



# 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
<b>AGIMIN</b>	<b>7001731</b>	<b>Electronic</b>	1	No	-	-	40 / 2000	<b>ABS</b>	10
<b>AGIMICRO</b>	<b>7001638</b>	<b>Analogue</b>	2	No	-	-	40 / 1700	<b>ABS</b>	12
<b>AGIMIXT</b>	<b>7000381</b>	<b>Analogue/Digital</b>	10	Yes	<b>Electronic/Temperature</b>	...350	60 / 1600	<b>AL-PTFE</b>	15
<b>AGIMATIC-S</b>	<b>7000242</b>	<b>Analogue</b>	10	No	-	-	60 / 1600	<b>INOX</b>	14.5
<b>AGIMATIC-N</b>	<b>7000243</b>	<b>Analogue</b>	10	Yes	<b>Electronic/Energy</b>	...350	60 / 1600	<b>INOX</b>	14.5
<b>AGIMATIC-E</b>	<b>7002431</b>	<b>Analogue</b>	10	Yes	<b>Electronic/Temperature</b>	...350	60 / 1600	<b>INOX</b>	14.5
<b>AGIMAN</b>	<b>7000446</b>	<b>Analogue</b>	2	Yes	<b>Electronic/Energy</b>	...350	60 / 1600	<b>For Heating Mantle</b>	
<b>AGIMATIC-ED</b>	<b>7001511</b>	<b>Digital</b>	10	Yes	<b>Electronic/Temperature</b>	...350	60 / 1600	<b>INOX</b>	14.5
<b>AGIMATIC-ED-C</b>	<b>7001609</b>	<b>Digital</b>	10	Yes	<b>Electronic/Temperature</b>	...350	60 / 1600	<b>CERAMICS</b>	14,5
Large Volume stirring									
<b>AGIMATIC-HS</b>	<b>7001005</b>	<b>Digital</b>	25	No	-	-	50 / 980	<b>INOX</b>	28 x 34
<b>AGIMATIC-HL</b>	<b>7001006</b>	<b>Digital</b>	60	No	-	-	50 / 980	<b>INOX</b>	44 x 38
Reversible stirring action									
<b>AGIMATIC REV-E</b>	<b>7000836</b>	<b>Digital</b>	10	Yes	<b>Electronic/Temperature</b>	...350	50 / 1500	<b>INOX</b>	14.5
<b>AGIMATIC REV-ED-C</b>	<b>7001610</b>	<b>Digital</b>	10	Yes	<b>Electronic/Temperature</b>	...350	50 / 1500	<b>CERAMICS</b>	14,5
<b>AGIMATIC REV-W</b>	<b>7000922</b>	<b>Digital</b>	2	No	-	-	100 / 1100	<b>EPOXI RESIN</b>	14.5
Multi- positions									
<b>MULTIMATIC 5-S</b>	<b>7000951</b>	<b>Analogue</b>	5 x 0.6	No	-	-	...1600	<b>INOX</b>	28 x 33
<b>MULTIMATIC 9-S</b>	<b>7000952</b>	<b>Analogue</b>	9 x 0.3	No	-	-	...1600	<b>INOX</b>	28 x 33
<b>MULTIMATIC 5-N</b>	<b>7000953</b>	<b>Analogue</b>	5 x 0.6	Yes	<b>Electronic/Energy</b>	...300	...1600	<b>INOX</b>	25 x 25
<b>MULTIMATIC 9-N</b>	<b>7000954</b>	<b>Analogue</b>	9 x 0.3	Yes	<b>Electronic/Energy</b>	...300	...1600	<b>INOX</b>	25 x 25
ROTARY & TILTING MIXERS									
Tube Mixers	Part No.		Vol. max. litres		Heaters		Range r.p.m.		Capacity
<b>ORBIT</b>	<b>3000445</b>		5 x 0.25		No		12		See Tube Selection
<b>MOVIL ROD</b>	<b>7001723</b>		-		No		10 / 80		35 mm Ø max.
<b>MOVIL TUB</b>	<b>7000913</b>		-		No		15		12 Tubes
<b>MOVIL VIB</b>	<b>7001721</b>		-		No		2000		See Tube Selection
<b>MOVIL XH-B</b>	<b>7001722</b>		-		No		2600		See Tube Selection
VIBRATING SHAKER									
Oscillating	Part No.		Max. Load		Heater		Capacity		Oscil. min.
<b>VIBROMATIC</b>	<b>7000384</b>		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
<b>ROTATERM</b>	<b>3000435</b>		Yes		<b>Electronic/Digital</b>		...250	20/230	41x31
<b>ROTABIT</b>	<b>3000974</b>		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
<b>7001731</b>	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.

