



STIRRERS, SHAKERS AND HOMOGENEIZERS

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*I never did anything worth doing by accident, nor did any of my inventions come by accident; they came by work.
Thomas Edison*



STIRRERS Stirrer and shaker summary table

QUICK OVERVIEW

MAGNETICS									
Single Direction	Part No.	Controller	Volume max.	Heater	Controller	Range	Range	Rapid	Plate Ø
Stirring			litres		Type	temperature °C	r.p.m.	Overview	cm
AGIMIN	7001731	Electronic	1	No	-	-	40 / 2000	ABS	10
AGIMICRO	7001638	Analogue	2	No	-	-	40 / 1700	ABS	12
AGIMIXT	7000381	Analogue/Digital	10	Yes	Electronic/Temperature	...350	60 / 1600	AL-PTFE	15
AGIMATIC-S	7000242	Analogue	10	No	-	-	60 / 1600	INOX	14.5
AGIMATIC-N	7000243	Analogue	10	Yes	Electronic/Energy	...350	60 / 1600	INOX	14.5
AGIMATIC-E	7002431	Analogue	10	Yes	Electronic/Temperature	...350	60 / 1600	INOX	14.5
AGIMAN	7000446	Analogue	2	Yes	Electronic/Energy	...350	60 / 1600	For Heating Mantle	
AGIMATIC-ED	7001511	Digital	10	Yes	Electronic/Temperature	...350	60 / 1600	INOX	14.5
AGIMATIC-ED-C	7001609	Digital	10	Yes	Electronic/Temperature	...350	60 / 1600	CERAMICS	14,5
Large Volume stirring									
AGIMATIC-HS	7001005	Digital	25	No	-	-	50 / 980	INOX	28 x 34
AGIMATIC-HL	7001006	Digital	60	No	-	-	50 / 980	INOX	44 x 38
Reversible stirring action									
AGIMATIC REV-E	7000836	Digital	10	Yes	Electronic/Temperature	...350	50 / 1500	INOX	14.5
AGIMATIC REV-ED-C	7001610	Digital	10	Yes	Electronic/Temperature	...350	50 / 1500	CERAMICS	14,5
AGIMATIC REV-W	7000922	Digital	2	No	-	-	100 / 1100	EPOXI RESIN	14.5
Multi- positions									
MULTIMATIC 5-S	7000951	Analogue	5 x 0.6	No	-	-	...1600	INOX	28 x 33
MULTIMATIC 9-S	7000952	Analogue	9 x 0.3	No	-	-	...1600	INOX	28 x 33
MULTIMATIC 5-N	7000953	Analogue	5 x 0.6	Yes	Electronic/Energy	...300	...1600	INOX	25 x 25
MULTIMATIC 9-N	7000954	Analogue	9 x 0.3	Yes	Electronic/Energy	...300	...1600	INOX	25 x 25
ROTARY & TILTING MIXERS									
Tube Mixers	Part No.		Vol. max. litres		Heaters		Range r.p.m.		Capacity
ORBIT	3000445		5 x 0.25		No		12		See Tube Selection
MOVIL ROD	7001723		-		No		10 / 80		35 mm Ø max.
MOVIL TUB	7000913		-		No		15		12 Tubes
MOVIL VIB	7001721		-		No		2000		See Tube Selection
MOVIL XH-B	7001722		-		No		2600		See Tube Selection
VIBRATING SHAKER									
Oscillating	Part No.		Max. Load		Heater		Capacity		Oscil. min.
VIBROMATIC	7000384		4 Kg		No		8 flasks of 50 mm Ø max. (optional + Erlenmeyer 250 ml)		100 / 950
ORBITAL TO - FRO SHAKERS									
To & Fro & orbital movement	Part No.		Heater		Heater	Range	Range		Platforms
					Type	temperature °C	r.p.m.		cm
ROTATERM	3000435		Yes		Electronic/Digital	...250	20/230		41x31
ROTABIT	3000974		No		-	-	20/230		According to accessories



Shaker for Petri plates "AG-200", shaker for bottles "AG-200-A", and shaker for Erlenmeyer flasks "AG-200-B".

Thermo shaker "TRM-4" for Microtiter.

Incubated / refrigerated high volume orbital shakers "100D", "200D", "1102" and "2102".

Ultrasonic homogenizers "CY-500".

MAGNETIC STIRRERS



A new generation of stirrer for the most exacting work



Magnetic Stirrer “Agimin” without heating

MICROPROCESSOR CONTROLLED, ELECTRONIC CONTROL, PORTABLE.

FEATURES

Maximum stir volume 1 litre.
Speed controllable from 40 to 2000 r.p.m. with storage of the ultimate speed setting.
Double power source: 4 x 1.5V AA batteries or with a mains adapter.
Moulded ABS plastic case.
Excellent resistance to chemical agents.

CONTROL PANEL

Luminous On/ Off push button.
Luminous r.p.m. push button.
Increase/ decrease speed push button.
Low battery indicator lamp.

MODEL

Part No.	Height cm	Ø cm	Depth cm	Power W	Weight Kg
7001731	5	10	15	0.9	0.35



Comes complete with support bar and clamp for 3 electrodes (1 x 13 mm Ø and 2 x 16 mm Ø), 4 batteries 1.5V AA, mains adapters and 2 PTFE coated stir bars.



Magnetic stirrer “Agimicro” without heating

FEATURES

Maximum stir volume: 2 Litres.
Adjustable stir speed from 40 to 1400 r.p.m.
Durable moulded ABS plastic body.
Excellent chemical resistance.

MODEL

Part No.	Height cm	Ø Plate cm	Power W	Weight Kg
7001638	5	12	2	0.5

Comes complete with a 8 Ø x 32 mm P.T.F.E. coated stir bar.

CONTROL PANEL

Mains switch with luminous “on” indicator.
Analogue control of speed in r.p.m.

ACCESSORIES

Support bar and electrode clamp (1 of 13 and 2 of 16 mm Ø). Used with pH and conductivity meters.
Part No. **7001639**



Powerful magnetic stirrer “Agimatic-H” without heating

FOR LOW VISCOSITY VOLUMES FROM 1 TO 25 LITRES AND 60 LITRES.
USING REDUCED VOLUMES THE UNIT CAN STIR MEDIUM TO HIGH VISCOSITY LIQUIDS.

Maximum stirring power

FEATURES

Electronic speed control from 50 to 980 r.p.m. will maintain a constant stir speed irrespective of the liquid viscosity.
Digital speed display.
AISI 304 stainless steel top plate with an epoxy coated metal case.

CONTROL PANEL

Main switch with a luminous “on” indicator.
Electronic speed control.
Digital speed display in r.p.m.

MODEL

	Part No.	Speed control r.p.m.	Maximum stir volume in litres	Height/Width/Depth (exterior) cm	Power W	Weight Kg
AGIMATIC-HS	7001005	50 to 980	up to 25	12 28 34	35	8
AGIMATIC-HL	7001006	50 to 980	up to 60	14 44 38	40	12

Model HS comes complete with a 16 Ø x 127 mm stir bar and model HL with a 19 Ø x 150 mm stir bar.





