# Premium Stackable Shaking Incubators





### **Description:**

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.



### ZWYR-D2401 With P5010-50



### ZWYR-D2403 with P5017



ZWYR-D2401 With P5010-35

### Features:

- Stackable up to three units for maximum space savings.
- 5.6" LCD 640x480 touch screen panel clearly indicates all parameters in one page display and enables all complicated program settings intuitively just with finger tips.
- 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 beltless driving system is both durable and economical, maintenance free, allows extended speed ranges from 30 to 300 RPM, ±1 RPM with minimized vibration, even when shakers are stacked of three high. The shaking diameter can be changed from 1-50mm 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 cool white, or Red & Blue dual light colors are possible and the intensity of each color 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.
- Internal UV light as standard provides proactive contamination control when needed.
- 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)

| Flask (ml) | 50ml | 100ml | 250ml | 500ml | 750ml | 1000ml | 2000ml | P8010 | P8012 |
|------------|------|-------|-------|-------|-------|--------|--------|-------|-------|
| ZWYR-D2401 | 91   | 50    | 38    | 26    | 15    | 15     | 8      | 8     | 19    |
| ZWYR-D2402 | 180  | 100   | 76    | 52    | 30    | 30     | 16     | 16    | 38    |
| ZWYR-D2403 | 270  | 150   | 114   | 78    | 45    | 45     | 24     | 24    | 57    |

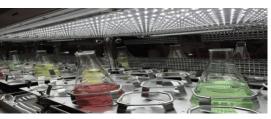
## **Specifications:**

| Model                                | ZWYR-D2401                                         | ZWYR-D2402     | ZWYR-D2403     |  |  |
|--------------------------------------|----------------------------------------------------|----------------|----------------|--|--|
| Control                              | P.I.D Microprocessor                               |                |                |  |  |
| Control Mode                         | Fix Value or Program (up to 9 Segments)            |                |                |  |  |
| Control Panel                        | LCD Touch Screen                                   |                |                |  |  |
| Air Convection                       | Forced                                             |                |                |  |  |
| Shaking Mode                         | Orbit                                              |                |                |  |  |
| Volume/ Compartment (L)              | 190                                                |                |                |  |  |
| Ambient Temperature( <sup>o</sup> C) | 10-35                                              |                |                |  |  |
| Shaking Speed (rpm)                  | 30-300                                             |                |                |  |  |
| Stroke (mm)                          | Ø1-50 Stepless Adjustable                          |                |                |  |  |
| Temperature Range (ºC)               | 4-60#                                              |                |                |  |  |
| Temperature Accuracy (°C)            | 0.1                                                |                |                |  |  |
| Temperature Uniformity (ºC)          | ±0.5ºC@37℃                                         |                |                |  |  |
| Timer                                | 1 to 9999 mins                                     |                |                |  |  |
| Tray (mm) (WxD)                      | 800x430                                            |                |                |  |  |
| Tray Included                        | 1                                                  | 2              | 3              |  |  |
| Inner Dimensions (mm) (WxDxH)        | 920x532x395                                        |                |                |  |  |
| Exterior Dimensions (mm) (WxDxH)     | 1300x930x735                                       | 1300x930x1315  | 1300x930x1895  |  |  |
| Packing Dimensions (mm) (WxDxH)      | 1420x1050x90                                       | 1420x1050x1480 | 1420x1050x2060 |  |  |
| Net/Gross Weight (kg)                | 250/290                                            | 430/500        | 630/730        |  |  |
| Power (W)                            | 1200                                               | 2400           | 3600           |  |  |
| Electricity                          | 220-240V 50/60 Hz                                  |                |                |  |  |
| Approval                             | CE, ISO                                            |                |                |  |  |
| Convitu                              | Over-temperature Protection, Compressor            |                |                |  |  |
| Security                             | Overload Protection, Electrical Leakage Protection |                |                |  |  |
| Additional                           | Built-in Printer, RS485 Interface (Option), LED    |                |                |  |  |
| Additional                           | Lighting Control Kit (Option), Base Stand(Option)  |                |                |  |  |

| Lighting Control Kit | P5011RB                          | P5011W                |  |  |
|----------------------|----------------------------------|-----------------------|--|--|
| Light Source         | LED                              |                       |  |  |
| Light Color*         | 50% Red, 50% Blue                | 100% Warm White       |  |  |
| Spectrum             | Red: 640-660nm, Blue: 430-450nm  | 4500k:400-700nm       |  |  |
| Light Intensity      | Up to 700 µmol/(m2*s)            | Up to 400 µmol/(m2*s) |  |  |
| Control Range        | Individually, from 0-100% output |                       |  |  |
| Control Mode         | Fixed Value & Programmable       |                       |  |  |
| Panel Dimensions     | 890x500x10mm                     |                       |  |  |
| Power                | 300W                             |                       |  |  |



P5011RB: (50% Red, 50% Blue)



P5011W: (100% Warm White)

\*Fully customized color combinations are available, contact Labwit representatives for more information. # Min. Operating Temperature: 15 ° C when Photosynthetic Lighting option is applied.

# **Ordering Information:**

| Part Number | Descriptions                                                                                           | Part Number | Descriptions                                         |
|-------------|--------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------|
| ZWYR-D2401  | ZWYR-D2401, 190Lx1, Premium Stackable Shaking Incubator, Single, 4-60 $^\circ\!\mathbb{C}$ , 30-300rpm | P8010       | Tube Rack S/S                                        |
| ZWYR-D2402  | ZWYR-D2402, 190Lx2, Premium Stackable Shaking Incubator, Double, 4-60 $^\circ\!\mathrm{C}$ , 30-300rpm | P8012       | Clamp for 96 Well Plate, S/S                         |
| ZWYR-D2403  | ZWYR-D2403, 190Lx3, Premium Stackable Shaking Incubator, Triple, 4-60 $^\circ\!\mathbb{C}$ , 30-300rpm | P8017       | Sticky Mat, 20 x 20cm                                |
| P5010-35    | Cabinet Base Stand for ZWYR-D2401, H35cm                                                               | P8021       | O Clamp, S/S, for 50ml Flask, with Spring Retainer   |
| P5010-50    | Frame Base Stand for ZWYR-D2401, H50cm                                                                 | P8024       | O Clamp, S/S, for 500ml Flask, with Spring Retainer  |
| P5011RB     | LED Lighting Panel, For ZWYR-D2401/D2402/D2403, ZWYC-290A, Red & Blue                                  | P8022       | O Clamp, S/S, for 100ml Flask, with Spring Retainer  |
| P5011W      | LED Lighting Panel, For ZWYR-D2401/D2402/D2403, ZWYC-290A, White                                       | P8023       | O Clamp, S/S, for 250ml Flask, with Spring Retainer  |
| P5016       | RS-485 Interface                                                                                       | P8024       | O Clamp, S/S, for 500ml Flask, with Spring Retainer  |
| P5017       | Upward Door Opening for ZWYR-D2401/D2402/D2403                                                         | P8025       | O Clamp, S/S, for 750ml Flask, with Spring Retainer  |
| P6024       | Predrilled Tray for ZWYR-D2401/2402/2403                                                               | P8026       | O Clamp, S/S, for 1000ml Flask, with Spring Retainer |
| P6025       | Tray for ZWYR-D2401/2402/2403, Plain                                                                   | P8027       | O Clamp, S/S, for 2000ml Flask, with Spring Retainer |







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