300rpmZWF-334 Reciprocal Benchtop Shaker, 30-300rpmZWQ-344 Rocking Benchtop Shaker, 20-80rpmTray for ZWY-304/ZWF-334, S/S & Clamp TrayTray for ZWY-304/ZWF-334, S/S Bar Tray x 1, Rubber Bar x 4, Knob x8Tray for ZWQ-344, Stl S/C# Tray x 1, Spring x 4, Rubber Mat x 1Universal Spring Tray for ZWY-304/ZWF-334T Clamp, S/S, for 50ml Flask, with Spring Retainer	ZWY-304 Orbital Benchtop Shaker, 30-300rpm   P8013     ZWF-334 Reciprocal Benchtop Shaker, 30-300rpm   P8003     ZWQ-344 Rocking Benchtop Shaker, 20-80rpm   P8014     Tray for ZWY-304/ZWF-334, S/S & Clamp Tray   P8004     Tray for ZWY-304/ZWF-334, S/S Bar Tray x 1, Rubber Bar x 4, Knob x8   P8010     Tray for ZWQ-344, Stl S/C# Tray x 1, Spring x 4, Rubber Mat x 1   P8011     Universal Spring Tray for ZWY-304/ZWF-334   P8012     T Clamp, S/S, for 50ml Flask, with Spring Retainer   P8017





# FLOOR **Orbital Shakers**

LABWIT floor shakers are designed to uniformly shake more than a hundred of samples 24/7 under the extreme environmental conditions, like in warm and in cold room (5 to 50°C non condensation). The powerful drive mechanism guarantees reliable, smooth and quiet orbital shaking without vibration, even on a high speed up to 300rpm. They are ideal for mass production, especially the two platform models ZWY-3222B and ZWY-B3222 are widely used in biochemical, fermentation and pharmaceutical experiments for big volumes or a lot of small flasks.

- Microprocessor controller maintains the precision of speed control.
- ► Large LCD display presents all actual and set parameters.
- Password protection of all parameters against unauthorised change.
- ► Operating parameter retention after power failure.
- ► Electronic timer with 0 to 999 hours or continues operation.
- ► Soft start and stop function.

- Patented over-speed protection minimises the risk of un controlled shaking.
- ► Two platform models provide increased capacity; accept 50ml to 1L flasks on lower level, or up to 5L if without the top tray.
- Powerful brushless AC induction motor with quadruple counterbalanced drive system.
- ▶ Superior cast iron and stainless steel critical components.

Model	ZWY-322B	ZWY-3222B	ZWY-322C	ZWY-B3222			
Action Mode	Orbit						
Stroke (mm)	Ø35		Ø50	Ø50			
Speed (rpm)	30-300	30-300					
Speed Variation (rpm)	±1						
Timer	0 to 999 hours						
Number of Trays	1	2	1	2			
Tray (mm) (WxD)	940x700						
Flasks Configurations*	*Glass dimensions may r	educe max. capacity					
50 ml	161	322	161	322			
100 ml	100	200	100	200			
250 ml	61	122	61	122			
500 ml	52	104	52	104			
750 ml	37	74	37	74			
1000 ml	30	60	30	60			
2000 ml	19*	-	19*	-			
3000 ml	12*	-	12*	-			
5000 ml	8*	-	8*	-			
Tube Rack S/S	14	28	14	28			
96 Well Plate	42	84	42	84			
Exterior Dimensions (mm) (WxDxH)	1115x840x455	1115x840x815	1115x840x455	1115x840x815			
Packing Dimensions (mm) (WxDxH)	1210x920x690	1210x920x1040	1210x920x690	1210x920x1040			
Net/Gross Weight (kg)	280/335	310/370	330/425	350/450			
Power (W)	300						
Electricity	220-240V 50/60 Hz						
Approval	CE, ISO						

ZWY-322B	ZWY-322B, Single Layer, Orbital Floor Shaker, Ø35mm, 30-300rpm	P8002	Clamp, S/S, for 100ml Flask, with Spring Retainer		
ZWY-3222B	ZWY-3222B, Double Layer, Orbital Floor Shaker, Ø35mm, 30-300rpm	P8013	Clamp, S/S, for 150ml Flask, with Spring Retainer		
ZWY-322C	ZWY-322C, Single Layer, Orbital Floor Shaker, Ø50mm, 30-300rpm	P8003	Clamp, S/S, for 250ml Flask, with Spring Retainer		
ZWY-B3222	ZWY-B3222, Double Layer, Orbital Floor Shaker, Ø50mm, 30-300rpm	P8014	Clamp, S/S, for 300ml Flask, with Spring Retainer		
P5006	Single Layer Shaking Frame for ZWY-322B/3222B, Stl S/C	P8004	Clamp, S/S, for 500ml Flask, with Spring Retainer		
P5008	Single Layer Shaking Frame for ZWY-322C/ B3222, Stl S/C	P8005	Clamp, S/S, for 750ml Flask, with Spring Retainer		
P6020	Predrilled Tray for ZWY-322B/3222B Stl S/C	P8006	Clamp, S/S, for 1000ml Flask, with Spring Retainer		
P6021	Predrilled Tray for ZWY-322C/B3222 Stl S/C	P8007	Clamp, Spring S/S, for 2000ml Flask, with Spring Retainer		
P6048	Plain Tray for ZWY-322B/3222B Stl S/C	P8008	Clamp, Spring S/S, for 3000ml Flask, with Spring Retainer		
P6049	Plain Tray for ZWY-322C/B3222 Stl S/C	P8009	Clamp, Spring S/S, for 5000ml Flask, with Spring Retainer		
P7019	Universal Spring Pallet for ZWY-322B/3222B	P8010	Tube Rack S/S 🛠		
P7020	Universal Spring Pallet for ZWY-322C/B3222	P8011 Tube Rack ABS Plastic			
P7022	Universal Tray for All Horizontal Model, 1/2 Pcs	P8012 Clamp for 96 Well Plate, S/S			
P8001	Clamp, S/S, for 50ml Flask, with Spring Retainer		# Stl S/C:Spray Coated Steel		

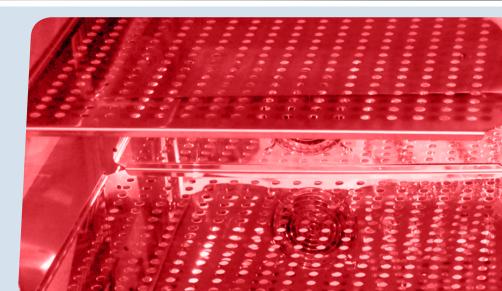




LABWIT range of laboratory incubators and drying ovens are made to the highest standard for exceptional quality, trusted for their consistency in delivering optimum performance and reliability in the lab.

LABWIT's collection of incubators provide precisely controlled environment with wide variety of sizes and types, which literally are suitable for all purposes in a broad range of applications. The general purpose incubators are designed for general lab use and feature direct heating and water jacket models for optimised temperature uniformity across the inner chambers. The direct heating CO<sub>2</sub> incubator has been carefully engineered and proven to provide contamination-free, reliable and easy-to-use environment conditions to protect the samples and optimize cell growth. Besides these, LABWIT also offers incubators with cooling as well as humidity controlling functions, to extend the functionality of our proud product lines.

Moreover, LABWIT drying ovens are available in two types, bottom heating and back heating models. Both types are designed for daily lab or industrial work, from drying sterilisation applications to complex controlled heating applications.





# DIRECT HEATING CO<sub>2</sub> Incubator

LABUR

The LABWIT ZOCR Series  $CO_2$  Incubators are intricately crafted to provide reliable, user-friendly control over environmental conditions, ensuring the protection of samples and the enhancement of cell growth. This latest innovation from LABWIT showcases a fanless micro-circulation design with closed-loop HEPA filtration, effectively reducing dead corners in the chamber where potential contamination could lurk.

**Touch Screen Panel** Start your complete access and full control from your fingertips

ZOCR-1160



# Integrated

Comprehensive information available at your fingertips

#### **User-friendly**

Graphic user interface, easy to operate with icons and prompts

**Intelligent** Self diagnostic alarm system monitors all functions and parameters and prompts the user in case of errors

#### **Touch Screen Panel**

#### 1. Decon

Start / stop Decon Cycle

#### 2. Alarm Indicator

Blinks when alarm occurs. Alarms (except for sensor failures) can be muted by pressing this icon, and may ring back in 5 minutes if alarm conditions still persist.

#### 3. Door Ajar

Lights when door is opened.



#### 4. CO, Tank Indicator

Lights when indicated CO<sub>2</sub> tank supply is in use A Tank: Primary B Tank: Secondary

#### 5. Heating Indicator

Lights when heating elements are working

#### 6. Gas Inject Indicator

Lights when CO<sub>2</sub> gas is injected.

- 7. Enter set menu
- 8. Clock display

## Precise Parameter Controlling System All-round cares about your cell growth

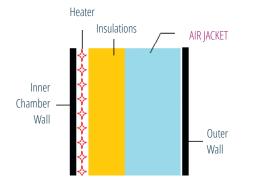
#### **Direct Heating and Air Jacket System**

The chamber design combines direct heating and air jacket elements resulting in efficient thermal isolation of the chamber, rapid temperature recovery and superior protection of samples from ambient temperature fluctuations. Multiple direct heating elements are mounted on each side of the chamber and are controlled independently by the microprocessor to provide outstanding temperature uniformity. One element in the external door and a second within the main unit and adjacent to the perimeter of the glass door, are controlled proportionally to eliminate any of condensation on the glass door.

The unique Air Jacket system creates isolation between insulation and ambient, thereby minimising the impact of ambient temperature fluctuations on the working chamber, and maintaining more stable temperature control.

#### Fan-less Chamber with Micro-circulation System

The chamber features a brand-new fanless micro-circulation system combined with an inline closed-loop HEPA filter. The micro-circulation system ensures that there are no temperature gradients inside the chamber, achieving perfect temperature uniformity.



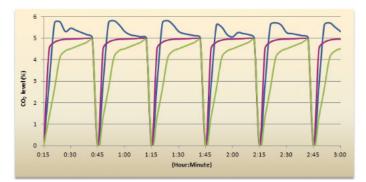
The closed-loop HEPA filtration system is located outside the chamber, unaffected by the chamber's 140°C high-temperature sterilisation program.

#### World Class Infrared (IR) CO<sub>2</sub> Sensor

LABWIT incorporates a single beam, dual wavelength IR  $\rm CO_2$  sensor, providing the most accurate measurement of  $\rm CO_2$  concentrations available to the market. The superior performance and accuracy of the IR sensor are the most noticeable when applied to situations where temperature and humidity fluctuate rapidly, such as when the door is opened frequently.

IR sensor is located out of the chamber; meaning removal is not required when performing the high temperature decontamination cycle.

IR sensor is drift-free, auto-zero automatically adjusts baseline for optimum accuracy, no need to calibrate by the users.



- Company A's Model: Slow recovery (Typical TC Sensor)
- Company B's Model: Overshoot
- LABWIT ZOCR Model: Fast Recovery, non-overshoot (IR Sensor)

### **Superior Contamination Controlling Features**

#### Maximizing the safety for where your cells will be thriving

#### **In-Line HEPA Filter**

Protects cultures by removing potential contamination sources before CO<sub>2</sub> gas is injected into the chamber. In-line filter should be checked and replaced regularly.



#### **Seamless Chamber & Coved Corners**

The entire inner chamber is made of high grade electro- polished easy-to-clean stainless steel. All coved corners minimises the unnecessary chamber surfaces where contaminants can hide.

The Fan-less chamber design not only eliminates the circulating fan, which are prone to contamination and create numerous difficult-to-clean dead corners in traditional  $CO_2$  incubators, facilitating cleaning and optimising the sterile chamber, but also significantly increases the actual usable space of the inner chamber.