Analogue-digital magnetic stirrer “Agimixt”

FOR REGULABLE SPEED UP TO 1600 rpm
FOR REGULABLE TEMPERATURES UP TO 350 °C.
MAXIMUM STIRRING VOLUME: 5-10 LITRES.
ALUMINIUM UPPER PLATE, PTFE COVERED, PLATE Ø 15 cm.

NEW



An economic and effective option

FEATURES

Metallic case with light alloy injection molding and epoxy covered.
Frontal control panel splash protected.
Side hole for a support rod.

CONTROL PANEL

Main switch with illuminated indicator.
Analogue speed indicator.
Electronic indicator with temperature indicator digital display.
Back connection for external PT100 probe for temperature control of the container liquid.

1. Mains switch with illuminated indicator.
2. SET temperature indicator.
3. External probe indicator.
4. Temperature indicator digital display.
5. Heater indicator.
6. Speed selector control.
7. Increase parameter value push button.
8. Decrease parameter value push button.
9. Auto-tuning push button.



MODEL

	Part No.	Maximum stir volume litres	Height/width/Depth (exterior) cm	Power W	Weight Kg
AGIMIXT	7000381	up to 10	14,5 19 26	300	3,5

Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.

ACCESSORIES

PT100 temperature probe. Part No. **1001605**

Support rod with thread of 12 mm Ø x500 mm high, attachable to the case, stirrer dependent.
Part No. **1000725**



Magnetic Stirrers “Agimatic” and “Agiman”



A new generation design of stirrers at the forefront of technology

COMMON FEATURES

Unique functional design, with epoxy covered alloy case. Choice of stainless steel or ceramic top plate (model dependent). An internal case acts as a spill guard and insulator, made from AISI304 stainless steel. Tilted control panel for easy viewing with splash protection. Location hole at the back for a retort support rod, supplied as an accessory. Electronic speed control from 60 to 1600 r.p.m. and from 50 to 1500 r.p.m. for models “Agimatic Rev” with constant speed irrespective of liquid viscosity. Easy to service and to replace modular electronics. All heated models have a connection at the back to connect an electronic contact thermometer “Sensoterm II”, electronic controller “Electemp” or Pt100 temperature probe, model dependent. **Agimatic and Agiman exterior measures: Height 14,5, Width 19 y Depth 26 cm. Weight: 3,5 Kg.**

All hotplates have a safety over temperature cut out, set to the maximum working temperature.

TECHNICAL SCHEMATICS OF DIFFERENT COMPONENTS

ICONS OF THE DIFFERENT TEMPERATURE REGULATION SYSTEMS AND OPTIMUM STIR CONDITIONS.



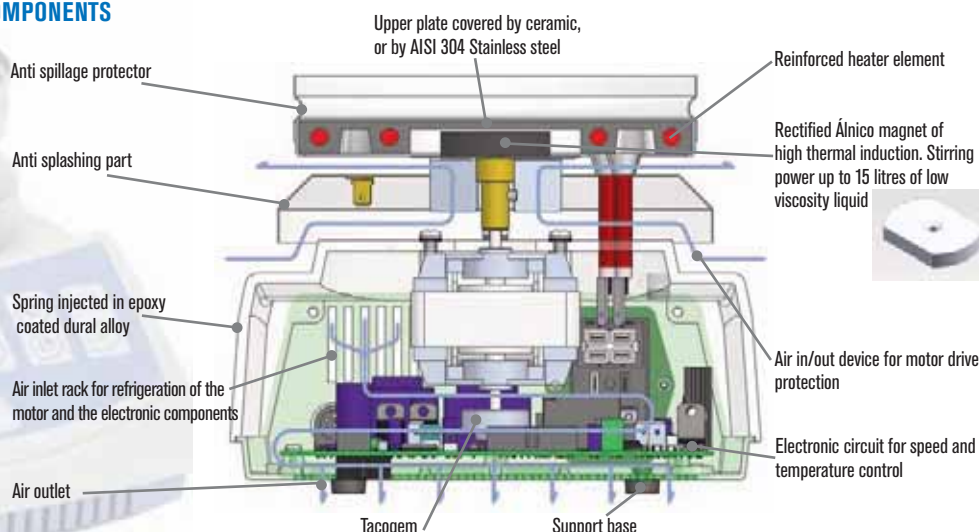
Electronic contact thermometer “Sensoterm II”



Electronic temperature regulator “Electemp”



Temperature sensor Pt100





Magnetic Stirrers “Agimatic” and “Agiman” analogue control

FOR SPEEDS FROM 60 TO 1600 rpm..

MAXIMUM STIR VOLUME: 10 LITRES.

PLATE MADE FROM AISI 304 STAINLESS STEEL WITH REMOVABLE SAFETY RING.

PLATE Ø 14.5 cm.



“Agimatic-S” without heating

CONTROL PANEL

1. Mains switch illuminated.
2. Electronic stir speed control.

Part No. **7000242**

Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.



“Agimatic-N” with heating

ELECTRONIC DIGITAL CONTROL OF SPEED AND POWER TO THE HEATER.

CONTROL PANEL

1. Switch on button with indicator lamp for heating and for stirring speed.
2. Electronic stir speed control.
3. Electronic heater energy control from 0-100%, synchronised with an indicator lamp that functions when the plate is hot.
4. Illuminated indicator when the heater is “on”.

Part No. **7000243**

Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.

Connection at the back to connect:

Electronic thermometer “Sensoterm II”



Electronic temperature regulator “Electemp”



“Agimatic-E” with heating

ELECTRONIC TEMPERATURE CONTROL OF SPEED AND POWER TO THE HEATER.
PRECISION $\pm 2^{\circ}\text{C}$.

CONTROL PANEL

1. Switch on button with indicator lamp for heating and for stirring speed.
2. Electronic stir speed control.
3. Electronic temperature control of the heater plate from 50 °C to 350 °C synchronised with an indicator lamp that functions when the plate is hot.
4. Illuminated heater indicator when the heater is on.

Part No. **7002431**

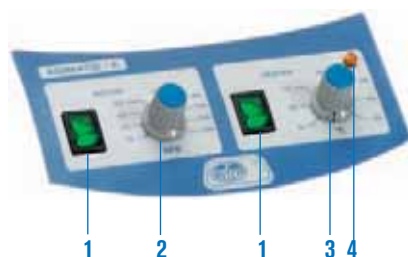
Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.

Connection at the back to connect:

Electronic thermometer “Sensoterm II”



Electronic temperature regulator “Electemp”



Magnetic stirrer “Agiman”

ELECTRONIC HOTPLATE DIGITAL CONTROL.

WITH A MECHANISM FOR ATTACHING HEATING MANTLES.

CONTROL PANEL

- Switch on button with indicator lamp for heating and for stirring speed.
- Electronic stir speed control.
- Electronic heater energy control from 0-100%, synchronised with an indicator lamp that goes on when the mantle is hot.
- Illuminated heater indicator when the mantle is “on”.