### CONTROL PANEL

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

### MODEL

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

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

### 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
<b>AGIMATIC-HS</b>	<b>7001005</b>	50 to 980	up to 25	12 28 34	35	8
<b>AGIMATIC-HL</b>	<b>7001006</b>	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
<b>AGIMIXT</b>	<b>7000381</b>	<b>up to 10</b>	<b>14,5 19 26</b>	<b>300</b>	<b>3,5</b>

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.



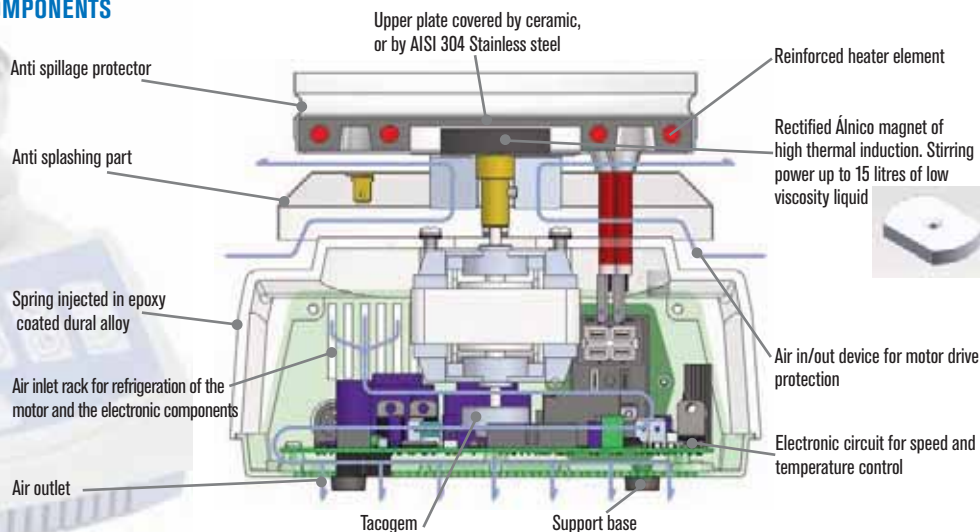
Electronic contact thermometer "Sensoterm II"



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 ±2 °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**

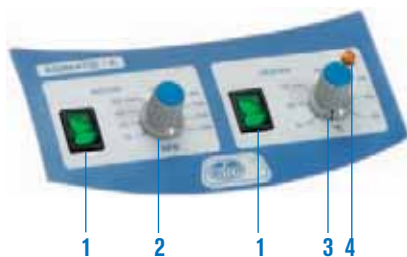
Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.

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

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 goes on when the mantle is hot.
4. 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
<b>3000447</b>	250
<b>3000448</b>	500
<b>3000449</b>	1000
<b>3000450</b>	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  $\pm 2$  °C.  
MAXIMUM STIR VOLUME: 10 LITRES.  
PLATE Ø IS 14,5 cm.  
WITH REMOVABLE SAFETY RING AGAINST SPILLAGES.



## “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  $\pm 2$  °C.

Part No. **7001511**

Supplied with a PTFE coated stir bar of  $\varnothing 8 \times 40$  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  $\pm 2$  °C.

Part No. **7001609**

Supplied with a PTFE coated stir bar of  $\varnothing 8 \times 40$  mm long.