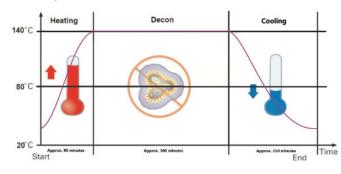
### **Safety Features**

- Non-volatile memory guarantees data integrity in the event of power interruption.
- Over-temperature protections unit: alarms when temperature deviation is detected, and heaters are cut off when the temperature is overshot by 3°C.
- ► CO<sub>2</sub> deviation alarm protects the pH value of the culture media.
- ► CO<sub>2</sub> supply is interrupted upon door opening to avoid unnecessary gas waste.
- ► Audio and visual alarm reminds of low supply of CO<sub>2</sub> gas.

#### 140°C Decontamination Cycle

The ZOCR Series uses time-ed decontamination cycle. The high temperature decontamination cycle uses 140°C dry heating cycles, effective and maintenance free method to ensure the contaminating agents are eradicated.

The incubator can be fully sterilised and ready for a new application after an 10-hour overnight, maintenance free Decon Cycle.



- Alarms provide optimum protections over all sensor failures.
- ▶ Over-current and leakage protection.
- Lockable outdoor protects biohazard samples from un authorised access.
- ► CO<sub>2</sub> tank backup system (Optional): integrated gas tank switcher allows the connection of two CO<sub>2</sub> gas supplies.

When low gas supply in the primary tank is detected, the controller switches automatically to the secondary supply.

	Order Information
ZOCR-1160	ZOCR-1160, 160L, Premium DH CO <sub>2</sub> Incubator, IR Sensor, A +5°C-60°C, 0-20%
P4002	Right Hinged Door
P4003	Built-in Printer
P4004	Gas Tank Backup Kit
P5033	TCP/IP Interface
P5035	USB Port Interface
P9033	Perforated Shelf Plate for ZOCR-1160

### **Other Features**

#### Outer Door

Right or Left Hinge Reversible. Heated for preventing condensations.

Lockable outer door protects your samples against unauthorised access, especially when biologically hazardous material is involved.



### Humidity Sensor

Ensures continuous monitoring over the humidity level. Resolution of display: 1% Passive humidity read-out. Easy to

dismantle for high temperature Decon Cycle.

#### Stacking Locator

Corners are pressed for easy locating during stacking.



#### Shelving

SUS304 electro-polished stainless steel. Anti-tip, easy to dismantle without tools. Perforated, for improving uniformity.

#### Water Pan

Autoclavable stainless steel water pan heated by controlled base heater to manage humidity and assist humidity recovery.

#### Access Port

Makes validation easy and provide the user convenience for connecting instrumentation. A rubber stopper is included as standard.

#### Glass Inner Door

Tempered glass door allows observations without interference to the inner chamber environment.







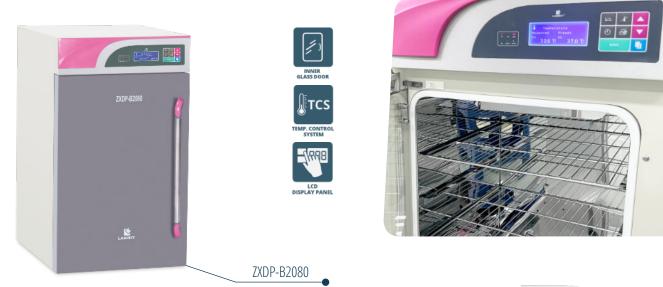








Model	ZOCR-1160
	Temperature
Heating Mode	Direct Heat & Air Jacket
Control Method	P.I.D Microprocessor
Temperature Range	Ambient +5°C to 60°C
Temperature Uniformity	≤±0.3 @ 37°C
Temperature Accuracy	≤±0.2°C
Ambient Temperature Range	10°C - 35°C
	CO,
CO <sub>2</sub> Control Method	P.I.D Microprocessor
CO, Range (% CO,)	0-20
CO, Accuracy (% CO,)	≤±0.2
CO, Sensor	IR, Single-Beam, Dual Wavelength, Auto-zeroing
	Humidity
Humidification Method	Water Pan
Humidity Range (RH)	Up to 95% @ 37°C
Humidity Display Resolution (RH)	0.01
	Contamination Control
Contamination Control Methods	High Temperature 140°C Decon Cycle
containing control methods	0.3 Micron In-line HEPA Filter for CO, Injection
	Controlling system
Circulation Mode	Fan-less, Closed Loop HEPA Filtration
Control Panel	5.6" TFT Touch Screen
Control Panel	Low & Over temperature, Low & Over CO <sub>2</sub> Deviation, Door Ajar, Low Gas Supply, All Sensor Failures,
Alarms	Printer Failure
CO <sub>2</sub> Tank Backup System	Option, with Low Gas Supply Alarm, Auto Switch
Printer	Option, Built-in
Modbus TCP/IP Port	Option
USB2.0 Port	Option
	Capacity
Internal Volume (L)	160
Internal Dimensions (WxDxH)(mm)	603 x 456 x 650
Exterior Dimensions (WxDxH)(mm)	720 x 710 x 980
Packing Dimensions (WxDxH)(mm)	850 x 830 x 1220
Net/Gross Weight (Kg)	110/130
Door Type	Left/Right Reversible
Number of Shelves (Std/Max)	3/10
Max. Load (Kg)	10/Shelf; 25/Unit
Shelves Size (WxD) (mm)	530 x 400
Power (W)	220/240 Volt 50/60 Hz
Electricity	1200W
Approval	CE, ISO



# DIRECT HEATING Incubators



ZXDP-B Series of Direct Heating Incubators offer an economical incubation method to a variety of micro-organism cultures. As a standard feature, all incubators have a high-tech microprocessor controller that maintains accurate temperature control (PID) of the chamber in the range of ambient  $+5^{\circ}$ C to  $65^{\circ}$ C. With an accuracy of  $\pm 0.1^{\circ}$ C, a user-friendly sealed control panel allows easy digital setting and fast readout of time and temperature as well as an alarm signal if there is a deviation from set point parameters. The processor of our incubators can store up to 9 programs-18 steps-into a non-volatile memory. Programs can be used for running multiple "ramp and soak" cycles up to 99 times. Of course the incubators can also be used as a constant (one) temperature incubator.

- ► P.I.D. microprocessor ensures the precision of temperature control under both fixed value mode and program mode.
- ► Fully programmable through the keyboard (9 programs/18 steps).
- ► Forced-air circulation provides uniformity of ±0.5°C @ 37°C.
- ► Audible and visible alarm on over temperature.
- ► Password protection against unauthorised access to all settings.

- ► Non-volatile memory retains preset parameters after an accidental power interruption.
- ► Large LCD display for easy parameters setting and fast readout.
- ► Inner glass door provides complete visibility to the chamber.
- ► Standard 2 grids included.

Model	ZXDP-B2050	ZXDP-B2080	ZXDP-B2160	ZXDP-B2270			
Heat Mode	Direct Heat (With Ge	Direct Heat (With Gentle Circulation)					
Volume (L)	50	80	160	270			
Temperature	Ambient +5°C to 65	°C					
Temperature Accuracy	±0.1°C						
Temperature Uniformity	±0.5 @ 37°C						
Alarm	Enabled						
Timer	0 - 9999 mins						
Setting	Digital						
Display	LCD	LCD					
Grid Included	2 (max 4)	2 (max 4)	2 (max 4)	2 (max 4)			
Grid Size(mm) (WxD)	330x345	380x395	480x495	530x595			
Distance Between Grids (mm)	80	100	130	160			
Inner Dimensions (mm) (WxDxH)	350x350x410	400x400x500	500x500x650	600x550x820			
Exterior Dimensions (mm) (WxDxH)	470x520x785	520x570x880	620x670x1030	740x740x1280			
Packing Dimensions (mm) (WxDxH)	550x610x960	600x660x1050	700x760x1210	830x850x1460			
Net Weight (kg)	33/57	40/73	63/102	63/140			
Power (W)	200	250	380	550			
Electricity	220-240V 50/60 Hz						
Approval	CE, ISO						

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	Order Information
ZXDP-B2050	ZXDP-B2050, 50L, Direct Heat Incubator, A +5°C-65°C
ZXDP-B2080	ZXDP-B2080, 80L, Direct Heat Incubator, A +5°C-65°C
ZXDP-B2160	ZXDP-B2160, 160L, Direct Heat Incubator, A +5°C-65°C
ZXDP-B2270	ZXDP-B2270, 270L, Direct Heat Incubator, A +5°C-65°C
P9001	Grid Plate for ZXDP-B2050, S/S 🛠
P9002	Grid Plate for ZXDP-B2080, S/S
P9004	Grid Plate for ZXDP-B2160, S/S
P9005	Grid Plate for ZXDP-B2270, S/S
	* S/S: Stainless Steel





# WATER JACKET Incubators

ZXGP incubators offer an economical incubation method for a variety of microorganism cultures with highly uniform temperature control. The processor of our incubators can store up to 9 programs-18 steps-into a "non-volatile" memory. Programs can be used for running multiple "ramp and soak" cycles up to 99 times. Of course the incubators can also be used as a constant (one) temperature incubator. With a triple wall construction and large volume of water, ZXGP Series Water Jacketed Incubators provide unsurpassed temperature stability and protection against heat loss. The water jacket technology holds the temperature for extended periods of time, which is critical during power failures. Under test conditions, the temperature initially drops at only 1°C per hour, and just 8.5°C in 10 hours, by contrast, on most direct heating models, which comes with 3.4°C and more than 15°C dropping instead.

ZXGP-B2160

Model	ZXGP-B2080	ZXGP-B2160	ZXGP-B2270	
Heat Mode	Water Jacket (With Gentle Circulation)			
Volume (L)	80	160	270	
Temperature	Ambient +5°C to 65°C	Ambient +5°C to 65°C		
Temperature Accuracy	±0.1°C			
Temperature Uniformity	±0.5 @ 37°C			
Alarm	Enabled			
Timer	0 - 9999 mins			
Setting	Digital			
Display	LCD			
Grid Included	2 (max 3)	2 (max 4)	2 (max 4)	
Grid Size(mm) (WxD)	380x395	480x495	580×595	
Distance Between Grids (mm)	110	126	150	
Inner Dimensions (mm) (WxDxH)	400x400x500	500x500x650	600x600x750	
Exterior Dimensions (mm) (WxDxH)	560x525x870	660x625x1020	760x725x1120	
Packing Dimensions (mm) (WxDxH)	680x645x1040	780x745x1190	880x845x1290	
Net/Gross Weight (kg)	45/69	78/105	115/145	
Power (W)	640	1140	1740	
Electricity	220-240V 50/60 Hz	·		
Approval	CE, ISO			

#### **Order Information**

ZXGP-B2080	ZXGP-B2080, 80L, Water Jacket Incubator, A +5°C-65°C	P9007	Grid Plate for ZXGP-B2080, S/S
ZXGP-B2160	ZXGP-B2160, 160L, Water Jacket Incubator, A +5°C-65°C	P9008	Grid Plate for ZXGP-B2160, S/S
ZXGP-B2270	ZXGP-B2270, 270L, Water Jacket Incubator, A +5°C-65°C	P9009	Grid Plate for ZXGP-B2270, S/S



# PREMIUM BOD Incubators



The Premium BOD Incubators of the ZXSD-R Series from LABWIT are designed to meet a variety of advanced experimental needs, ranging from BOD determination to incubation of micro-organism cultures, preservation of samples, Drosophila incubation and determination of enzymatic activities, to any applications that need incubation at close to ambient temperature or lower. It features a 4.3" TFT touch screen panel, which ensures clear indication as well as easy operations. Each of the four models has a wide temperature range from ambient -18°C (minimum 4°C) to 65°C and can be operated at a single user defined temperature, but can also be programmed with up to 9 different temperature segments within a time frame (18 steps). The (cooling) compressor runs continuously and the control is done through a solenoid valve for more precise temperature control if lower than ambient temperatures are required.