Part No. **7000446**

Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.

Connection at the back to connect:

Electronic thermometer “Sensoterm II”



Electronic temperature regulator “Electemp”



ACCESSORIES

Attachable heating mantle for the “Agiman” magnetic stirrer.

Part No.	Capacity flask ml
3000447	250
3000448	500
3000449	1000
3000450	2000

Complements for Agimatic-S-N-E and Agiman.
See accessories on page 34 and 35.





Magnetic Stirrers “Agimatic-ED” and “Agimatic-ED-C” digital control



FOR SPEEDS FROM 60 TO 1600 RPM.
FOR ADJUSTABLE TEMPERATURES FROM 50 °C TO 350 °C. PRECISION ± 2 °C.
MAXIMUM STIR VOLUME: 10 LITRES.
PLATE Ø IS 14,5 cm.
WITH REMOVABLE SAFETY RING AGAINST SPILLAGE.



“Agimatic-ED” with heating

ELECTRONIC TEMPERATURE CONTROL OF SPEED AND POWER TO THE HEATER.

SILUMIN UPPER PLATE COVERED BY AISI 304 STAINLESS STEEL.

CONTROL PANEL

1. Digital display indicating stir speed or temperature.
2. Push button, parameter selector, Stir speed or Temperature.
3. Push button, increase parameter value.
4. Push button, decrease parameter value.
5. Indicator lamp, safety thermostat “on”
6. Push button Stop-Start

Precision ± 2 °C.

Part No. **7001511**

Supplied with a PTFE coated stir bar of Ø 8 x 40 mm. long.



Connection at the back to connect:

Electronic contact thermometer “Sensoterm II”



Electronic temperature regulator “Electemp”



Temperature sensor Pt100



“Agimatic-ED-C” with heating

ELECTRONIC TEMPERATURE CONTROL OF SPEED AND POWER TO THE HEATER.

SILUMIN UPPER PLATE WITH CERAMIC SURFACE.

Ceramic surface:

Excellent conductivity and heat distribution.
Unalterable surface.
Higher acceleration to reach temperature.
Extreme resistance against chemical agents and scratches.



CONTROL PANEL

1. Digital display indicating stir speed or temperature.
2. Push button, parameter selector, Stir speed or Temperature.
3. Push button, increase parameter value.
4. Push button, decrease parameter value.
5. Indicator lamp, safety thermostat “on”
6. Push button Stop-Start

Precision ± 2 °C.

Part No. **7001609**

Supplied with a PTFE coated stir bar of Ø 8 x 40. mm long.



NEW

Connection at the back to connect:

Electronic contact thermometer “Sensoterm II”



Electronic temperature regulator “Electemp”



Temperature sensor Pt100



Complements for Agimatic-ED and Agimatic ED-C. See accessories on pages 34 and 35.



Reversible magnetic Stirrers “Agimatic-Rev-E” and “Agimatic-Rev-ED-C”



Forefront technology for the most exacting analysis

FOR SPEEDS FROM 50 TO 1500 rpm.

FOR ADJUSTABLE TEMPERATURES FROM 50 °C TO 350 °C. PRECISION ± 2 °C.

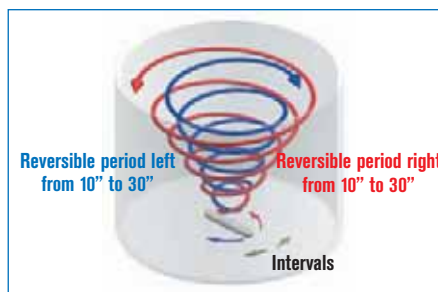
MAXIMUM STIR VOLUME: 10 LITRES. PLATE Ø IS 14,5 cm.

MAGNETIC REVERSIBLE ACTION STIRRERS, WITH ADJUSTABLE TIME STIRRING PERIODS AND PRECISE SPEED CONTROL, PROVIDES THE FOLLOWING ADVANTAGES FOR REPEAT PROCESSES:

- A.- FASTER MIXING, REDUCED STIRRING TIME.
- B.- CONTROLLABLE VORTEX EFFECT.
- C.- QUICKLY ELIMINATES AIR FROM WITHIN THE SAMPLE MIXTURE, DEGASSING.
- D.- MINIMUM SPLASHING, NO LOSS OF SAMPLE.

SELECT MOVEMENT FOR ONE DIRECTION OR REVERSE.

ELECTRONIC CONTROL OF THE FREQUENCY INVERTING PERIOD, FROM 10-30 SECONDS.



“Agimatic-Rev-E” with heating

ELECTRONIC DIGITAL CONTROL OF STIR SPEED AND HEATER TEMPERATURE. WITH REMOVABLE SAFETY RING AGAINST SPILLAGE.

SILUMIN UPPER PLATE COVERED BY AISI 304 STAINLESS STEEL.

CONTROL PANEL

1. Digital display indicating stir speed or temperature.
2. Push button, parameter selector, Stir speed, Temperature or reverse stir speed time.
3. Push button, increase parameter value.
4. Push button, decrease parameter value.
5. Indicator lamp, safety thermostat “on”
6. Push button Start-Stop.

Part No. **7000836**

Supplied with PTFE coated stir bar of Ø 8 x 40 mm. Long



Connection at the back to connect:

Electronic contact thermometer “Sensoterm II”



Electronic temperature regulator “Electemp”



Temperature sensor Pt100



“Agimatic-Rev-ED-C” with heating

ELECTRONIC DIGITAL CONTROL OF STIR SPEED AND HEATER TEMPERATURE. WITH REMOVABLE SAFETY RING AGAINST SPILLAGE.

SILUMIN UPPER PLATE WITH CERAMIC SURFACE.

Ceramic surface:

- Exelent conductivity and heat distribution.
- Unalterable surface.
- Higher acceleration to reach temperature.
- Extreme resistance against chemical agents and scratches.



CONTROL PANEL

1. Digital display indicating stir speed or temperature.
2. Push button, parameter selector, Stir speed or Temperature.
3. Push button, increase parameter value.
4. Push button, decrease parameter value.
5. Indicator lamp, safety thermostat activated.
6. Push button Start-Stop.

Part No. **7001610**

Supplied with PTFE coated stir bar of Ø 8 x 40 mm. Long.



Connection at the back to connect:

Electronic contact thermometer “Sensoterm II”



Electronic temperature regulator “Electemp”



Temperature sensor Pt100



Complements for Agimatic-Rev-E and Rev-ED-C see accesories on pages 34 and 35.



Reversible magnetic stirrer, submersible "Agimatic-Rev-W" without heating



WITH ELECTRONIC CONTROL AND DIGITAL DISPLAY.

Modular conception polyvalent, no motor

Stirring system with no moving parts within the plate. The operation of the plate is due to creating electronically a controlled gyrating magnetic field that spins a magnetic stir bar within a vessel.

By means of a control knob and a digital display the user can adjust the speed of rotation accurately from 100 to 1100 r.p.m.