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”

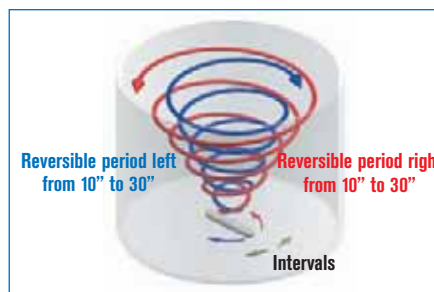


## Forefront technology for the most exacting analysis

FOR SPEEDS FROM 50 TO 1500 rpm.  
 FOR ADJUSTABLE TEMPERATURES FROM 50 °C TO 350 °C. PRECISION  $\pm 2$  °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

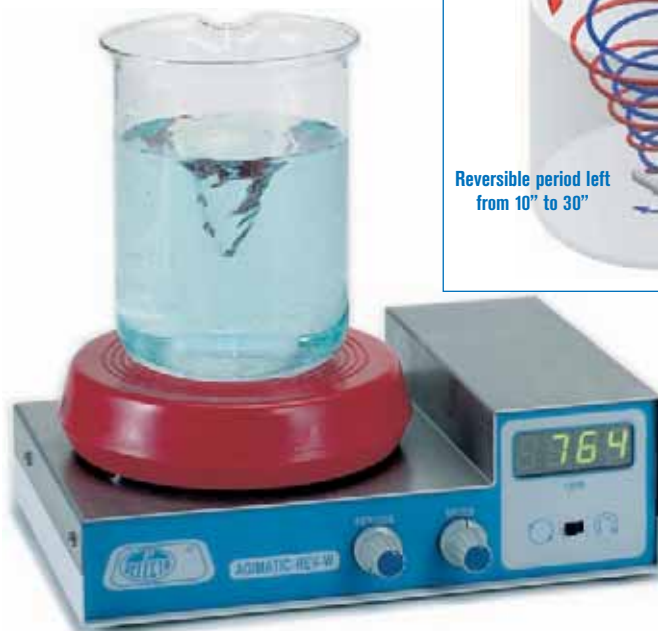
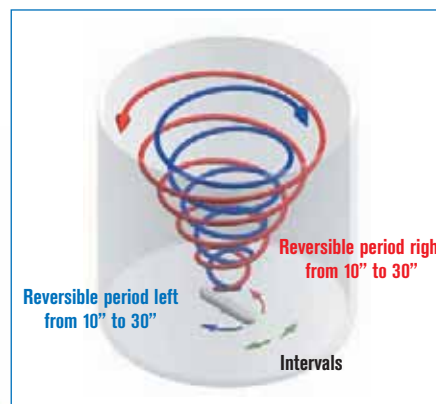
- Rotation direction selector.
- Electronic speed control.
- Electronic reverse time period control.
- Digital speed display.

## 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
<b>7000922</b>	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
<b>MULTIMATIC 5-S</b>	<b>7000951</b>	11 28 35	28 33	Up to 1600	5 x 600	16	7
<b>MULTIMATIC 9-S</b>	<b>7000952</b>	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
<b>1001007</b>	<b>14</b>	<b>16 29 35</b>	<b>4</b>



### 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
<b>MULTIMATIC 5-N</b>	<b>7000953</b>	16 28 35	25 25	300	Up to 1600	5 x 600	680	700	12
<b>MULTIMATIC 9-N</b>	<b>7000954</b>	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.

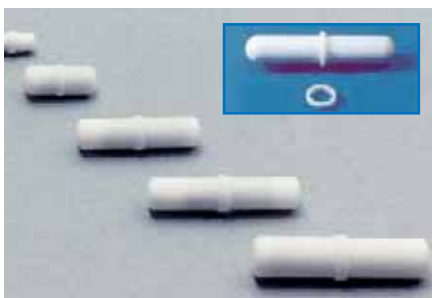
### CONTROL PANEL

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.

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

\* With pivot ring for large volumes.



### 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.

<b>1000536</b>	9 side x 35 mm long.
<b>1000537</b>	14 side x 40 mm long.
<b>1000538</b>	12 side x 50 mm long.
<b>1000539</b>	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.

<b>1000790</b>	25 Ø x 15 mm height.
<b>1000791</b>	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 "IMANFLOTER".

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

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

Part No.	Total length	Stir bar length
<b>1000897</b>	50 mm	39 mm
<b>1000898</b>	60 mm	45 mm



### Stir-bar retriever.

Flexible, encased in PTFE.

Part No.

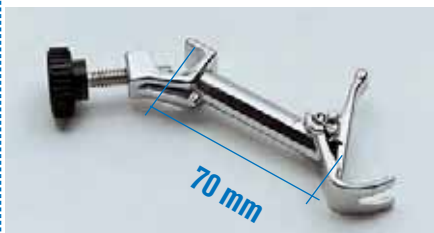
**1000020** Length: 280 mm.