- ► P.I.D. microprocessor ensures the precision of temperature control under both fixed value mode and programmable mode.
- $\blacktriangleright$  4.3" TFT touch screen panel displays all parameters, easy operation and readout for all control modes.
- ▶ Three-dimensional airflow system ensures fast response, and high uniformity of  $\pm 0.5^{\circ}$ C @ 37°C.
- ► Sound cooling system with CFC free refrigerant, ozone layer friendly.
- ► Automatic defrosting: only minimal ice formation and very low heat discharge into working area occurs the unit can continue operating when defrosting.
- ▶ Real-time electronic timer from 0 to 9999 mins.

- ► 3 steps adjustable fan speed, offering more precisely controlled environment of incubation, without concerns of media or samples drying out.
- ► Non-volatile memory retains pre-set parameters in case of power interruption.
- ► Triple safety protections for samples, incubator and environment.
- ► Independent device for over temperature, high current flow and electric leakage.
- ► Standard configuration includes a double layer tempered glass observe window in outer door, an inner glass door, forced air circulation, a fluorescent lamp, Ø50mm access port and 2 grids, built-in printer.
- ▶ Optional UV Lamp, RS-232, RS-485 interface available.

Model	ZXSD-R1090	ZXSD-R1160	ZXSD-R1270	ZXSD-R1430
Volume (L)	90	160	270	430
Door Type	Outer door with obser	vation window, and heat resist	tance glass inner door	
Temperature Range	4°C to 65°C			
Temperature Accuracy	±0.1°C			
Temperature Uniformity	± 0.5 @ 37°C			
Alarm	Enabled			
Timer (min)	0 - 9999 mins			
Settings	Digital			
Display	4.3" TFT Touch Screen			
Grids Included	2 (Max 11)	2 (Max 15)	2 (Max 18)	2 (Max 25)
Grid Size (mm) (WxD)	310x356	410x456	513x556	555x656
Inner Dimensions (mm) (WxDxH)	400x410x550	500x500x650	600x600x750	700x645x950
Exterior Dimensions (mm) (WxDxH)	550x620x1280	630x740x1380	750x840x1480	840x880x1680
Packing Dimensions (mm) (WxDxH)	630x710x1440	730x820x1560	830x930x1660	940x980x1860
Net/Gross Weight (kg)	68/112	98/155	153/203	180/240
Power (W)	710	860	950	1350
Electricity	220-240V 50/60 Hz			
Approval	CE, ISO			

ZXSD-R1090	ZXSD-R1090, 90L, Premium Cooled BOD Incubator, 4°C-65°C
ZXSD-R1160	ZXSD-R1160, 160L, Premium Cooled BOD Incubator, 4°C-65°C
ZXSD-R1270	ZXSD-R1270, 270L, Premium Cooled BOD Incubator, 4°C-65°C
ZXSD-R1430	ZXSD-R1430, 430L, Premium Cooled BOD Incubator, 4°C-65°C
P5016	RS-485 Interface
P5021	RS-232 Interface
P5022	UV Lighting, 8W, for ZXSD/ZXSP Series
P9010	Grid Plate for ZXSD-B1090, ZXSD-R1090, S/S 🛠
P9011	Grid Plate for ZXSD-B1160, ZXSD-R1160, S/S
P9012	Grid Plate for ZXSD-B1270, ZXSD-R1270, S/S
P9013	Grid Plate for ZXSD-B1430, ZXSD-R1430, S/S
	* S/S: Stainless Steel





# PREMIUM LOW TEMPERATURE **Incubators**



The LABWIT Premium Incubators ZXSP-R Series feature advanced cooling system as well as more engineered structure design which make it possible to cool down as low as -10°C.

Both the interior and exterior are made of robust materials for lifetime operations. The inner chamber is made of high quality #304 stainless steel sheets, with 4 round coved corners. All exposed edges are de-burred to insure no sharp edges. The exterior is cold rolled steel finished with powder coated polyurethane finish, which is resistant to most chemicals and easily cleaned with mild household detergents.

► Gas tight and high density insulated outer door without glass window ensures excellent chamber insulation even when running at minus temperatures.

- ► P.I.D. microprocessor ensures the precision of temperature control under both fixed value mode and program mode.
- ightarrow 4.3" TFT touch screen panel displays all parameters, easy operation and readout for all control modes.
- ▶ Three-dimensional heating system ensures fast response, and high uniformity of  $\pm 0.5^{\circ}$ C @ 37°C.

► Air tight outer door design ensures optimised insulation, achieving the best temperature controlling performance under low temperature setpoint.

▶ Optional UV Lamp, RS-232, RS-485 interface available.

► Sound cooling system with CFC free refrigerant and automatic defrosting system ensure long term operation at low temperature setpoint without frosting issue.

- ▶ Real-time electronic timer from 0 to 9999 mins.
- ► Non-volatile memory retains pre-set parameters in case of power interruption.
- ► Triple safety protections for samples, incubator and environment.
- ► Independent device for over temperature, high current flow and electric leakage.
- ► Standard configuration includes forced air circulation, a fluorescent lamp, Ø50mm access port and 2 grids, built-in printer.
- ▶ No inner glass door is included.

Model	ZXSP-R0160	ZXSP-R0270	ZXSP-R0430
Volume (L)	160	270	430
Door Type	Single door with high-density	y insulation	
Temperature Range	-10°C to 65°C		
Temperature Accuracy	±0.1°C		
Temperature Uniformity	±0.5@37°C		
Alarm	Enabled		
Timer (min)	0 - 9999 mins		
Settings	Digital		
Display	4.3" TFT Touch Screen		
Grid size (mm) (WxD)	380x456	477x556	513x656
Grids No.	2 (Max.15)	2 (Max. 18)	2 (Max. 25)
Inner dimensions (mm) (WxDxH)	500x500x650	600x600x750	700x645x950
Exterior dimensions (mm) (WxDxH)	650x680x1380	750x780x1480	850x820x1680
Packing dimensions (mm) (WxDxH)	770x820x1590	830x930x1660	940x980x1860
Net/Gross Weight (kg)	100/160	153/190	180/240
Power (W)	860	950	1350
Electricity	220/240 Volt 50/60 Hz		
Approval	CE, ISO		

	Order Information	
ZXSP-R0160	ZXSP-R0160,160L, Premium Low Temperature BOD Incub	oator, -10°C to 65°C
ZXSP-R0270	ZXSP-R0270, 270L, Premium Low Temperature BOD Incul	bator, -10°C to 65°C
ZXSP-R0430	ZXSP-R0430, 430L, Premium Low Temperature BOD Incul	bator, -10°C to 65°C
P5016	RS-485 Interface	
P5021	RS-232 Interface	
P5022	UV Lighting, 8W, for ZXSD/ZXSP Series	
P9030	Grid Plate for ZXSP-R0160, S/S	1
P9031	Grid Plate for ZXSP-R0270, S/S	
P9032	Grid Plate for ZXSP-R0430, S/S	
	✤ S/S: Stainless Steel	

ZXSP-R0160



# ECONOMIC BOD Incubators



The BOD incubators of the ZXSD-B Series from LABWIT are designed to meet a variety of advanced experimental needs, ranging from BOD determination to incubation of micro-organism cultures, preservation of samples, Drosophila incubation and determination of enzymatic activities. All these applications require precise and constant temperature control. Each of the four models has a wide temperature range from ambient -18 °C (minimum 4°C) to 65 °C and can be operated at a single user defined temperature, but can also be programmed with up to 9 different temperature segments within a time frame. (18 steps). The (cooling) compressor runs continuously and the control are done through a solenoid valve for more precise temperature control if lower than ambient temperatures are required.

ZXSD-B Series BOD incubators also feature a back-up program in case of power failures, the stored parameters remain in the memory of the microprocessor. Your experiment therefore resumes under the same conditions even when interrupted by an interruption of power.

- ► P.I.D. microprocessor ensures the precision of temperature control under both fixed value mode and program mode.
- ► Large blue LCD display for temperature diagram, easy readout for program control.
- $\blacktriangleright$  Three-dimensional heating system ensures fast response, and high uniformity of ±0.5°C @ 37°C.
- ► Sound cooling system with CFC free refrigerant.
- ► Automatic defrosting: only minimal ice formation and very low heat discharge into working area occurs the unit can continue operating when defrosting.
- ► 3 steps adjustable fan speed, offering more precisely controlled environment of incubation, without concerns of media or samples drying out.
- ▶ Real-time electronic timer from 0 to 9999 mins.

- ► Password protection of all parameters against unauthorised access.
- ► Non-volatile memory retains pre-set parameters in case of power interruption.
- ► Triple safety protections for samples, incubator and environment.
- ► Independent device for over temperature, high current flow and electric leakage.
- ► Standard configurations; a double layer tempered glass observe window in outer door, an inner glass door, forced air circulation, a fluorescent lamp, Ø50mm access port and 2 grids.
- ► Optional built-in printer, UV Lamp, RS-232 interface available.

Model	ZXSD-B1090	ZXSD-B1160	ZXSD-B1270	ZXSD-B1430
Volume (L)	90	160	270	430
Door Type	Outer door with obs	ervation window, and heat	t resistance glass inner doo	or
Temperature Range	4°C to 65°C			
Temperature Accuracy	±0.1°C			
Temperature Uniformity	±0.5 @ 37°C			
Alarm	Enabled			
Timer (min)	0 - 9999 mins			
Settings	Digital	Digital		
Display	LCD			
Grids Included	2 (Max 11)	2 (Max 15)	2 (Max 18)	2 (Max 25)
Grid Size (mm) (WxD)	310x356	410x456	513x556	555x656
Inner Dimensions (mm) (WxDxH)	400x410x550	500x500x650	600x600x750	700x645x950
Exterior Dimensions (mm) (WxDxH)	550x555x1280	630x740x1380	750x840x1480	840x880x1680
Packing Dimensions (mm) (WxDxH)	630x710x1440	730x820x1560	830x930x1660	940x980x1860
Net/Gross Weight (kg)	68/112	98/155	153/203	180/240
Power (W)	710	860	950	1350
Electricity	220-240V 50/60 Hz	1		i
Approval	CE, ISO			

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	Order Information	
ZXSD-B1090	ZXSD-B1090, 90L, Economic Cooled BOD Incubator, 4°C-65°C	
ZXSD-B1160	ZXSD-B1160,160L, Economic Cooled BOD Incubator, 4°C-65°C	
ZXSD-B1270	ZXSD-B1270, 270L, Economic Cooled BOD Incubator, 4°C-65°C	
ZXSD-B1430	ZXSD-B1430, 430L, Economic Cooled BOD Incubator, 4°C-65°C	
P5016	RS-485 Interface	
P5021	RS-232 Interface	ALL AND A
P5022	UV Lighting, 8W, for ZXSD/ZXSP Series	
P9010	Grid Plate for ZXSD-B1090, ZXSD-R1090, S/S 🛠	
P9011	Grid Plate for ZXSD-B1160, ZXSD-R1160, S/S	
P9012	Grid Plate for ZXSD-B1270, ZXSD-R1270, S/S	
P9013	Grid Plate for ZXSD-B1430, ZXSD-R1430, S/S	
	✤ S/S: Stainless Steel	

ZXSD-B1160



# PREMIUM HUMIDITY Incubators



Like all LABWIT equipment, the premium humidity incubators have been designed to provide one of the highest quality standards of performance with matching microprocessor technology, precise temperature control and humidity control system combining state-of-the-art technology with years of design, quality and manufacturing experience. The ZXMP-R Series of Humidity Incubators are specialised in a variety of critical experiments, such as analysis of water, BOD tests, incubation of tissue cell, germs and other micro-organism, and so on. To achieve this, the LABWIT control electronics is in place to service the precise control requirements of the chamber's environment, providing optimum programmable conditions for culture growth.