To accelerate and improve better the stirring process, a reversible stirring action can be employed. The direction of rotation can be oscillated from 10 to 30 seconds by means of an adjustable control knob on the front of the unit.

Up to 4 magnetic stir plates can be connected to the control unit and run simultaneously to produce reproducible stir speeds on each plate.

The modular base plate can be extended and function some distance away from the control unit.

The plates are made with epoxy resin, hermetically sealed and are completely water tight and can be placed within a water bath to temperatures up to 50 °C.

Each plate has a threaded hole for a support rod and a 1.5 meters extended cable.

FEATURES

Electronic speed control from 100-1100 r.p.m.
Select single or reverse stirring action.
Electronic frequency control for rotation direction from 10 to 30 seconds.
Digital speed display.
Control unit case made from AISI 304 stainless steel.
Four connectors situated at the back to connect up to 4 stir plates.

CONTROL PANEL

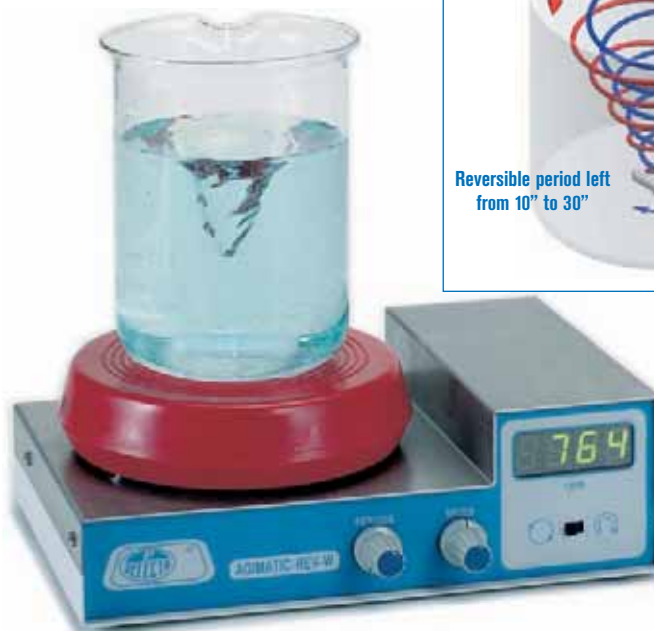
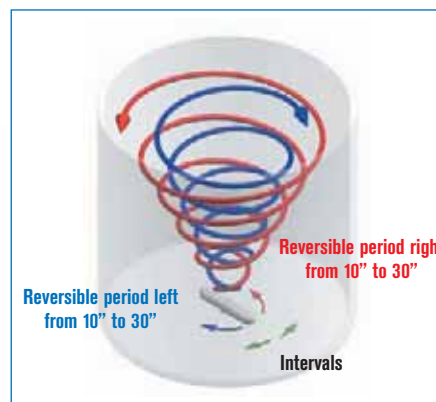
Rotation direction selector.
Electronic speed control.
Electronic reverse time period control.
Digital speed display.

MODEL

Part No.	Plate Ø cm	Maximum stir volume in litres	Speed control r.p.m.	Height/Width/Depth Control unit (exterior) cm	Power W	Weight Kg
7000922	14.5	2	100-1100	8 24 18	14	2.5

Comes complete with a magnetic stir plate, stir bar 8 Ø x 40 mm long and support rod that is fitted in the back of the unit that supports the plate at the height required.

ACCESSORIES: See accessories on (pages 34 and 35).



Example: system of submerged stirrers table top and with retort stand.

ACCESSORIES

Tanks and thermostats. See immersion thermostats (page 90 to 104).

Magnetic stir plate.

Part No. 7000923





Multiple position magnetic stirrers “Multimatic”



COMMON FEATURES

External plate made from AISI 304 stainless steel with engraved stirrer positions.
Independent stirring speed control for each position.
Front panel protected against splashes.

Models 5-S and 5-N: Suitable for 5 flasks, 600 ml max. (max. Ø 90 mm).
9-S and 9-N: Suitable for 9 flasks, 300 ml max. (max. Ø 75 mm).
Epoxy coated external case.

APPLICATIONS

Specially recommended for bio-pharmaceutical diagnostic assays.



Stirrers “Multimatic” 5-S and 9-S without heating FOR 5 AND 9 POSITIONS.



CONTROL PANEL

Illuminated mains switch.
Individual position stir speed control.

MODELS

	Part No.	Height / Width / Depth (exterior) cm	Width / Depth (plate) cm	Speed control r.p.m.	Maximum stir volume ml	Power W	Weight Kg
MULTIMATIC 5-S	7000951	11 28 35	28 33	Up to 1600	5 x 600	16	7
MULTIMATIC 9-S	7000952	11 28 35	28 33	Up to 1600	9 x 300	27	9

Comes complete with a 5 or 9 mm stir bar, model dependent covered in PTFE of 8 Ø x 32 mm long.

ACCESSORIES

Transparent methacrylate bath.
Fits onto the non heating stir plate of the “Multimatic” 5-S y 9-S
The bath can withstand temperatures up to 60 °C.
See section Thermostats and immersions (page 91).

Part No.	Capacity litres	Height / Width / Depth (exterior) cm	Weight Kg
1001007	14	16 29 35	4



Hotplate stirrers “Multimatic” 5-N y 9-N with heating FOR 5 AND 9 POSITIONS, OVER TEMPERATURE SAFETY THERMOSTAT FITTED.



MODELS

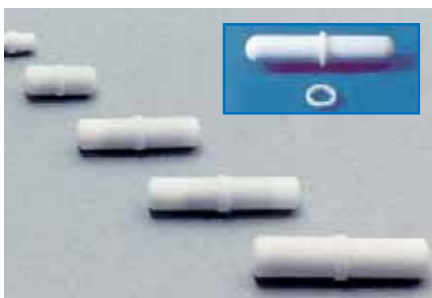
	Part No.	Height / Width / Depth (exterior) cm	Width / Depth (plate) cm	Maximum temperature °C	Speed control r.p.m.	Maximum stir volume ml	Heater Power W	Total Power W	Weight Kg
MULTIMATIC 5-N	7000953	16 28 35	25 25	300	Up to 1600	5 x 600	680	700	12
MULTIMATIC 9-N	7000954	16 28 35	25 25	300	Up to 1600	9 x 300	680	700	14

Comes complete with a 5 or 9 mm stir bar, model dependent covered in PTFE of 8 Ø x 32 mm long.

CONTROL PANEL

Mains illuminated power switch.
Individual speed control for each position.
Electronic heater energy control from 0-100% synchronised with an indicator lamp when the heater is on.

ACCESSORIES FOR MAGNETIC STIRRERS



Stir-bars followers for magnetic stirrers.

Encased in PTFE with pivot ring, temperature resistant to +275 °C.

Part No.