## 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
<b>3000445</b>	Fixed 12	19 23 20	15	6



### ACCESSORIES

Erlenmeyer flask adapters, clips made from stainless steel.

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

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

Part No.	Capacity	Part No.	Capacity
<b>3000356</b>	35 tubes from 6 to 9 mm Ø.	<b>3002215</b>	22 tubes from 17 to 20 mm Ø.
<b>3003011</b>	30 tubes from 10 to 13 mm Ø.	<b>3001820</b>	18 tubes from 21 to 24 mm Ø.
<b>3002512</b>	25 tubes from 14 to 16 mm Ø.	<b>3001723</b>	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
<b>7000913</b>	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
<b>7001723</b>	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	<b>7001721</b>	2000	6	15 10	30	2.8
XH-B	<b>7001722</b>	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.

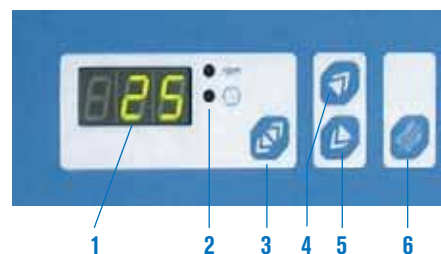
### CONTROL PANEL

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
<b>7000384</b>	<b>100 - 950</b>	<b>4</b>	<b>23 77 27</b>	<b>34</b>	<b>11</b>



### 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.*



## Orbital shaker “AG-200”, “AG-200-A”, “AG-200-B”

ELECTRONIC DIGITAL CONTROL OF SPEED AND RUN-TIME



NEW



### 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



### 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

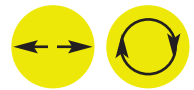
Made of stainless steel with upper spring.  
 Part no. **5312105** Adapter for 50 ml.  
 Platform capacity: 8 units  
 Part no. **5312106** Adapter for 100 ml.  
 Platform capacity: 8 units  
 Part no. **5312107** Adapter for 250 ml.  
 Platform capacity: 6 units  
 Part no. **5312108** Adapter for 500 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  $\pm 1$  °C.



### 2 in 1 System suitable for orbital or linear motion

#### FEATURES

Adjustable temperature range from ambient +5 °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.

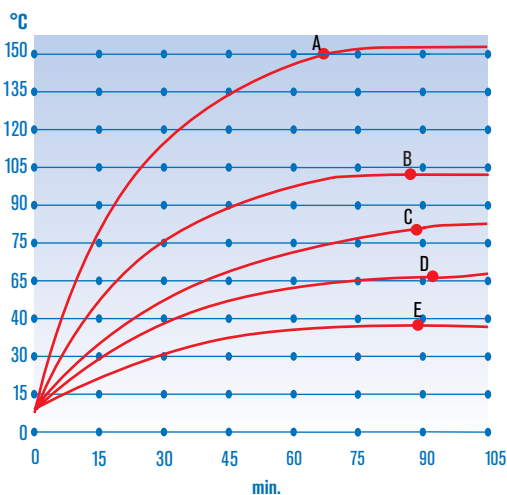
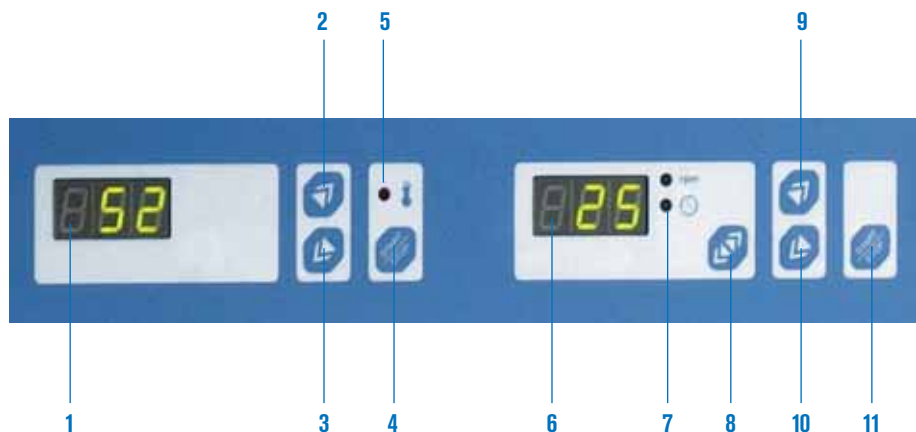
#### CONTROL PANEL

