

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.

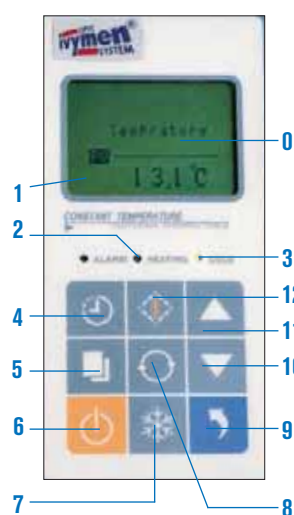


Orbital rotation adjustment

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.	5312090	5312091	5312094	5312095
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**



Ultrasonic homogenizers "CY-500"

INTENSE CAVITY SHAKING.
FOR 10 TO 500ML VOLUMES.



NEW

OPERATION

The ultrasonic generator transforms the electric current from 220V 50Hz into ultrasonic energy of 20KHz, to feed the ultrasonic transducers. The transducer produces an elastic distortion by following the alternate voltage, which traduces in a longitudinal mechanical vibration that produces a cavitation effect in the titanium alloy probe submerged in the solution. This generates a multitude of micro bubbles which releases a considerable energy in the probe end that allow a sample intense shaking and vibration.

APPLICATIONS

Biology, chemistry, environment, general analysis laboratory.

It allows disintegration of cells and biological tissue, DNA protein extraction, ether hydrolysis RNA, reactions output acceleration and increase, earth and sediments treatment according to EPA SW methods which simplifies the Soxhlet method in time, quality control, R&D, sample gas remove, dissolution and homogenization, emulsion, dispersion, liposomes formation, proteins microencapsulation, etc.



FEATURES

The equipment consists of a control and power unit and an ultrasonic transducer (homogenizer).

Control unit: Epoxy coated external metallic case and ABS front panel. It consists of a LCD display, cycle time programming push buttons, impulse intervals, maximum power and temperature with 10 programs configurable by the user. Probe and connector for the sample temperature control.

Ultrasonic transducer consists of a piezoelectric converter with a 1/4 inches titanium alloy probe (5,6mmØ and 60mm height).

It is hold by means of a retort stand and an adjustable clamp, max. 44 cm height.

CONTROL PANEL

On/off switch.

Parameters indicator LCD display.

Ultrasonic power adjustable control (1-99%).

Push button from 0 to 9 for parameters selection: Time (1" - 2hours).

Maximum impulses and temperature.

SET push button: select parameters.

CLEAR push button: cancel parameters.

ENTER push button: validate parameters.

START/STOP push button: cycle beginning and end.

PAUSE push button: pause function.

RECALL-SAVE push button: memory to save 10 programs.

ACCESSORY

Anti-noise cabin

Made in double isolated layer that protects from high noises emitted by the ultrasound effects.

It comes with a transparent door.

Part No. **5059601**



MODEL

Part No.	KHz Frequency	Height/Width/Depth (exterior) cm	Power W	Weight Kg
5059600	20	22 19 33	500	6,7

It is supplied with a support-rod adjustable in height.



V solid mixer homogeneizer “VS-5” and “VS-8”



NEW

APPLICATIONS

For the use in pharmaceutical, chemistry and alimentary industry.
For powder, granulated and small concentrated batches that are sent to the production plant after being investigated in laboratory.

FEATURES

Made of stainless steel AISI 304.
It have two loading entrances in V and an unloading hole which is protected with isolated covers with silicon gaskets.
Engine group with shaking device at a constant speed of 18 rpm.

CONTROL PANEL

Start button.
Stop button.
Container positioner button.
Timer from 1 to 99,9h.

MODELS

Model	Part no.	Volume Liters	Load capacity (50%) Liters	RPM	Height / Width / Depth (external cm)	Power W	Weight Kg
VS-5	5810100	5	2,5	18	58 72 37	550	47
VS-8	5810101	8	4	18	64 81 37	550	52

SPARE PART

Silicone gasket for VS-5 y VS-8.
Part No. 5810110 (Unit).



Multifunctional grinding mill “TR-20”

FOR CRASHING AND SHEARING



NEW

APPLICATIONS

For a wide range of products grinding, solid, fragile, soft and semi-hard ones. For the use in pharmaceutical, chemistry and alimentary industry in general.

FEATURES

Made of stainless steel AISI 304.
Device for different kind of easily changeable sieves. From 0,12 mm Ø to 0,80 mm Ø.
It is supplied with a sieve of 0,18 mm Ø.

Model	Part No.	Capacity Kg / h	Db	RPM	Measures (cm) Height./ Width. / Depth.	Power Kw	Weight Kg
TR-20	5810000	10 a 30	85	4200	70 40 80	2,2	85



ACCESSORIES

Sieves

Part no.	Sieve Ø mm.
5810001	0,80 mm
5810002	0,38 mm
5810003	0,25 mm
5810004	0,18 mm
5810005	0,12 mm



SPARE PARTS Shear Part no. 5810006

Device for an easy sieve insertion.