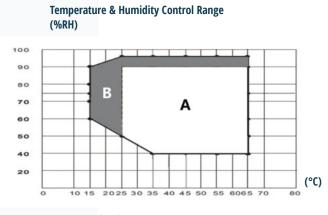
Each model has a wide temperature range from 4°C to 65°C, with relative humidity control from 40 to 90% RH, which can be operated at a single user defined temperature and relative humidity, but can also be programmed with up to 9 different temperature/ humidity segments within a time frame. (18 steps)

- ► P.I.D. microprocessor ensures the precision of temperature and humidity control under both fixed value mode and temperature control under programmable mode.
- $\blacktriangleright$  4.3" TFT touch screen panel displays all parameters, easy operation and readout for all control modes.
- ► The humidification system features 140°C steam direct injection into the chamber with quality humidity sensor. Maintenance of the water tank can be easily performed from the side and back . The water level in the tank can be checked by looking through the central viewing window.
- ► Tempered inner glass window provides a clear view of samples in the chamber.
- ► Three dimensional heating system ensures fast response, and high uniformity of  $\pm 0.5^{\circ}$ C @ 37°C.

- ► Heated outer door and chamber perimeter take care of the coldest spots, minimises the formation of condensation.
- ► Sound cooling system with CFC free refrigerant and automatic defrosting system.
- ► Non-volatile memory retains pre-set parameters in case of power interruption.
- ► All shelves, shelf supports and guide rails are easily removable and can be autoclaved to remove contamination.
- ► Independent device for over temperature, high current flow and electric leakage.
- ► Standard 2 grids & built-in printer included, optional RS-485 interface available.
- ▶ Real time electronic timer from 0 to 9999 mins.

Model	ZXMP-R1150	ZXMP-R1230	ZXMP-R1430
Volume (L)	150	230	430
Temperature Range	4°C to 65°C		
Temperature Accuracy	±0.1°C		
Temperature Uniformity	±0.5@37°C		
Humidity Range (%RH)	40-90		
Humidity Accuracy (%RH)	0.1		
Humidity Uniformity (%RH)	±5		
Alarm	Enabled		
Timer (min)	0 - 9999 mins		
Settings	Digital		
Display	LCD		
Grids Included	2 (Max 13)	2 (Max 15)	2 (Max 23)
Grid size (mm) (WxD)	360x456	465x556	528x658
Inner dimensions (mm) (WxDxH)	500x450x650	600x550x700	700x618x950
Exterior dimensions (mm) (WxDxH)	628x728x1380	728x828x1480	828x895x1682
Packing dimensions (mm) (WxDxH)	730x820x1570	830x930x1650	940x980x1860
Net/Gross Weight (kg)	105/158	130/205	180/240
Power (W)	1500	1600	2500
Electricity	220-240V 50/60 Hz		
Approval	CE, ISO		

ZXMP-R1150	ZXMP-R1150,150L, Premium Humidity Incubator, 4°C-65°C, 40-90%RH
ZXMP-R1230	ZXMP-R1230, 230L, Premium Humidity Incubator, 4°C-65°C, 40-90%RH
ZXMP-R1430	ZXMP-R1430, 430L, Premium Humidity Incubator, 4°C-65°C, 40-90%RH
P9014	Grid Plate for ZXMP-R1150, S/S 🛠
P9015	Grid Plate for ZXMP-R1230, S/S
P9016	Grid Plate for ZXMP-R1430, S/S
	<b>*</b> S/S: Stainless Steel



A: Guaranteed working range B: Recommended Time-limited operation (max. 24 hours)



Humidification System Tank



# PREMIUM Plant Growth Chamber



ZXLP-R1270

The LABWIT ZXLP Plant Growth Chambers are available in four models, offering precise control of temperature, and light. They feature LED light panels with multiple colour options, configured on three sides: the outer door and two sidewalls. The LED lighting system is customizable to suit your application, with a wavelength range from less than 400nm to 700nm, ideal for strong vegetative and generative growth, enhancing vernalization, and providing a broad sun-like spectrum for research and biotech application.

Available in sizes from 90L to 430L internal capacity, these chambers are designed to occupy minimal floor space, optimising your laboratory's layout. The 4.3-inch touch screen interface facilitates easy programming with alarms and non-volatile memory, and includes a built-in printer and a Ø50mm access port.

LABWIT is dedicated to environmentally efficient design, using cutting-edge green technologies for proven cost savings and energy efficiency. The chambers are insulated with CFC-free polyurethane foam, ensuring high thermal retention and reducing the load on your lab's HVAC systems.

A variety of options and accessories allow you to customize the chambers to your specific needs. Popular options include programmable/dimmable LED light panels available in Cool White, Warm White, Red (660nm), and Blue (420nm) dual lighting, extra grid plates, and RS485 options.

- ► P.I.D. microprocessor ensures the precision of operational parameters control under both fixed value mode and program mode.
- $\blacktriangleright$  4.3" TFT touch screen panel displays all parameters, easy operation and readout for all control modes.
- ► LED lighting panel system features fully adjustable lighting output between 0-100%, in application up to 500µmol/m/s subject to light source selection.
- ► Light intensity control programmable for day/night photoperiods.
- ► Light intensity control programmable for day/night photoperiods.
- ▶ Light configuration available from front door, side walls.
- ▶ 3D airflow circulation assuring an optimal temperature uniformity of  $\pm 1.0^{\circ}$ C@37°C, also through multi stepped growth surfaces, reducing tension between plants.

- ► Stainless steel internal construction with powder coated steel external surfaces.
- ► Internal glass door allows users to visually located required samples, minimising door opening times allowing rapid return to set conditions.
- ► Sound cooling system with CFC free refrigerant and automatic defrosting system.
- ► Ø50mm Access port provided for additional probes or watering system.
- ▶ Real-time electronic timer from 0 to 9999 mins.
- ► Non-volatile memory retains pre-set parameters in case of power interruption.
- ► All shelves, shelf supports and guide rails are easily removable and can be autoclaved to remove contamination.

	ZXLP-R1090	ZXLP-R1160	ZXLP-R1270	ZXLP-R1430			
Volume	90L	160L	270L	430L			
Door Type	Solid outer door with h	Solid outer door with heat resistance glass inner door					
Control Panel	4.3" TFT Touch Screen						
Ambient Temperature	5°C to 35°C	5°C to 35°C					
Noise Level	<55 dB (1m above floo	r)					
Data Logging	Built-in Printer						
Grids Included	2 (Max 11)	2 (Max 15)	2 (Max 18)	2 (Max 25)			
Grid Size (mm)	310 x 356	410 x 456	513 x 556	555 x 656			
Inner Dimensions (mm) (WxDxH)	400 x 410 x 550	500 x 500 x 650	600 x 600 x 750	700 x 645 x 950			
Exterior Dimensions (mm) (WxDxH)	550 x 620 x 1280	630 x 740 x 1380	750 x 840 x 1480	840 x 880 x 1680			
Packing Dimensions (mm) (WxDxH)	620 x 690 x 1440	700 x 810 x 1540	820 x 910 x 1640	910 x 950 x 1840			
Net/Gross Weight (kg)	68/108	98/145	130/180	180/220			
Power (W)	710	860	950	1350			
Standard	Built-in printer, Fluorescent Lamp, Ø50mm Access Port						
Options	LED Lighting System, UV Lamp, RS-485 Interface						
Electricity	220-240V 50/60 Hz						
Approval	CE						
Temperature	Temperature	Temperature					
Temp. Range	Ambient - 20°C to 65°C (Min. 4°C)#						
Temp. Accuracy	±0.1°C	±0.1°C					
Temp. Uniformity	±1.0°C @ 37°C						
Principle of Sensor	PT100						
Control Mode	Fixed Value & Program						
Cooling System	Auto-Defrosting, Autom	nated					
	# Min. 15°C when Photosynthetic Lighting option is applied.						

	LED Lighting System (Option)				
	Red & Blue Dual	Warm White	Cool White Mono		
Light Type	LED, 50% Red, 50% Blue	LED, 100% Warm White	LED, 100% Cool White		
Spectrum	Red: 640-660nm, Blue: 430-450nm	4000k: 400-700nm	6500k: 400-700nm		
Light Intensity	Up to 700µmol/(m <sup>2*</sup> s)	Up to 650µmol/(m <sup>2*</sup> s)	Up to 450µmol/(m <sup>2*</sup> s)		
Control	Yes, Individually, from 0-100% output	Yes, from 0-100% output	Yes, from 0-100% output		
Control Mode	Fixed Value & Programmable		· · · ·		

ZXLP-R1090	90L, Premium Plant Growth Chamber, 4°C-65°C			
ZXLP-R1160	160L, Premium Plant Growth Chamber, 4°C-65°C			
ZXLP-R1270	270L, Premium Plant Growth Chamber, 4°C-65°C			
ZXLP-R1430	430L, Premium Plant Growth Chamber, 4°C-65°C			
P5016	RS-485 Interface			
P5022	UV Lighting, 8W, for ZXSD/ZXSP Series			
P5048RB-90	LED Lighting Panel, For ZXLP-R1090, Red & Blue			
P5048RB-160	LED Lighting Panel, For ZXLP-R1160, Red & Blue			
P5048RB-270	LED Lighting Panel, For ZXLP-R1270, Red & Blue			
P5048RB-430	LED Lighting Panel, For ZXLP-R1430, Red & Blue			
	·			

P5048CW-90	LED Lighting Panel, For ZXLP-R1090, Cool White
P5048CW-160	LED Lighting Panel, For ZXLP-R1160, Cool White
P5048CW-270	LED Lighting Panel, For ZXLP-R1270, Cool White
P5048CW-430	LED Lighting Panel, For ZXLP-R1430, Cool White
P5048WW-90	LED Lighting Panel, For ZXLP-R1090, Warm White
P5048WW-160	LED Lighting Panel, For ZXLP-R1160, Warm White
P5048WW-270	LED Lighting Panel, For ZXLP-R1270, Warm White
P5048WW-430	LED Lighting Panel, For ZXLP-R1430, Warm White
P9010	Grid Plate for ZXSD-B1090, ZXSD-R1090, S/S*
P9011	Grid Plate for ZXSD-B1160, ZXSD-R1160, S/S
P9012	Grid Plate for ZXSD-B1270, ZXSD-R1270, S/S



### ZXFD-B5140

TCS

DRYING **Oven** 

ZXRD-B5110 ZXRD-A7140

isation curing,

The LABWIT forced air drying ovens are engineered for your daily work, from routing simple glassware drying sterilisation applications up to 200°C or 300°C, to the complex, controlled heating applications, for example, ageing, bonding, curing, heat treat annealing, stress relieving, burn-in, hardening test purposes.

LABWIT provide ovens with two optional heating modes, ZXRD Series Back Heating and ZXFD Series Bottom Heating. Both ranges are designed to provide accurate temperature uniformity, with minimized temperature overshoot. For all 200°C models, the ovens are equipped with LCD control panel and can be programmed to run up to 9 different programs with 18 steps of temperatures and time segments.

- ► Forced-air convection and three-dimensional heating systems ensure air circulation and heat distribution.
- ► Options of back or bottom heating models, up to 200°C and 300°C.
- ► PID Microprocessor controller with 9 segments and 18 steps, only on 200°C models.
- ► Large LCD display on 200°C models, and LED display on 300°C models.
- ► Argon-filled multiple glazed tempered safety glass window, 2 glazing for 200°C models and 3 glazing for 300°C models, optimises sample monitoring as well as minimise heat losses.