##### 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

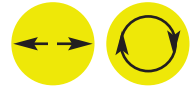
Part No.	Platform	Width / Depth (platform) cm	Height / Width / Depth (exterior) cm	Power W	Weight Kg
3000435	Spring clip	41 31	30 46 38	2300	32

Diagram of Temperature Vs Time.  
For 500ml Erlenmeyer flasks.  
A. Plate to 250 °C: Silicon 150 °C.  
B. Plate to 200 °C: H<sub>2</sub>O 97 °C.  
C. Plate to 150 °C: H<sub>2</sub>O 82 °C.  
D. Plate to 100 °C: H<sub>2</sub>O 61 °C.  
E. Plate to 50 °C: H<sub>2</sub>O 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.

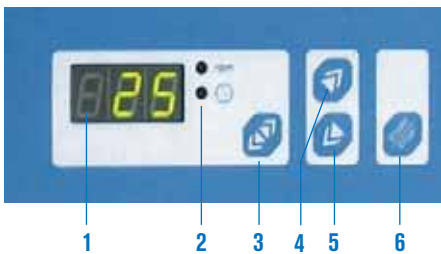
Choice of orbital movement or a horizontal "To and Fro" motion.

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
<b>3000974</b>	<b>20 - 230</b>	<b>20 42 43</b>	<b>80</b>	<b>13.5</b>

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

**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.

### 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
<b>3000975</b>	<b>9 42 35</b>	<b>5</b>
<b>3000976</b>	<b>9 55 35</b>	<b>6</b>



Platform Part No. 3000975

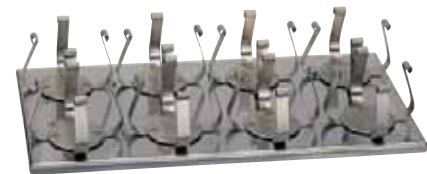


Platform Part No. 3000976

### 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	
<b>3000977</b>	<b>3000975</b>	<b>40 34</b>	<b>36</b>	<b>25</b>	<b>16</b>	<b>9</b>	<b>5</b>	<b>1.5</b>
<b>3001010</b>	<b>3000976</b>	<b>54 34</b>	<b>48</b>	<b>30</b>	<b>20</b>	<b>12</b>	<b>8</b>	<b>2</b>



### 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
<b>3000957</b>	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.

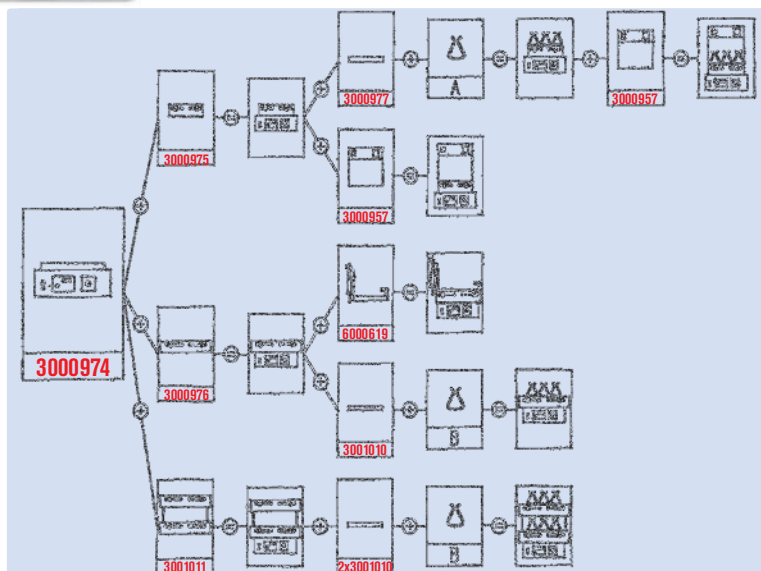
Part No.	Width / Depth (platform) cm	Total combined height cm
<b>3001011</b>	55 35	40



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	<b>1001003</b>	36	48
100 ml	<b>1000978</b>	25	30
250 ml	<b>1000979</b>	16	20
500 ml	<b>1000980</b>	9	12
1000 ml	<b>1000981</b>	5	8