1000009	6 Ø x 10 mm long.	without pivot ring.
1000012	4 Ø x 12 mm long.	without pivot ring.
1000019	7 Ø x 20 mm long.	with pivot ring.
1000032	8 Ø x 32 mm long.	with pivot ring.
1000039	8 Ø x 40 mm long.	with pivot ring.
1000045	10 Ø x 45 mm long.	with pivot ring.
1001061*	12 Ø x 75 mm long.	with pivot ring.
1001062*	16 Ø x 102 mm long.	with pivot ring.
1001063*	16 Ø x 127 mm long.	with pivot ring.
1001064*	19 Ø x 150 mm long.	with pivot ring.

* With pivot ring for large volumes.



Concentric stir-bar with beaker cover "CENTRIMAN".

Encased in P.T.F.E. with an adjustable axis bar made of AISI 304 stainless steel. Suitable for applications with volumes of 100 to 2000 ml.

Soft start stirring and adjustable height prevents the stir-bar jumping inside the vessel.

Conical fitting lid of polypropylene with excellent chemical and thermal properties that resists temperatures up to 160 °C. The lid has an auto-lubricating central axis hole with two lateral air displacement holes.

Part No.

1000900	Concentric stir-bar with conical fitting lid for beakers volumes of 100 ml. to 500 ml. Length 32 mm.
1000901	Concentric stir-bar with conical fitting lid for beakers volumes of 500 ml. to 1000 ml. Length 50 mm.
1000902	Concentric stir-bar with conical fitting lid for beakers volumes of 1000 ml. to 2000 ml. Length 55 mm.



Triangular stir-bar "TRIMAG".

Encased in heat resistant PTFE of temperatures up to 275 °C. useful for "dissolving solids" and stirring silts. Liquids flow upwards as well as sideways. Quiet with excellent stability. Suitable for flat bottomed vessels.

Part No.

1000536	9 side x 35 mm long.
1000537	14 side x 40 mm long.
1000538	12 side x 50 mm long.
1000539	14 side x 55 mm long.



Starhead stir bar.

Circular, encased in heat resistant PTFE for temperatures up to 275 °C. Useful for tubes, flasks and round bottom vessels.

Part No.

1000790	25 Ø x 15 mm height.
1000791	40 Ø x 17 mm height.



Box of 17 assorted stir bars.

Encased in temperature resistant PTFE for temperatures up to 275 °C.

Contents:

- 1 stir-bar with pivot ring 6x10 mm.
- 1 stir-bar with pivot ring 4 x12 mm.
- 1 stir-bar with pivot ring 7x20 mm.
- 2 stir-bars with pivot ring 8x32 mm.
- 2 stir-bars with pivot ring 8x40 mm.
- 2 stir-bars with pivot ring 10x45 mm.
- 1 triangular stir-bar of 9x35 mm.
- 1 triangular stir-bar of 14x40 mm.
- 1 triangular stir-bar of 12x50 mm.
- 1 triangular stir-bar of 14x55 mm.
- 1 stir-bar Rotor-Pat of 11x35 mm.
- 1 oval stir-bar of 16x30 mm.
- 1 oval stir-bar of 20x40 mm.
- 1 star head stir-bar of 20x15 mm.
- 1 star head stir-bar of 40x17 mm.

Part No. **1000487**



Stir Bar "ROTOR-PAT".

Encased in PTFE useable up to temperatures of 275 °C.

Excellent stability with strong vortexing turbulence, useful for round bottom or convex bottom flasks.

Part No.

1000001 11 Ø max. x 35 mm long.



Oval stir bar, coated with PTFE, resistant to high temperatures of up to +275 °C. Can be used for all types, including round bottom vessels.

Part No.

1000788 16 Ø x 30 mm long.

1000789 20 Ø x 40 mm long.



Floating magnetic stir-bar "IMANFLOTOR".

Encased completely in PTFE Dismountable structure, autoclavable. Designed specifically for low constant speed stirring. Recommended for tissue culture applications. The floating conception of the Imamfloter minimises the grinding effect of cell damage as there is no friction on the bottom of the flask.

Medium speed levels prevent the IMANFLOTOR from jumping within the vessel.

Part No.	Total length	Stir bar length
1000897	50 mm	39 mm
1000898	60 mm	45 mm



Stir-bar retriever.

Flexible, encased in PTFE.

Part No.

1000020 Length: 280 mm.

ACCESSORIES FOR MAGNETIC STIRRERS AND HOTPLATE STIRRERS



Support rod with thread of 12 mm Ø x 500 mm high, stirrer dependent, attaches to the main body of the stirrer.

Part No. **1000725**



Clamp with bosshead, "AUTOMATIC" Chrome coated alloy with screw closure.

For Ø from 0 to 25mm.

Part No. **7000251**



Electronic contact thermometer with digital readout "Sensoterm II".

Complete with AISI 304 stainless steel sheathed Pt1000 temperature sensor.

FEATURES:

Conceived and designed as external sensor probe, where the controller is away from the measuring temperature zone of heat and vapour. The advantages over a contact thermometer means additional safety, no broken glassware or mercury spills.

SPECIFICATION

Temperature range from: -50 °C to +300 °C.

Temperature sensor : 3.5 Ø x 250 mm immersion.

Stability: 1 °C ±1 digit

Resolution: 1 °C.

Temperature display: LCD 8 mm.

Working environment: 0 to 60 °C and relative humidity up to 80 %.

Dimensions: 130 high x 71 wide x 24 mm deep (without probe)



Identification ICON

Part No. **1001009**



Adapters for round flasks of 250, 500 and 1000 ml.

Made of Aluminium alloy. Suitable for the stirrers with a Ø greater than 14.5 cm.

Maximum adapter temperature 250 °C.

Part No.

1001712 250 ml flasks.

1001718 500 ml flasks.

1001719 1000 ml flasks.



Temperature controller Electemp.

FEATURES:

P.I.D. digital temperature controller. User configurable microprocessor of function parameters.

Temperature range: -150 °C to 1300 °C

Sensor options: Pt100 or Thermo resistor K type probe

SPECIFICATION:

Stability: ±0.1 °C.

Resolution: ±0.1 °C Pt 100 / ±1 °C K Type probe.

Operation: ON-OFF/P.I.D.

AUTOTUNING. Adapts automatically to the working medium (Solid, liquid or gas.)

Dimensions: 10.5 high x 13.5 wide x 21cm deep.

Maximum power (at 230 V): 3100 W.

Weight: 1.250 Kg



Identification ICON

Part No. **3000887**

ACCESSORIES:

Probe Pt100 Part No. **1000893**

Probe K Type. Part No. **1000895**



Aluminium PTFE coated bath.

Suitable for stirrers and hotplate stirrers. "Agimatic N, E, ND, ED and Rev-E".

Suitable as water or oil baths for temperatures up to 200 °C with magnetic stirring from 150 to 1500 r.p.m. For rotary evaporators etc.

Part No.

1001230 capacity 2 litres. 11 cm high x 18 cm Ø.

1001231 capacity 4 litres. 13 cm high x 24 cm Ø.

ACCESSORIES:

Suitable only for tank Part No. 1001230.

Set of 4 reduction ring lid, stainless steel AISI304, with location hole for a thermometer.