- ► Electro-polished stainless steel inner chambers and round corners for easy cleaning and better air circulation.
- ► Safe protections: over-temperature limit protection, separate over-current fuses, trip switching protection over electric leakage.
- ► Non-volatile memory retains pre-set parameters in case of power interruption.
- ► Standard wheel casters available on all models of 210L and above in volume.
- ► Adjustable electro-polished stainless steel shelving provides air flow around samples for uniformed tempering and allow for easy cleaning.
- ▶ 2 grids included as standard.



# Air Tight Door

► Hermetic door closure system for optimal air tightness and minimal heat loss.

▶ "Push & Catch" design, easy to grip and operate.



# Adjustable Air Vent

- ► Adjustable air vent for discharge of humidity evaporation.
- ► Adjusting knob located on side wall for easy access.
- ► Air vent located on the back wall.



### Convenient Working Environment

- ► Complete stainless steel inner chamber.
- ► Low heat dissipation due to 50mm high density insulation.
- ► 2 shelves included as standard.

### Specifications of ZXRD (Back Heating)

	specifications	UI ZARD (Dack He	ating)			
Model	ZXRD-B5055	ZXRD-B5110	ZXRD-B5210	ZXRD-A7080	ZXRD-A7140	ZXRD-A7230
Volume (L)	55	110	210	80	140	230
Heating Mode	Back Heating					
Programmable Control (9Segment/18 steps)	Standard					
Temperature Range	Ambient +5°C to 2	200°C		Ambient +5°C to	300°C	
Temperature Accuracy	±0.1°C					
Temp. Uniformity (%)	< ± 2.5% (@max t	emperature)				
Display	LCD			LED		
Alarm	Enabled					
Timer (min)	0 - 9999 mins	0 - 9999 mins				
Settings	Digital					
Grids Included	2 (max 10)	2 (max 16)	2 (max 19)	2 (max 13)	2 (max 17)	2 (max 21)
Grid Size (mm) (WxD)	285x295	335x375	455x485	319x330	385x405	475x485
Distance Between Grids (mm)	30					
Chamber Dimensions (mm) (WxDxH)	330x345x450	420x385x650	500x535x750	375x365x550	450x440x685	520x540x800
Exterior Dimensions (mm) (WxDxH)	520x525x860	610x565x1060	690x720x1240	565x495x960	640x570x1095	720x670x1290
Packing Dimensions (mm) (WxDxH)	610x630x1040	690x665x1230	770x820x1430	650x590x1130	720x670x1255	790x800x1460
Net/Gross Weight (kg)	50/71	61/104	98/143	58/98	70/104	104/155
Power (W)	1300	2100	2500	2100	2300	2700
Electricity	220-240V 50/60 H	łz				
Approval	CE, ISO					



Specifications of ZXFD (Bottom Heating)						
Model	ZXFD-B5090	ZXFD-B5140	ZXFD-B5250	ZXFD-B5430	ZXFD-B5600	
Volume (L)	90	140	250	430	600	
Heating Mode	Bottom Heating					
Programmable Control (9Segment/18 steps)	Yes, Standard					
Temperature Range	A +5°C to 200°C					
Temperature Accuracy	±0.1°C					
Temperature Uniformity (%)	< ± 2.5% (@max t	emperature)				
Display	LCD					
Alarm	Enabled	Enabled				
Timer (min)	0 - 9999 mins					
Settings	Digital					
Grids Included	2 (Max 4)	2 (Max 5)	2 (Max 6)	2 (Max 8)	2 (Max 8)	
Grid Size (mm) (WxD)	389×393	413×493	493×595	596x694	725×789	
Distance Between Grids (mm)	90	95	105	105	110	
Chamber Dimensions (mm) (WxDxH)	400x430x485	500x455x600	600x535x750	700x635x950	800x766x1000	
Exterior Dimensions (mm) (WxDxH)	585x610x895	685x635x1010	790x720x1240	890x820x1440	990x950x1495	
Packing Dimensions (mm) (WxDxH)	670x690x1070	770x720x1190	880x810x1430	990x900x1660	1090x1050x1780	
Net/Gross Weight (kg)	55/98	80/115	108/145	170/253	210/280	
Power (W)	1500	2100	2500	2700	2900	
Electricity	220-240V 50/60 H	lz				
Approval	CE, ISO					

ZXRD-B5055	ZXRD-B5055, 55L, Back Heating Oven, A +5°C-200°C
ZXRD-B5110	ZXRD-B5110, 110L, Back Heating Oven, A +5°C-200°C
ZXRD-B5210	ZXRD-B5210, 210L, Back Heating Oven, A +5°C-200°C
ZXRD-A7080	ZXRD-A7080, 80L, Back Heating Oven, A +5°C-300°C
ZXRD-A7140	ZXRD-A7140, 140L, Back Heating Oven, A +5°C-300°C
ZXRD-A7230	ZXRD-A7230, 230L, Back Heating Oven, A +5°C-300°C
ZXFD-B5090	ZXFD-B5090, 90L, Bottom Heating Oven, A +5°C-200°C
ZXFD-B5140	ZXFD-B5140, 140L, Bottom Heating Oven, A +5°C-200°C
ZXFD-B5250	ZXFD-B5250, 250L, Bottom Heating Oven, A +5°C-200°C
ZXFD-B5430	ZXFD-B5430, 430L, Bottom Heating Oven, A +5°C-200°C
ZXFD-B5600	ZXFD-B5600, 600L, Bottom Heating Oven, A +5°C-200°C
	✤ S/S: Stainless Steel

P9018	Grid Plate for ZXRD-B5055, S/S
P9019	Grid Plate for ZXRD-B5110, S/S
P9020	Grid Plate for ZXRD-B5210, S/S
P9021	Grid Plate for ZXRD-A7080, S/S
P9022	Grid Plate for ZXRD-A7140, S/S
P9023	Grid Plate for ZXRD-A7230, S/S
P9025	Grid Plate for ZXFD-B5090, S/S
P9026	Grid Plate for ZXFD-B5140, S/S
P9027	Grid Plate for ZXFD-B5250, S/S
P9028	Grid Plate for ZXFD-B5430, S/S
P9029	Grid Plate for ZXFD-B5600, S/S



# WATER BATHS

# & SHAKERS

General water baths and water bath shakers are diffusely useful in chemical industry, biology, pharmacy, environmental protection, hygiene and disease control, academies and other science research and producing areas.

LABWIT offers comprehensive range of water baths & shakers which combine unmatched reliability and durability for your laboratory applications. It delivers superior temperature control and uniformity. Bath temperature is controlled to an accuracy of  $\pm 0.1^{\circ}$ C by a P.I.D microprocessor controller for optimum, reproducible bath conditions.





### **Circulating Water Bath**

LABWIT circulating water baths are ideal for applications where temperature uniformity and control are crucial, such as enzymes and serology. These high performance baths range in capacity 18 and 25 litres and include a stainless steel diffuser shelf and a hinged gable cover as standard equipment.

▶ Water bath temperature is monitored and controlled over the entire range of ambient up to 99.9°C with an accuracy of  $\pm 0.1$ °C with P.I.D temperature controller.

► Circulating pump direct water flows around bath perimeter for fast heating and better uniformed temperature control, ±0.2°C @ 37°C.

► Easy-to-maintain stainless steel interior chamber and powder-coated exterior resist most corrosion and chemical damages.

► Easy-to-read LED digital display provides a user-friendly interface which helps minimise errors in establishing running conditions.

► Non-volatile memory retains preset parameters during a power failure and restarts unit automatically after the power is restored.

► Electro-polished SUS304 stainless steel hinged gable lid to prevent dust penetration, uncontrolled heat dissipation as well as water evaporation.

- ► Low water level alarm.
- ► Anti-drying function.
- ▶ Fitted with drain valve.

### **Non Circulating Water Baths**

► Available in four different models, range in numbers of well compartment from 2 to 8 including a stainless steel diffuser shelf.

▶ Precise temperature control up to 99.9°C.

▶ Water bath temperature is monitored and controlled over the entire range with an accuracy of  $\pm 0.1$  °C with P.I.D temperature controller.

► Easy-to-maintain stainless steel interior chamber and powder-coated exterior resist most corrosion and chemical damages.

► Easy-to-read LED digital display provides a user-friendly interface which helps minimise errors in establishing running conditions.

► Non-volatile memory retains preset parameters during a power failure and restarts unit automatically after the power is restored.

► Standard ring set to prevent dust penetration, uncontrolled heat dissipation as well as water absorption.

- Low water level alarm.
- ► Anti-drying function.
- ► Fitted with drain valve.

### **Personal Mini Water Baths**

- ▶ Personal sized tank of 4.6L.
- ► Stainless steel interior tank and powder coated corrosion resistant exterior case.

► Easy-to-read LED digital display provides a user-friendly interface which helps minimise errors in establishing running conditions.

- ► High precision temperature sensor probe.
- ► Precise temperature control with P.I.D microprocessor controller.
- ► High-density insulation minimises heat losses.
- ► Electro-polished perforated diffuser made of SUS304 stainless steel as standard.











Model	ZSQ-3	ZSBB-712	ZSBB-724	ZSBB-726	ZSBB-728	ZSXH-618	ZSXH-625
Volume(L)	4.6	8	16	24	32	18	25
Temperature	Ambient - 99.9°C						
Control	P.I.D Microproces	sor					
Temperature Accuracy	±0.1°C						
<b>Circulation Pump</b>	No					Yes	
Cemperature Uniformity	±0.5 @ 37°C					±0.2 @ 37°C	
Lid	None	Ring Set				Gable Lid	
Compartments	1	2x1	2x2	3x2	4x2	1	
Timer	1 - 99 hours, 59 mins						
Setting	Digital						
Display	LED						
Power (W)	500	500	1000	1500	2000	1500	2000
Tank Dimensions (mm) (WxDxH)*	Ø200x150	320x160x160	320x320x160	480x320x160	640x320x160	350x300x225	400x320x250
Exterior Dimensions (mm) (WxDxH)*	320x260x300	575x225x235	575x385x235	735x385x235	895x385x235	735x365x385	785x385x420
Packing dimensions (mm) (WxDxH)	420x350x420	645x295x395	645x455x395	805x455x395	965x455x395	840x430x540	890x450x575
Net/Gross Weight (kg)	6/13	8/13	14/21	20/29	22/33	22/32	28/40
Electricity	220/24 Volt - 50/60 Hz						
Approval	CE, ISO						

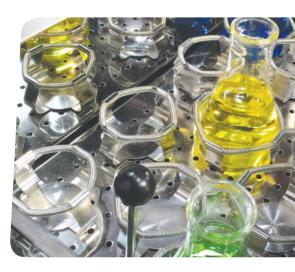
\* Tank height includes perforated diffuser height of 50mm.

	Order Information
ZSQ-3	ZSQ-3, 4.6L Water Bath, 1, A-99.9°C
ZSBB-712	ZSBB-712, 8L Water Bath, 2 x 1, A-99.9°C
ZSBB-724	ZSBB-724, 16L Water Bath, 2 x 2, A-99.9°C
ZSBB-726	ZSBB-726, 24L Water Bath, 3 x 2, A-99.9°C
ZSBB-728	ZSBB-728, 32L Water Bath, 4 x 2, A-99.9°C
ZSXH-618	ZSXH-618, 18L Water Bath, With Pump & Gable Lid , A-99.9°C
ZSXH-625	ZSXH-625, 25L Water Bath, With Pump & Gable Lid, A-99.9°C
P4011	Gable Lid for ZSBB-712, S/S
P4012	Gable Lid for ZSBB-724, S/S
P4013	Gable Lid for ZSBB-726, S/S
P4014	Gable Lid for ZSBB-728, S/S



ZSBB-724





# RECIPROCAL SHAKING Water Baths



▶ Heat loss and evaporation is minimized with the use of

finely electro-polished stainless steel gabled lid cover,

▶ High quality #304 stainless steel for excellent durability

Standard stainless steel tray, without clamps.

standard on ZWY Series units.

of interiors and its parts.

