

## High volume orbital shaker incubator

FAN AIR CIRCULATED, WITH OR WITHOUT REFRIGERATION  
DIGITAL ELECTRONIC CONTROL OF SPEED, TEMPERATURE AND TIME. FOR LONG OPERATING PERIODS.

### SAFETY:

TRIPLE PROTECTION MOTOR DRIVE:  
OVER TEMPERATURE, IRREGULAR MOVEMENTS, AUTOMATIC STOP WHEN THE DOOR IS OPENED, TEMPERATURE ALARM, THERMAL CUTOUT.



*Hinged door models with or without refrigeration*



*Framework type models with or without refrigeration*



### GENERAL FEATURES

Metallic external case epoxy-coated.  
Current and set digital reading of temperature, time and speed parameters.  
Acoustic alarm and illuminated indicator at the end of the cycle and also to indicate temperature and / or time programs errors.  
Automatic switch off mechanism when the shaker door is opened.  
Motor over load protection, with automatic switch off activation.  
Induction drive motor, where the drive mechanism has an anti vibration system.  
Refrigerated models have a hermetically sealed compressor unit with a ventilated condenser.  
Internal case made of stainless steel AISI 316 with polished finish and glazed door for a handy visibility of the samples process.  
Internal platform with multi-adapter positions for differing accessories, such as: conical flask adapters, microtitre plate holders and universal tray with adjustable tension springs for other non standard sized vessels.

### HINGED DOOR MODELS "100D" AND "200D"

Temperated glass hinged door.  
The orbital rotation can be adjusted without disassembly from 50mm.

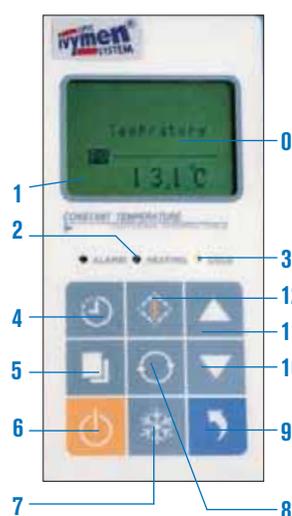


*Orbital rotation adjustment*

### MODELS FRAMEWORK TYPE "1102" AND "2102"

Made with two doors framework type and double glass windows which allow visibility of the material exposed in the inside  
Two removable upper trays for high volume Erlenmeyer flasks accommodation in the lower tray.  
Adjustable outlet hole for the air in the inside of the chamber.  
With wheels for movements and adjustable support for a stabled fixing.  
**Accessories:** See pag. 43

### CONTROL PANEL



0. LCD Display.
1. Heater "ON" indicator.
2. Alarm indicator.
3. Refrigeration compressor "ON" indicator. (only refrigerated models)
4. Time function push button.
5. Modify and confirm push button.
6. Start / Stop Push button.
7. Adjust temperature push button. (only refrigerated models)
8. Speed push button.
9. Rotation push button.
10. Reduce value push button.
11. Increase value push button.
12. Temperature push button.

**Note:** In models framework type, the control panel position is horizontal.



100D and 200D series.



1102 and 2102 series.

| MODELS   | 100D   | 200D  | 1102  | 2102                  |
|--|--|---|---|-----------------------|
| Part No.   | <b>5312090</b>   | <b>5312091</b>  | <b>5312094</b>  | <b>5312095</b>        |
| Rotation amplitude                               | Continuous adjustment from 0 to 50 mm orbital                            |   | 26 mm   |                       |
| Controllable speed range                         | from 30 to 600 r.p.m.  | from 30 to 400 r.p.m.   | from 30 to 300 r.p.m.   | from 30 to 300 r.p.m. |
| Controllable speed in steps of                   | 1 r.p.m.   | 1 r.p.m.  | 1 r.p.m.  | 1 r.p.m.              |
| Refrigeration                                    | No   | Yes   | No  | Yes                   |
| Heating  | Yes  | Yes   | Yes   | Yes                   |
| Controllable temperature range                   | from ambient +5 °C to 60 °C  | from 5 °C up to 60 °C   | from ambient +5 °C to 60 °C   | from 6 °C up to 60 °C |
| Controllable temperature in steps of             | 0.1 °C   | 0.1 °C  | 0.1 °C  | 0.1 °C                |
| Chamber temperature uniformity                   | ±1 °C  | ±1 °C   | ±1 °C   | ±1 °C                 |
| Timer  | from 0 to 500 hours  | from 0 to 500 hours   | from 0 to 500 hours   | from 0 to 500 hours   |
| Usable platform dimensions                       | 340 x 370 mm   | 370 x 400 mm  | 734 x 458 mm  | 734 x 458 mm          |
| Platform number                                  | 1  | 1   | 2   | 2                     |
| Maximum conical flask capacity (see accessories) | 6 x 1000 ml, or 9 x 500 ml, or 12 x 250 ml, or 16 x 100 ml, or 20 x 50ml | 9 x 1000 ml, or 9 x 500 ml, or 16 x 250 ml, or 20 x 100 ml, or 25 x 50 ml | *4 x 5000 ml, or *8 x 3000 ml, or *8 x 2000ml, or 24 x 1000 ml, or 44 x 500 ml, or 56 x 250 ml, or 104 x 100 ml, or 104 x 50 ml |                       |
| Dimensions Height x Width x Depth                | 510 x 600 x 580 mm   | 555 x 685 x 730 mm  | 1440 x 950 x 700 mm   | 1440 x 950 x 700 mm   |
| Weight   | 72 Kg  | 100 Kg  | 265 Kg  | 272 Kg                |
| Power  | 540 W  | 700 W   | 930 W   | 1200 W                |

\*Note: An upper tray divided into two removable pieces which allow high volume Erlenmeyer flasks accommodation, from 2000 to 5000 ml. in the lower tray or the Universal platform which is supplied as an accessory.

### ACCESSORIES

#### Erlenmeyer and flask adapters.

Made from hardened sprung stainless steel.



- Part No. **5312105** Adapter for 50 ml
- Part No. **5312106** Adapter for 100 ml
- Part No. **5312107** Adapter for 250 ml
- Part No. **5312108** Adapter for 500 ml
- Part No. **5312109** Adapter for 1000 ml
- Part No. **5312110** Adapter for 2000 ml
- Part No. **5312111** Adapter for 3000 ml
- Part No. **5312112** Adapter for 5000 ml



**Adapter for microtiter holder**  
From 85 x 130 mm., allows up to 3 plates in models 100D and 200D, and up to 6 plates in models 1102 and 2102.

Part No. **5312113**

**Universal platform tray with elastic tension clips** that hold in position any type of vessel, flasks, beakers, racks, etc.



For model **100D**  
Dimensions 310 x 280 x 75 mm  
Part No. **5312117**

For model **200D**  
Dimensions 370 x 300 x 75 mm  
Part No. **5312118**

For models **1102 and 2102**  
Dimensions 734 x 458 x 75 mm  
Part No. **5312120**