Part No. **3000917**



Temperature sensor Pt100. Controls the sample temperature in the digital hotplate stirrers:

Part Nos: 7001511, 7001609, 7000836 and 7001610.

Immersion Probe:

4mm Ø x 130 mm long.

Cable connector 150 cm long.



Identification ICON

Part No. **1001610**



Rotator "Orbit"



FEATURES

Rotation Speed: 12 r.p.m.

Adjustable rotation angle axis from vertical to horizontal. An elastic shaft drive and clip supports permit the flasks and tubes to be loaded and unloaded while the motor is running. Epoxy coated outer casing. Recommended for extractions of cell cultures, blood tubes and other haematological applications.

MODEL

Part No.	Speed r.p.m.	Height / Width / Depth (exterior) cm	Power W	Weight Kg
3000445	Fixed 12	19 23 20	15	6



ACCESSORIES

Erlenmeyer flask adapters, clips made from stainless steel.

Part No.	Capacity
3000850	8 x 50 ml Erlenmeyer flasks.
3006100	6 x 100ml Erlenmeyer flasks.
3005250	5 x 250ml Erlenmeyer flasks.

Tube adapters, made from Aluminium, with nickel/chrome clips for different tube Ø.

Part No.	Capacity	Part No.	Capacity
3000356	35 tubes from 6 to 9 mm Ø.	3002215	22 tubes from 17 to 20 mm Ø.
3003011	30 tubes from 10 to 13 mm Ø.	3001820	18 tubes from 21 to 24 mm Ø.
3002512	25 tubes from 14 to 16 mm Ø.	3001723	17 tubes from 23 to 28 mm Ø.



Tilting Mixer Shaker "Movil-Tub"

FEATURES

Fixed speed tilting shaker mixer with removable silicon, anti slide tray. Recommended especially for haematology, chemistry and microbiology applications.

MODEL

Part No.	Tube capacity	Tube Ø / length mm	Speed r.p.m.	Height / Width / Depth (exterior) cm	Tilt angle	Power W	Weight Kg
7000913	12	20 160	15	12 34 20	25°	6	2,5



NEW
DESIGN



Roller and tilt mixer "Movil-Rod"

WITH VARIABLE SPEED CONTROL FROM 10 TO 80 r.p.m.

FEATURES

Roll and tilt mixer with 7 rollers, double action, gently rolls the tubes while rocking, produces a sinusoidal movement, providing excellent sample homogenisation. Recommended for suspensions of biological and haematological fluids.

MODEL

Part No.	For tube Ø up to mm	Speed r.p.m.	Length (rollers) cm	Height / Width / Depth (exterior) cm	Power W	Weight Kg
7001723	35	10 - 80	24	9.8 34.9 26.5	12	3.6



Vortex tube mixer

VORTEX MIXER HEAD OR SURFACE.

FEATURES

Mixing amplitude: 6.2 mm. Base with three suction feet.

Model "Movil-Vib" with selector mixing by contact or fixed continuous movement.

Model "XH-B" with start stop switch for multiple tubes.

MODEL	Part No.	Frequency r.p.m.	Ø platform (usable) cm	Height / Ø (exterior) cm	Power W	Weight Kg
Movil-Vib	7001721	2000	6	15 10	30	2.8
XH-B	7001722	2600	10	13 13	20	2.3

Mod. "Movil-Vib"
Part No. 7001721.

Mod. "XH-B"
Part No. 7001722.





Rocking Mixer "Vibromatic"

DIGITAL ELECTRONIC CONTROL OF SPEED AND TIME.



Optimum shaking frequency: 950 oscillations per minute

APPLICATIONS

Dissolution, extractions and homogenisation.

FEATURES

Electronic control from 100 to 950 oscillations per minute. (1900 vibrations) and timer from 1 to 999 minutes or continuous operation.

Oscillation amplitude: 8 mm.

Easily detachable arms equipped with 8 clamps that allow all types of tubes and flask with diameters of between 5 to 50 mm can be held in position.

Maximum load: 4 kg.

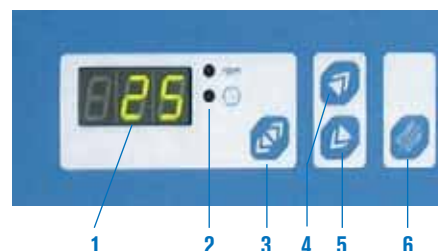
CONTROL PANEL

1. Digital display indicator of osc./min. and time.
2. Parameter display selector.
3. Parameter selector, speed or time.
4. Push button increase value.
5. Push button decrease value.
6. Push button start-stop.



MODEL

Part No.	Oscillations p.m.	Maximum capacity Kg	Height / Width / Depth (exterior) cm	Power W	Weight Kg
7000384	100 - 950	4	23 77 27	34	11



ACCESSORIES



Platform support for Erlenmeyer flasks, made from AISI 304 stainless steel with clip adapter position holes for 50 ml to 1000 ml flasks. Platform dimensions: 38 cm long x 19 cm wide.

Weight: 2 Kg.

Platform capacity:

- 18 Erlenmeyer flasks of 50 ml.
- 12 Erlenmeyer flasks of 100 ml.
- 8 Erlenmeyer flasks of 250 ml.
- 6 Erlenmeyer flasks of 500 ml.
- 3 Erlenmeyer flasks of 1000 ml.

Part No. **3001221**



Adapters for Erlenmeyer flasks.

Made from tempered stainless steel.

Part No.

1001003	Adapter for	50 ml.
1000978	Adapter for	100 ml.
1000979	Adapter for	250 ml.
1000980	Adapter for	500 ml.
1000981	Adapter for	1000 ml.

2 in 1. Platform support for Erlenmeyer flasks.



Model Vibromatic with adapter platform.

COMMON FEATURES

External ABS case with adapter platform for the different models.
Innovative single button to select start, shaking speed, time and stop.
Digital display of time and shaking speed.
Maintenance free induction drive motor which produces a uniform movement according to the rotation speed program.
Acoustic notification at the end of the cycle.

CONTROL PANEL

Main switch.
Single button selector for shaking speed and time.
Display indicating the shaking speed.
Display indicating the programmed time.
Measures: Alto 10 x Ancho 28 x fondo 26

TECHNICAL INFORMATION

Rotation frequency: 50-250 r.p.m.
Timer from 1 min to 99h 59 min
Rotation amplitude: 20mm
Power: 50 W.
Load capacity: till 2,5Kg
Measures cm: Height 10 x Width 28 x Depth 26



NEW



Shaker for Petri plates “AG-200”

With non-slip rubber platform of 24cm width and 20cm depth.
Capacity for 4 Petri plates.
Useful for slides and little flasks shaking.
Weight (Kg): 7.
Part no: **5312010**



Shaker for bottles “AG-200-A”

With non-slip rubber platform of 26cm width and 22cm depth, with 3 adjustable rubber retaining bars suitable for any kind of glasses: Erlenmeyer, flasks, bottles, etc.
Weight (Kg): 8
Part no: **5312011**



Shaker for Erlenmeyer flasks “AG-200-B”

Tempered aluminium base of 27cm width and 22cm depth, with multi-adapter location holes to support different capacities flasks from 50ml to 2000ml.
Weight (Kg): 8.
Part no: **5312012**

Erlenmeyer flasks adapters

Made of stainless steel with upper spring.
Part no. **5312105** Adapter for 50 ml.
Platform capacity: 8 units
Part no. **5312106** Adapter for 100 ml.
Platform capacity: 8 units
Part no. **5312107** Adapter for 250 ml.
Platform capacity: 6 units
Part no. **5312108** Adapter for 500 ml.
Platform capacity: 4 units
Part no. **5312109** Adapter for 1000 ml.
Platform capacity: 2 units
Part no. **5312110** Adapter for 2000 ml.
Platform capacity: 1 unit.