ZWY-110X50

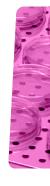
The latest ZWY-110X Series reciprocal water bath shaker combines unmatched reliability and durability. It delivers superior temperature control and uniformity with a smooth shaking motion. Bath temperature is controlled to an accuracy of  $\pm 0.1^{\circ}$ C by a P.I.D microprocessor controller for optimum reproducible bath conditions. Dual thermostats provide optimum protection for your work and water bath. The steeply gabled lid and inward-sloped tank rim allow condensate to drain neatly back into the bath, preventing condensate from dripping onto the samples.

- ► Solid electric drive mechanism provides uniform and quiet agitation and enables continuous 24 hour operation.
- ► Water bath temperature is monitored and controlled over the entire range with an accuracy of ±0.1°C with P.I.D temperature controller.
- ► Easy-to-read LCD digital display provides a user-friendly interface which helps minimise errors in establishing running conditions.
- ► Non-volatile memory retains preset parameters during a power failure and restarts unit automatically after the power is restored.





Model	ZWY-110X30	ZWY-110X50		
Volume (L)	30	50		
Gable Lid Included	Yes	Yes		
Shaking Mode	Reciprocal			
Temperature Range	Ambient - 99.9°C			
Temperature Accuracy	±0.1°C			
Temperature Uniformity	±0.2 @ 37°C			
Timer	0 to 500 hours			
Stroke (mm)	16 (Default setting), 24			
Speed Range(rpm)	20-180			
Tray (mm) (WxD)	434 x 256	494 x 316		
Capacity *	*Glass dimensions may reduce max. capacity			
50 ml	28	40		
100 ml	18	28		
250 ml	11	15		
500 ml	7	11		
1000 ml	-	6		
Inner Dimensions (mm) (WxDxH)	508x300x200	568x360x250		
Exterior Dimensions (mm) (WxDxH)	795x360x380	855x420x430		
Packing Dimensions (mm) (WxDxH)	865x430x520	925x490x590		
Net/Gross Weight (kg)	29/40	33/49		
Power (W)	1600	2000		
Electricity	220-240V 50/60 Hz			
Approval	CE, ISO			



#### **Order Information**

ZWY-110X30	ZWY-110X30, 30L, Reciprocal Water Bath Shaker, A - 99.9°C, 20-180rpm, with lid
ZWY-110X50	ZWY-110X50, 50L, Reciprocal Water Bath Shaker, A - 99.9°C, 20-180rpm, with lid

P6014	Tray for ZWY-110X30, S/S 🛠
P6015	Tray for ZWY-110X50, S/S
P7015	Universal Tray for ZWY-110X30
P7016	Universal Tray for ZWY-110X50
P8001	T Clamp, S/S, for 50ml Flask, with Spring Retainer
P8002	T Clamp, S/S, for 100ml Flask, with Spring Retainer
P8013	T Clamp, S/S, for 150ml Flask, with Spring Retainer
P8003	T Clamp, S/S, for 250ml Flask, with Spring Retainer
P8014	T Clamp, S/S, for 300ml Flask, with Spring Retainer

P8004	T Clamp, S/S, for 500ml Flask, with Spring Retainer
P8005	T Clamp, S/S, for 750ml Flask, with Spring Retainer
P8006	T Clamp, S/S, for 1000ml Flask, with Spring Retainer
P8010	Tube Rack S/S
P8011	Tube Rack ABS Plastic
P8012	Clamp for 96 Well Plate, S/S
P8015	Gable Lid for ZWY-110X30
P8016	Gable Lid for ZWY-110X50
	✤ S/S: Stainless Steel

# LAMINAR FLOW

# CLEAN BENCHES

LABWIT laminar flow clean benches offers a series of high efficiency products designed to protect equipment and other contents of the work zone from particulates, for applications sensitive to such contamination. It is ideally suited for use with non-hazardous contaminants and when flexible access to the equipment in the work zone is desired.

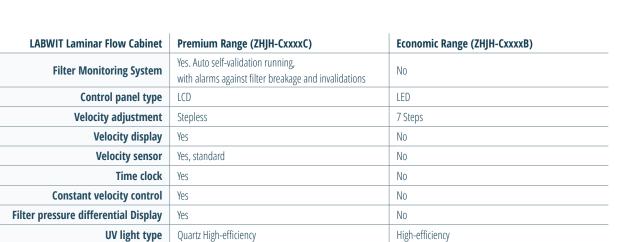
These laminar flow clean benches are available in premium and economic ranges, each range with airflow pattern options (vertical and horizontal), working surface width options (from 900-1800mm) and working sides options (single and double-sided working surface).



### **Premium VS Economic**

While the economic range features all basic functions of classic type of laminar flow clean bench, the premium range has renowned for its patented HEPA filter monitoring system, which monitors the status of the HEPA filter every time before each operation, and alarms the user in case it's broken, expiring or overloaded. Therefore, the integrity of the key component of the clean bench is well under control and the security of experiment and samples involved are assured.

Refer to the table for more information of the Premium and Economic ranges.



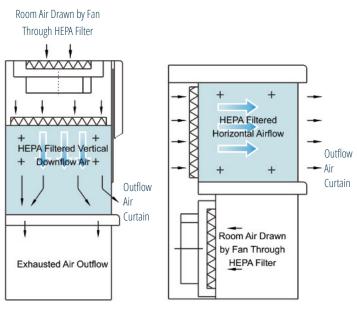
### **Vertical Flow VS Horizontal Flow**

► In all models, air is taken in through a pre-filter and then passed through a HEPA filter.

► In horizontal flow models, filtered air is passed through the main chamber, and finally exhausted through the back of the working chamber with horizontal air flow . In vertical flow models, filtered air is drawn out from the ceiling of the working chamber, and creates the vertical air down flow across the chamber area.

► On the horizontal flow models, air flow creates less turbulence at the work surface compared to vertical flow models, as the airflow smoothly pass across the chamber area rather than directly impinge upon the working surface.

► Airflow in a horizontal flow clean bench is blown directly towards the user, whereas the airflow in a vertical flow clean bench strikes the working surface first and exits towards the user indirectly. Herein, it should be noted, neither laminar flow type of clean benches offers any operator protection. ► Large or tall equipment in a horizontal flow clean bench will interrupt the airflow more than in a vertical flow model. This may create more turbulence and "dead" spots where airflow is lower than elsewhere. While vertical flow clean benches are not so impacted by large equipment.



Vertical Models

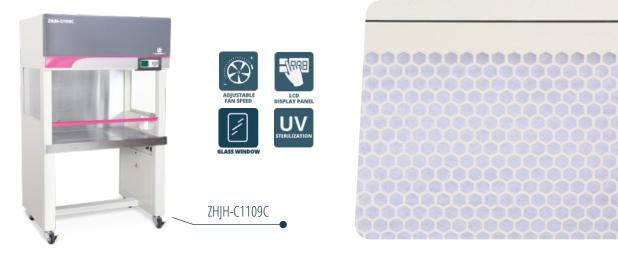
**Horizontal Models** 





	Fluc	prescent Lamp	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		UV Lamp	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Window Sash	•	•	•	•	•	•	•			•	•	•	•	•	•	•	•
		Time Clock										•	•	•	•	•	•	•	•
		Timer										•	•	•	•	•	•	•	•
	Diffe	Pressure rential Display										•	•	•	•	•	•	•	•
	Velo	ocity Level Dis- play	•	•	•	•	•	•	•	•	•								
	Cor	nstant Velocity Control										•	•	•	•	•	•	•	•
	V	elocity Display										•	•	•	•	•	•	•	•
	Ve	locity Stepless Setting										•	•	•	•	•	•	•	•
		HEPA Filter										•	•	•	•	•	•	•	•
al y		reakage Alarm HEPA Filter lidation Alarm										•	•	•	•	•	•	•	•
	IIIVd	LED Display	•	•	•	•	•	•	•	•	•								
		LCD Display										•	•	•	•	•	•	•	•
		Double Sided						•	•							•	•		
כומ		Single Sided	•	•	•	•	•			•	•	•	•	•	•			•	•
	H	orizontal Flow								•	•							•	•
		Vertical Flow	•	•	•	•	•	•	•			•	•	•	•	•	•		
	_	1800					•								•				
	Work Surface Width (mm)	1500				•								•					
	ce Widt	1400							•								•		
	k Surfac	1200			•						•		•						•
	Wor	900		•				•		•		•				•		•	
		600	•																
		Model & Features	ZHJH-C1106B	ZHJH-C1109B	ZHJH-C1112B	ZHJH-C1115B	ZHJH-C1118B	ZHJH-C1209B	ZHJH-C1214B	ZHJH-C2109B	ZHJH-C2112B	ZHJH-C1109C	ZHJH-C1112C	ZHJH-C1115C	ZHJH-C1118C	ZHJH-C1209C	ZHJH-C1214C	ZHJH-C2109C	ZHJH-C2112C
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**Clean Bench Model Summary** 



# PREMIUM LAMINAR FLOW **Clean Benches**

ZHIH-C1112C

ZHJH-C1118C





LABWIT premium vertical flow clean bench is a series of high air purifying equipment with an intellectualised control system to ensure a clean working environment. These units are designed for a particle-free, bacteria-free clean-air environment which is used for laboratory work, testing, manufacturing, inspection or pharmaceutical procedures under ISO Class 5 conditions to prevent airborne contamination. They are economical lightweight and are available in a variety of sizes. The patented HEPA filter monitoring system features an automatic filter integrity test, called "Self Validation Test", making sure the HEPA filter is integral and valid, hence the working room is properly protected every time before operation is started.

During operation, room air is drawn through a pre-filter in the top of the cabinet to trap large particles. Air flows through a HEPA filter and is blown vertically over the work area. The positive pressure laminar airflow provides product protection within the work area. The HEPA-filtered air prevents contaminants from entering the work area and provides a particulatefree work environment that minimises cross contamination.

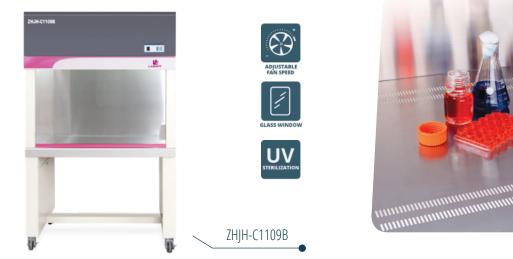
- ► Automatic HEPA filter integrity test monitors and alarms ► Standard with high efficiency quartz UV-light. against HEPA filter breakage and overloading.
- ► LCD screen displays the actual speed, differential pressure, flow volume and HEPA status.
- ► A pre-filter traps large particles to extend the life of the HEPA filter.
- ► A quiet and with stepless adjustable speed internal blower provides air velocity.
- ► Glare free fluorescent lamp.
- ▶ Operation mode choices of automatic and manual.

- Stainless steel work surface.
- Combined base stand with castors.
- ► The adjustable front window allows for easy positioning.
- ► Glass windows on left/right side.
- ► An extra power point is included as standard.
- ▶ Time clock display.

Model	ZHJH- C1109C	ZHJH- C1112C	ZHJH- C1115C	ZHJH- C1118C	ZHJH- C1209C	ZHJH- C1214C	ZHJH- C2109C	ZHJH- C2112C	
Airflow Mode	Vertical Flow	ertical Flow Horizontal Flow							
Work Side (mm)	Single	Single	Single	Single	Double	Double	Double	Double	
Work Area Width (mm)	900	1200	1500	1800	900	1400	900	1200	
Filter Monitoring System	Yes. Automatic r	unning before ever	y operation starts.						
Filter Efficiency	Fed Std 209E Cl	ass100 ISO 5							
Workroom Air Velocity	0.3-0.6 m/s (ste	epless)							
Velocity Precision	±0.05 m/s	±0.05 m/s							
Illumination	Fluorescent ligh	Fluorescent light ≥ 300Lx							
UV-light	Standard	Standard							
HEPA Differential Pressure	0-500 Pa	0-500 Pa							
Work Area Dimensions (mm) (WxDxH)	900x625 x645	1200x625 x645	1500x625 x645	1800x625 x645	900x650 x645	1400x650 x645	900x590 x570	1200x590 x570	
Exterior Dimensions (mm) (WxDxH)	1020x750 x1700	1320x750 x1700	1620x750 x1700	1920x750 x1700	1020x810 x1700	1520x810 x1700	1020x840 x1530	1320x840 x1530	
Packing Dimensions (mm) (WxDxH)	1100x840 x1890	1440x840 x1890	1700x870 x1890	2000x840 x1890	1100x930 x1890	1600x930 x1890	1140x960 x1700	1440x960 x1700	
Shipping Volume (m3)	1.75	2.24	2.70	3.18	1.93	2.81	1.86	2.35	
Net Weight (kg)	153	215	250	310	162	225	170	210	
Power (W)	380	680	680	680	380	680	380	680	
Electricity	220/240 Volt, 5	0/60 Hz	!	!		I			
Approval	CE, ISO								

	Order Information
ZHJH-C1109C	90cm, Premium Single Sided, Vertical Flow Clean Bench
ZHJH-C1112C	120cm, Premium Single Sided, Vertical Flow Clean Bench
ZHJH-C1115C	150cm, Premium Single Sided, Vertical Flow Clean Bench
ZHJH-C1118C	180cm, Premium Single Sided, Vertical Flow Clean Bench
ZHJH-C1209C	90cm, Premium Double sided, Vertical Flow Clean Bench
ZHJH-C1214C	140cm, Premium Double sided, Vertical Flow Clean Bench
ZHJH-C2109C	90cm, Premium Single sided, Horizontal Flow Clean Bench
ZHJH-C2112C	120cm, Premium Single sided, Horizontal Flow Clean Bench





# ZHJH-C112B

ZHIH-C1118B

# ECONOMIC LAMINAR FLOW **Clean Benches**





LABWIT economic laminar flow clean benches are the basic models of the premium units, which are designed for a particle-free, bacteria-free clean-air environment which is used for laboratory work, testing, manufacturing, inspection or pharmaceutical procedures under ISO Class 5 conditions to prevent airborne contamination. These benches are economical, lightweight and are available in a variety of size capacity.

During operation, room air is drawn through a disposable pre-filter in the top of the cabinet to trap large particles. Air flows through a HEPA filter and is projected vertically/horizontally over the work area. The positive pressure laminar airflow provides product protection within the work area. The HEPA-filtered air prevents contaminants from entering the work area and provides a particulate-free work environment that minimises cross contamination.

- ► LED digital indicator with touch pad controller.
- ► HEPA filter tested to a typical efficiency of >99.97% for contaminants at 0.3 microns in size.
- ► Class 100 ISO 5 air cleanliness within the work zone as per Fed Std 209E.
- ► A disposable pre-filter traps large particles to extend the life of the HEPA filter.
- ► A quiet and with 7 steps adjustable speed internal blower provides air velocity control.

- ► Glare free fluorescent lamp.
- ► Standard with UV-light.
- ► Stainless steel work surface.
- ► Combined base stand with castors.
- ► Glass windows on left/right side.
- ► The adjustable front window allows for easy positioning. (unavailable on horizontal models ZHJH-C2109B, ZHJH-C2112B).

Model	ZHJH- C1109B	ZHJH- C1112B	ZHJH- C1115B	ZHJH- C1118B	ZHJH- C1209B	ZHJH- C1214B	ZHJH- C2109B	ZHJH- C2112B	
Airflow Mode	Vertical Flow	Pertical Flow Horizontal Flow							
Work Side (mm)	Single	Single	Single	Single	Double	Double	Single	Single	
Work Area Width (mm)	900	1200	1500	1800	900	1400	900	1200	
Filter Monitoring System	No								
Filter Efficiency	Fed Std 209E Clas	is100 ISO 5							
Workroom Air Velocity	0.3-0.6 m/s (7 ste	0.3-0.6 m/s (7 steps adjustable)							
Velocity Precision	±0.05 m/s	±0.05 m/s							
Illumination	Fluorescent light a	Fluorescent light ≥ 300Lx							
UV-light	Standard								
HEPA Differential Pressure	0-500 Pa	0-500 Pa							
Work Area Dim. (mm) (WxDxH)	900x625x645	1200x625x645	1500x625x645	1800x625x645	900x650x645	1400x650x645	900x590x570	1200x590x570	
Exterior Dim. (mm) (WxDxH)	1020x740x1700	1320x740x1700	1620x740x1700	1920x740x1700	1020x790x1700	1520x790x1700	980x790x1440	1280x790x1440	
Packing Dim. (mm) (WxDxH)	1100x840x1890	1400x840x1890	1700x840x1890	2000x840x1890	1100x930x1890	1600x930x1890	1100x910x1610	1400x910x1610	
Shipping Volume (m <sup>3</sup> )	1.75	2.22	2.70	3.18	1.93	2.81	1.61	2.05	
Net Weight (kg)	153	215	250	310	162	225	150	185	
Power (W)	380	680	680	680	380	680	380	680	
Electricity	220/240 Volt, 50/	'60 Hz							
Approval	CE, ISO								

	Order Information
ZHJH-C1109B	90cm, Economic Single Sided, Vertical Flow Clean Bench
ZHJH-C1112B	120cm, Economic Single Sided, Vertical Flow Clean Bench
ZHJH-C1115B	150cm, Economic Single Sided, Vertical Flow Clean Bench
ZHJH-C1118B	180cm, Economic Single Sided, Vertical Flow Clean Bench
ZHJH-C1209B	90cm, Economic Double sided, Vertical Flow Clean Bench
ZHJH-C1214B	140cm, Economic Double sided, Vertical Flow Clean Bench
ZHJH-C2109B	90cm, Eco Single sided, Horizontal Flow Clean Bench
ZHJH-C2112B	120cm, Eco Single sided, Horizontal Flow Clean Bench







# PARTS & ACCESSORIES

We offer a broad range of parts and accessories to lift your experience with LABWIT equipment. Whether it is shaking trays, flask clamps, or spring pallets, we let you keep it real with LABWIT genuine parts.

### **Standard Shaking Trays**

(For Shaking Incubators)

► As a basic platform for all shaking equipment, shaking tray/s are included with the main units.

Two trays are included with all double layer units.

Extra shaking trays can be ordered separately if necessary.

► All shaking trays are made of high quality materials, for example, the spray coated steel trays of floor shakers, and SUS304 stainless steel trays of all shaking incubators.

► All shaking trays (except for stackable models ) are made of SUS304 stainless steel, and carefully perforated with standard holes distance intervals, which offers 100% flexibility for any attachment combinations on the shaking tray, for example, flask clamps, test tube racks, or 96 well plates, etc.

► The shaking trays of all stackable shaking incubators are made of SUS304 stainless steel corrosion resistant anodised aluminium, featuring threaded screw holes to fit with the specialised flask clamps with countersink screws.

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	Order Information					
P6001	Tray for ZWY-103B/D, S/S	P6041	Tray for ZWYR-29	13, ZWYC-293G, Plain		
P6002	Tray for ZWY-100H/100D, S/S	P6050	96 Well Plate Tray for ZWYC-293G, 530x435mm			
P6004	Tray for ZWY-240/200D, ZWYR-240/200D, S/S					
P6006	Tray for ZWY-111B/211B/111C/211C, ZWYR-211C, S/S					
P6007	Tray for ZWYR-211D, S/S					
P6008	Tray for ZWF-111/211, ZWFR-211, S/S	22	ere:			
P6010	Tray for ZWY-1102C/2102C, ZWYR-2102C, S/S		88			
P6011	Tray for ZWY-1102/2102, ZWYR-2102, S/S		DCOAC			
P6012	Tray for ZWY-1112B/2112B, ZWYR-2112B, S/S		P6016	P6023		
P6013	Tray for ZWF-1112/2112, ZWFR-2112, S/S					
P6014	Tray for ZWY-110X30, S/S	A=				
P6015	Tray for ZWY-110X50, S/S	1				
P6016	Tray for ZWY-304/ZWF-334, S/S Clamp Tray			And the second second		
P6017	Tray for ZWY-304/ZWF-334, S/S Bar Tray x 1, Rubber Bar x 4, Knob x 8					
P6018	Tray for ZWQ-344, Stl S/C Tray x 1, with spring x 4, Rubber Mat x 1	$\backslash$	P6017	→ P6040		
P6020	Tray for ZWY-322B/3222B Stl S/C	\		•		
P6021	Tray for ZWY-322C/B3222 Stl S/C					
P6022	Tray for ZWYC-290A, Predrilled					
P6023	Tray for ZWYC-290A, Plain					
P6024	Predrilled Tray for ZWYR-D2401/2402/2403					
P6025	Tray for ZWYR-D2401/2402/2403, Plain	$\backslash$	P6018	→ P6050		
P6040	Tray for ZWYR-293, ZWYC-293G, Predrilled	\		• \•		

### **Universal spring pallets**

► Universal spring pallet is designed to offer most flexibility for holding uncommon vessels and containers by using springs to divide the pallet area into a number of small sections.

Available for most shakers, rockers and shaking

incubators. Order Information

	Order Information
P7001	Universal Tray for ZWY-103B/103D
P7002	Universal Tray for ZWY-100H/100D
P7003	Universal Tray for ZWY-240/200D, ZWYR-240/200D
P7004	Universal Tray for ZWYR-D2401
P7007	Universal Tray for ZWY-111B/211B/111C/211C, ZWYR-211C, Full Pcs
P7008	Universal Tray for ZWYR-211D, Full Pcs
P7009	Universal Tray for ZWF-111/211, ZWFR-211, Full Pcs
P7011	Universal Tray for ZWY-1102C/2102C, ZWYR-2102C
P7012	Universal Tray for ZWY-1102/2102, ZWYR-2102, Full Pcs
P7013	Universal Tray for ZWY-1112B/2112B, ZWYR-2112B, Full Pcs
P7014	Universal Tray for ZWF-1112/2112, ZWFR-2112, Full Pcs
P7015	Universal Tray for ZWY-110X30
P7016	Universal Tray for ZWY-110X50
P7017	Universal Tray for ZWY-304/ZWF-334
P7019	Universal Tray for ZWY-322B/3222B
P7020	Universal Tray for ZWY-322C/B3222
P7022	Universal Tray for All Horizontal Model, 1/2 Pcs
P7023	Universal Tray for All Double Layer Model, 1/2 Pcs
P7027	Universal Spring Pallet for ZWYR-293, ZWYC-293G
P7029	Universal Spring Pallet for ZWYR-293, ZWYC-293G, 500x400mm

► Each full size universal spring pallet has the same width and depth of the standard shaking tray of each model respectively.

► Full size universal spring pallets can only be installed after the standard shaking tray is removed.



#### **Flask Clamps**

► All flask clamp attachments are designed for various Erlenmeyer flasks, made of high-quality stainless steel. Clamps are available in two types, one specific type designed for the shaking trays of stackable shaking incubators, known as "O  ${\bf Clamp}$ ", and the general type for all other shakers and rockers, known as "T Clamp".

**• O Clamps** feature countersink holes on the bottom with individual countersink screws supplied. These type of clamps can be easily fixed securely onto the shaking trays of stackable shaking incubators by screwing into the threaded holes with a general Philip's screwdriver.

► The traditional **T Clamps** have screw pins on the bottom of the clamps. Individual nuts are used to fix the clamps onto the standard trays through the predrilled holes.