Orbital and linear motion shaker “Rotaterm”

WITH HEATED PLATFORM TOP PLATE.
ELECTRONIC DIGITAL SPEED AND TEMPERATURE DISPLAY.
INCLUDES A SAFETY OVER TEMPERATURE DEVICE.
TEMPERATURE STABILITY $\pm 1^\circ\text{C}$.



2 in 1 System suitable for orbital or linear motion

FEATURES

Adjustable temperature range from ambient $+5^\circ\text{C}$. to 250°C .

Electronic 3 digit temperature display, monitored by a Pt 100 temperature probe.

Resolution: 1 digit.

Electronic digital speed control from 20 to 230 oscillations per minute and timer from 1 to 999 minutes or continuous operation.

Adjustable oscillation amplitude: 15 and 20 mm.

Choice of: orbital or linear motion.

Epoxy covered external casing.

Aluminium top plate platform with evenly distributed heater elements.

The upper platform is made of AISI 304 stainless steel with adjustable tensile spring clips that allow all kinds of glassware, flasks, Erlenmeyer flasks, racks, etc. to be held in position.

Digital calibration temperature circuit.



Part No 3000435 with platform and tensile spring clips.

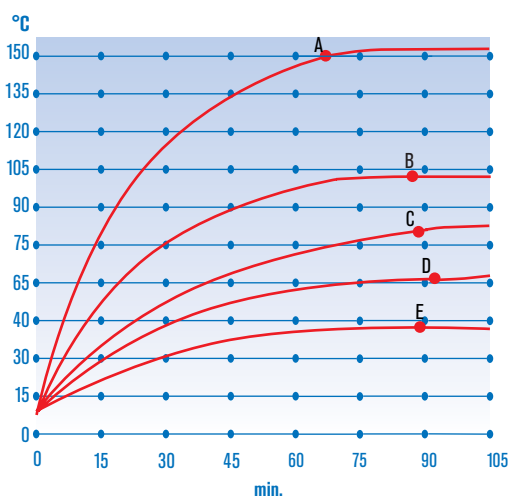
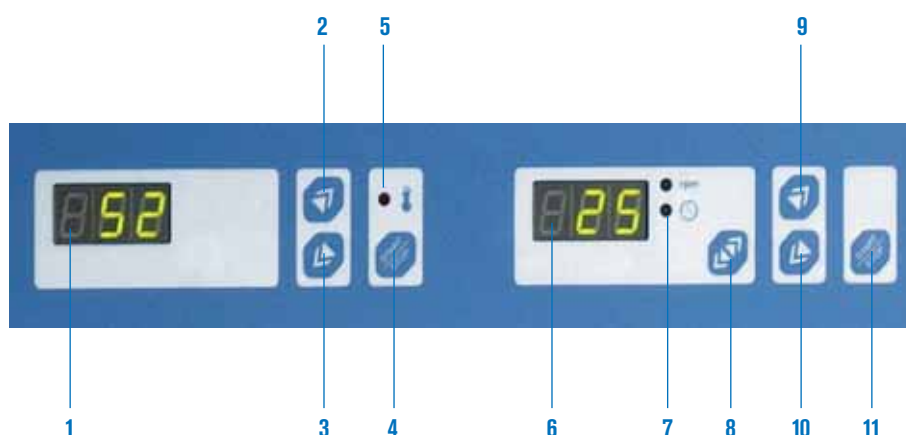
CONTROL PANEL

Temperature control.

1. Digital temperature display.
2. Push button increase temperature.
3. Push button reduce temperature.
4. Push button start-stop heater.
5. Over temperature alarm.

Temperature and speed control.

6. Digital display of oscillation per minute and time (in minutes).
7. Displayed parameter.
8. Push button select displayed parameter, speed or time function.
9. Push button increase parameter value.
10. Push button decrease parameter value.
11. Push button start-stop shaker.



MODEL

Part No.	Platform	Width / Depth (platform) cm		Height / Width / Depth (exterior) cm			Power W	Weight Kg
3000435	Spring clip	41	31	30	46	38	2300	32

Diagram of Temperature Vs Time.

For 500ml Erlenmeyer flasks.

A. Plate to 250°C : Silicon 150°C .

B. Plate to 200°C : H_2O 97°C .

C. Plate to 150°C : H_2O 82°C .

D. Plate to 100°C : H_2O 61°C .

E. Plate to 50°C : H_2O 37°C .



Orbital and horizontal shaker "Rotabit"

ELECTRONIC DIGITAL CONTROL OF SPEED AND RUN TIME.



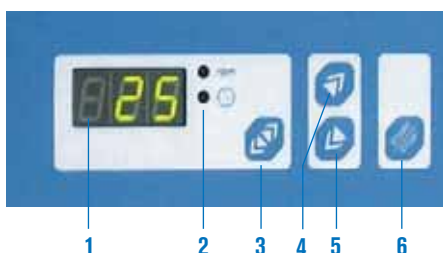
2 in 1 system, versatile orbital and horizontal shaker

FEATURES

Speed control from 20 to 230 oscillations per minute with timer from 1 to 999 minutes or continuous operation.
Shaking amplitude of: 15 and 20 mm.
Choice of orbital movement or a horizontal "To and Fro" motion.
Easy to interchange platforms, see accessories for platform selection.
Epoxy covered outer casing.

CONTROL PANEL

1. Digital display showing oscillations and time.
2. Displayed parameter.
3. Push button, select parameter function, speed or time.
4. Push button increase parameter value.
5. Push button reduce parameter value.
6. Push button Start- Stop.



MODEL

Part No.	Control oscillations p.m.	Height / Width / Depth (exterior) cm			Power W	Weight Kg
3000974	20 - 230	20	42	43	80	13.5

This shaker can be coupled to the "Boxcult" incubation chamber with platform Part No. 3000975 (see page 41).

ACCESSORIES

Universal platforms with non-slip surface with four adjustable silicon covered retaining bars suitable for all types of glassware, Erlenmeyer flasks, etc. to be held in position.

Part No.	Height / Width / Depth (exterior) cm			Weight Kg
3000975	9	42	35	5
3000976	9	55	35	6

NOTE: This shaker has multiple options and accessories, a flow chart for easy selection of the accessories can be found at the end of this section.