► Clamps of 750ml in size and below are equipped with one screw pin/countersink hole per unit. While four screw pins/ countersink holes on each clamp of 1L in size and above for more security.

► Clamps of 2L size and above are made of premium quality spring stainless steel for better security and grip.

► LABWIT offers customisation services of clamps design for Schott glass bottles, Fernbach flasks or to customer specifications. Contact us or your local distributor to discuss your requirements.





T Type Clamps

(All mod	els, except Stackable Shaking Incubators)
P8001	T Clamp, S/S, for 50ml Flask, with Spring Retainer
P8002	T Clamp, S/S, for 100ml Flask, with Spring Retainer
P8003	T Clamp, S/S, for 250ml Flask, with Spring Retainer
P8004	T Clamp, S/S, for 500ml Flask, with Spring Retainer
P8005	T Clamp, S/S, for 750ml Flask, with Spring Retainer
P8006	T Clamp, S/S, for 1000ml Flask, with Spring Retainer
P8007	T Clamp, Spring S/S , for 2000ml Flask, with Spring Retainer
P8008	T Clamp, Spring S/S, for 3000ml Flask, with Spring Retainer
P8009	T Clamp, Spring S/S, for 5000ml Flask, with Spring Retainer
P8013	T Clamp, S/S, for 150ml Flask, with Spring Retainer
P8014	T Clamp, S/S, for 300ml Flask, with Spring Retainer

	O Type Clamps (Stackable Shaking Incubators Only)	
P8021	O Clamp, S/S, for 50ml Flask, with Spring Retainer	
P8022	O Clamp, S/S, for 100ml Flask, with Spring Retainer	
P8023	O Clamp, S/S, for 250ml Flask, with Spring Retainer	
P8024	O Clamp, S/S, for 500ml Flask, with Spring Retainer	
P8025	O Clamp, S/S, for 750ml Flask, with Spring Retainer	
P8026	O Clamp, S/S, for 1000ml Flask, with Spring Retainer	
P8027	O Clamp, S/S, for 2000ml Flask, with Spring Retainer	
P8028	O Clamp, S/S, for 3000ml Flask, with Spring Retainer	
P8029	O Clamp, S/S, for 5000ml Flask, with Spring Retainer	



"O" Clamps	





P8011

P8012

# Tube Racks & 96 Well Plate Clamp

► Tube racks are available in stainless steel and ABS plastic.

 P8010 stainless steel tube rack set contains one clamp holder and one stainless steel rack. With two adjusting knobs, the rack itself can be randomly fixed at 0-90 degree angles. It is available with different sizes of holes for various sizes of test tubes.
While every tube rack has the same overall dimension, as 30x11x11cm. It is available with different sizes of holes for various sizes of test tubes.
For example:

\* P8010-17 : Tube Rack S/S, Φ17.5x55; for 15ml Falcon Tubes \* P8010-30: Tube Rack S/S, Φ30x20; for 50ml Falcon Tubes Refer to the below detailed list for available sizes of tube racks.

► P8011 ABS plastic tube rack set include a stainless steel clamp and an ABS plastic tube rack.

Tube Deels C/C + 14 FurCO
Tube Rack S/S, Φ14.5x60
Tube Rack S/S, Φ15x60
Tube Rack S/S, Φ16x60
Tube Rack S/S, Φ17.5x55
Tube Rack S/S, Ф18.5х52
Tube Rack S/S, Φ20x36
Tube Rack S/S, Φ21x36

P8010-22	Tube Rack S/S, Φ22.5x36
P8010-25	Tube Rack S/S, Φ25x24
P8010-30	Tube Rack S/S, Ф30x20
P8010-32	Tube Rack S/S, Ф32х17
P8010-35	Tube Rack S/S, Φ35x15
P8011	Tube Rack ABS Plastic
P8012	Clamp for 96 Well Plate, S/S, 128 x 86mm
P8032	O Clamp for 96 Well Plate, S/S, 128 x 86mm



### **Sticky Mat**

► The LABWIT Sticky Mat is designed for attaching culture vessels, such as flasks, bottles, dishes etc onto the shaking platforms for all shaking equipment, for example, shakers, rockers as well as shaking incubators. It can be used to cover the shaking platforms replacing the traditional flask clamps.

► The Sticky Mat can be easily removed and repositioned by simply peeling off the shaking tray surface.

► With proper care, the Sticky Mat can be durable and last for several years.





P8017	Sticky Mat, 20 x 20cm
P8082	Sticky Mat, 20 x 8cm

#### Universal Choice for Vessels and Shaking Trays

The Sticky Mat is suitable for use with any shaking tray or platform, including predrilled or with threaded holes, to fix various types of vessels onto the shaking trays.

#### High Shaking Speed

With strong stickiness, the Sticky Mat can be used for fastening the vessels with shaking speed up to 300rpm. (See specifications table for more details).

#### Handy to Install and Clean

Simply apply the Sticky Mat firmly without air bubble while it's wet. Rinse the mat under running water, or use mild soapy water if necessary.

#### Wide Temperature Range

The mat is proven to be safe to use over a wide range of temperature from 15°C-60°C.

#### Handy Shape and Size

The size of 20 x 20cm in square shape makes it easy to place small vessels, and handy to be removed. 20 x 8cm size available for making up better coverage over the shaking tray.

#### Easy to Remove the Vessels

Gently pull the vessel and hold for a while, the vessel will be removed effortlessly.

#### **Specifications:**

Only apply to flasks with filling volume 20%. Both flasks and Sticky Mat must be completely intact, clean, dry and free of grease. All information supplied without liability.

Only valid for standard glass Erlenmeyer Flasks. For vessels made of other materials, the maximum speed varies upon the shape and size of the vessel's bottoms.

Flask Size	Max Speed @ Shaking Diameter 25-50mm	Max Speed @ Shaking Diameter <25mm
50-750ml	250rpm Max	250rpm Max
1000ml	250rpm Max	300rpm Max
2000ml	250rpm Max	300rpm Max
3000ml	300rpm Max	300rpm Max
5000ml	250rpm Max	300rpm Max



# **Grid Plates**

- ► For Incubators and Drying Ovens.
- ► Anti-tilt design with high quality stainless steel.

Order Information		
P9001	Grid Plate for ZXDP-B2050, S/S	
P9002	Grid Plate for ZXDP-B2080, S/S	
P9003	Grid Plate for ZXDP-B2120, S/S	
P9004	Grid Plate for ZXDP-B2160, S/S	
P9005	Grid Plate for ZXDP-B2270, S/S	
P9006	Grid Plate for ZXGP-B2050, S/S	
P9007	Grid Plate for ZXGP-B2080, S/S	
P9008	Grid Plate for ZXGP-B2160, S/S	
P9009	Grid Plate for ZXGP-B2270, S/S	
P9010	Grid Plate for ZXSD-B1090, ZXSD-R1090, S/S	
P9011	Grid Plate for ZXSD-B1160, ZXSD-R1160, S/S	
P9012	Grid Plate for ZXSD-B1270, ZXSD-R1270, S/S	
P9013	Grid Plate for ZXSD-B1430, ZXSD-R1430, S/S	
P9014	Grid Plate for ZXMP-R1150, S/S	
P9015	Grid Plate for ZXMP-R1230, S/S	
P9016	Grid Plate for ZXMP-R1430, S/S	

P9018	Grid Plate for ZXRD-B5055, S/S
P9019	Grid Plate for ZXRD-B5110, S/S
P9020	Grid Plate for ZXRD-B5210, S/S
P9021	Grid Plate for ZXRD-A7080, S/S
P9022	Grid Plate for ZXRD-A7140, S/S
P9023	Grid Plate for ZXRD-A7230, S/S
P9025	Grid Plate for ZXFD-B5090, S/S
P9026	Grid Plate for ZXFD-B5140, S/S
P9027	Grid Plate for ZXFD-B5250, S/S
P9028	Grid Plate for ZXFD-B5430, S/S
P9029	Grid Plate for ZXFD-B5600, S/S
P9030	Grid Plate for ZXSP-R0160, S/S
P9031	Grid Plate for ZXSP-R0270, S/S
P9032	Grid Plate for ZXSP-R0430, S/S
P9033	Perforated Shelf Plate for ZOCR-1160
	S/S: Stainless Steel



# **Shaking Frames & Other**

	Gable Lids for Water Baths
P4011	Gable lid for ZSBB-712, S/S
P4012	Gable lid for ZSBB-724, S/S
P4013	Gable lid for ZSBB-726, S/S
P4014	Gable lid for ZSBB-728, S/S
	S/S: Stainless Steel

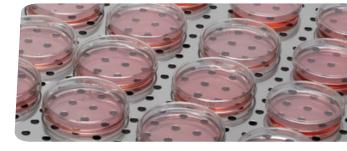


# **P5001**Single Layer Shaking Frame for ZWY-1102C/2102C, ZWYR-2102C, Stl S/C**P5002**Single Layer Shaking Frame for ZWY-1102/2102, ZWYR-2102C, Stl S/C

Shaking Frames for Double Layer Models

P5002	Single Layer Shaking Frame for ZWY-1102/2102, ZWYR-2102C, Stl S/C
P5003	Single Layer Shaking Frame for ZWY-1112B/2112B, ZWYR-2112B, Stl S/C
P5006	Single Layer Shaking Frame for ZWY-322B/3222B, Stl S/C
P5008	Single Layer Shaking Frame for ZWY-322C/ B3222, Stl S/C
P5024	Double Layer Shaking Frame for ZWY-1102C/2102C, ZWYR-2102C, Stl S/C
P5025	Double Layer Shaking Frame for ZWY-1102/2102, ZWYR-2102, Stl S/C
P5026	Double Layer Shaking Frame for ZWY-1112B/2112B, ZWYR-2112B, Stl S/C
P5027	Double Layer Shaking Frame for ZWY-322B/3222B, Stl S/C
P5028	Double Layer Frame for ZWY-322C/ B3222, Stl S/C







P5010-35

Stands for Stackable Shaking Incubators	
Cabinet Base Stand for ZWYR-D2401, H35cm	
Base Stand for ZWYR-D2401, H50cm	
et Base Stand for ZWYC-290A, H35cm	
Base Stand for ZWYC-290A, H50cm	
et Base Stand for ZWYR-293, ZWYC-293G, 840x710x350mm	
Base Stand for ZWYR-293, ZWYC-293G, 840x710x500mm	

for ZWYR-D2401/D2402/D2403, ZWYC-290A, Warm White

for ZWYR-D2401/D2402/D2403, ZWYC-290A, Red & Blue LED Lighting Panel and Control Kit, Warm White

LED Lighting Panel and Control Kit, Red & Blue

**LED Lighting Panels** LED Lighting Panel

LED Lighting Panel

for ZWYR-293, ZWYC-293G

for ZWYR-293, ZWYC-293G

P5011WW

P5011RB

P5031WW

P5031RB





	Others			
P4002	Right Hinged Door, ZOCR-1160			
P4003	Built-in Printer			
P4004	Gas Tank Auto-switching Kit			
P4015	Printer Paper Roll, 10 pcs			
P5013	Direct Steam Humidification Kit for ZWYC-290A			
P5014	IR CO <sub>2</sub> Kit for ZWYC-290A			
P5016	RS-485 Interface			
P5019	Ø50mm Shaking Orbit, for ZWY-2112B/1112B, ZWYR-2112B			
P5021	RS-232 Interface			
P5033	TCP/IP interface			
P5018	Static Perforated Shelf for ZWY-1102/2102, ZWYR-2102C, H15cm			
P5029	Static Perforated Shelf for ZWYC-290A, H15cm			
P5017	Upward Door Opening for ZWYR-D2401/D2402/D2403			
P5022	UV Lighting, 8W, for ZXSD/ZXSP Series			
P5030	Fluorescent Light for ZWYR-240/200D, ZWY-240/200D			









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