Platform Part No. 3000975

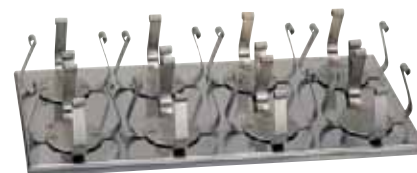


Platform Part No. 3000976

Base for Erlenmeyer flask clips.

Made from AISI 304 stainless steel with multi-adapter location holes to support Erlenmeyer flask clips. Capacities 50, 100, 250, 500 and 1000 ml.

Part No.	For platform number Part No.	Width / Depth (platform) cm	Capacity, No. of positions					Weight Kg
			50 ml	100 ml	250 ml	500 ml	1000 ml	
3000977	3000975	40 34	36	25	16	9	5	1.5
3001010	3000976	54 34	48	30	20	12	8	2



Erlenmeyer flasks spring clips.

Made with tempered stainless steel.

Part No.

- 1001003** Adapter for 50 ml.
1000978 Adapter for 100 ml.

- 1000979** Adapter for 250 ml.
1000980 Adapter for 500 ml.
1000981 Adapter for 1000 ml.



ACCESSORIES



Orbital To & Fro shaker
"Rotabit" complete with
accessory. "Boxcult"
incubation chamber.

Incubation chamber "Boxcult"

The "Boxcult" can be fitted onto the "Rotabit", Part No. 3000974, with the universal platform, (SMALL) Part No. 3000975.

Forced air fan circulation.

Adjustable temperature, ambient +5 °C to 57 °C.

Homogeneity ±2.5%

Stability ±0.5%

Built of transparent Perspex, access is through a wide hinged front door which provides easy access for loading and unloading. Samples can be viewed without opening the incubator maintaining a constant homogeneous temperature.

Part No.	Height / Width / Depth (interior) cm			Height / Width / Depth (exterior) cm			Power W	Weight Kg
3000957	50	47	47	61	51	51	220	11

See incubator section for more details (page 137).

Set of 5 reduction rings adapters for separating flasks of 50 to 100 ml.

Part No. **6000620**

Separating funnel device.

Two positions, for mixing Horizontal to Vertical for easy decanting.

Capacity: 5 separating funnels of 250 to 500 ml or 2 funnels of 1000 ml.

Part No. **6000619**

This accessory can only be fitted to the platform Part No. 3000976.

The "Rotabit" Part No. 3000974 and platform need to be ordered separately.



Double platform part no
3001011, with shaker
Part No. 3000974

Double platform.

Two levels.

Fits onto the "Rotabit" Part No. 3000974.

Complete with anti slide mats and four support bars that support the upper level. Each platform has four silicon clamping bars.

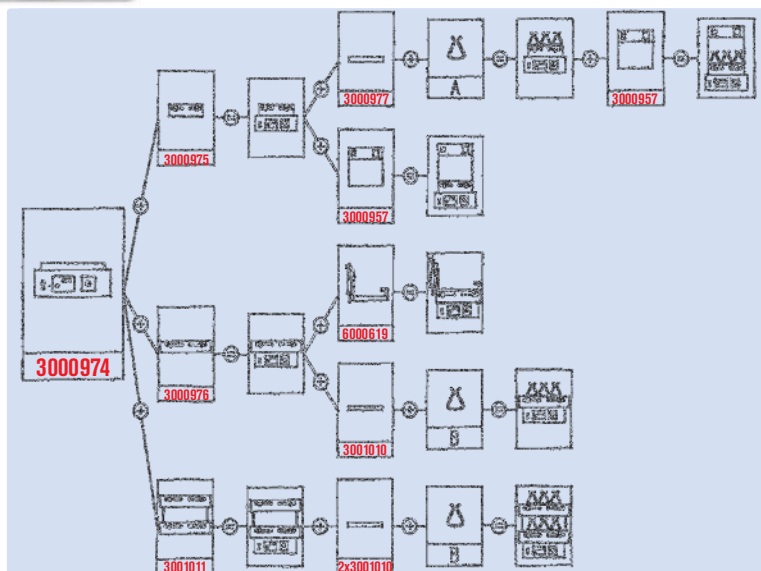
Part No.	Width / Depth (platform) cm		Total combined height cm
3001011	55	35	40



Separating funnel decanting accessory Part No. 6000619
Fits onto platform Part No. 3000976.



Flow diagram of the selection of accessories for the "Rotabit" To & Fro Orbital Shaker



SUITABLE FOR ErlenMEYER

Capacity	Part No.	A	B
50 ml	1001003	36	48
100 ml	1000978	25	30
250 ml	1000979	16	20
500 ml	1000980	9	12
1000 ml	1000981	5	8

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

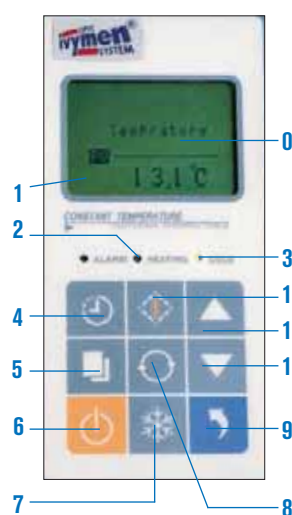
Two removable upper trays for high volume Erlenmeyer flasks accommodation in the lower tray.

Adjustable outlet hole for the air in the inside of the chamber.

With wheels for movements and adjustable support for a stable 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.
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" – 2 hours).

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”

OPTIC
ivymen[®]
SYSTEM

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

OPTIC
ivymen[®]
SYSTEM

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.





ROTATORY EVAPORATOR "RS 3000-V"

FOR 1000, 2000 AND 3000 ML. FLASKS.

MULTIFUNCTIONAL: VACUUM PUMP AND BATH BUILT-IN

Quality and safety. Rotary speed and bath temperature regulation

FEATURES

Compact rotatory evaporator composed of stainless steel AISI 304 case and with an extra-soft manual elevator system and bath made of dur-al alloy chemically treated.

Rotatory speed: from 20 to 120 rpm.

Bath temperature: up to 100 °C.

External probe temperature: up to 100 °C.

Vacuum breaker with air inlet filter.

CONTROL PANEL



1. Starting main switch ON/OFF.
 2. Digital reading indicator of external probe temperature.
 3. Bath temperature digital regulator.
 4. Rotator pump switch.
 5. Heater bath switch.
 6. Water recirculation pump switch.
 7. Regulator knob of rotating speed.
- Vacuometer built-in the case.



MODEL

	Part no	Speed Regulation t.p.m.	Height / Width / Depth (extérieur) cm			Power W	Weight Kg
RS 3000-V	6003000	0 a 120	64	74	42	1050	38

It is completely supplied with a tap for solution, a PT100 probe, a coolant, two 3000 ml. flasks, one 2000 ml flask, two 1000 ml. flasks and its accessories.

GLASS AND ITS ACCESSORIES DIAGRAM

SPARE PARTS

