



Laboratory Products

Incubator Shakers

Incubators

Ovens

Shakers

Chillers

Water Baths

Hotplates

Magnetic Stirrers

2016

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From the beginning in 1989, MRC developed & produced innovative laboratory equipment: incubator shakers, ovens, cooled incubators & chillers.

In 2013 the company expanded with the acquisition of the Fried Electric. 40 years experience laboratory instruments manufacturer. Product line increase with hotplates, stirrers, water baths & circulators.

MRC has two production facilities: one is located in Haifa Israel & second is located in Beijing China.



With decades of experience across the entire laboratory equipment range, MRC factory trained engineers provide after sales support and technical advice and guidance on product selection.

In addition to the general laboratory products MRC also manufactures non standard instruments on request. MRC products are sold all over the world via strong network of international dealers.



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DFI Series, 36 Liter, 80 Liter, 150 Liter, 240 Liter Incubators



DFI-36

DFI-80

DFI-150

DFI-240

Microbiological Incubator With Forced Convection

Premium equipment for all gentle incubation applications, including processing large numbers of samples at high throughput. Outstanding dynamics keep the required temperature virtually stable with homogenous distribution, irrespective of how many times the door is opened. The modern range of incubators is available in 4 sizes.

DFI Series offers excellent uniformity and stability & are used for many applications as incubation of culture test, drying slides, microbiological incubation, bacteriological test and more. The inner case is constructed from polished stainless steel. Internal glass door for incubator. All units are provided with wire plated shelves with multi position settings.

All models are with fans assisted air circulation.

The chamber ventilation and exhaust vent are easily adjustable.

Wide choice of control options is available.

PID controller is fitted as standard with dual display of measured value and setpoint, timer included.

Options:

- 38mm cable port
- Gas inlet
- 5 programs of 8 segments model: 3216CP
- 4 programs of 16 segments model: 2416P4
- RS-232/485 communication model: 3216E
- Datalogger



DFI-36

Model	DFI-36	DFI-80	DFI-150	DFI-240
Temp. range	Room temperature – 80°C			
Temp. constancy	±0.1°C			
Temp. uniformity	±0.5°C at 37°C			
Temp. control	PID			
Heater: Incubator	400W	400W	600W	800W
Inside Material	SUS 304			
Timer	1 minute to 99 hours & 59 minutes or continuous			
Safety devices	Short circuit breaker, over heat protector, sensor abnormality			
Inside dimensions (mm)	W400xD300xH300	W500xD400xH400	W600xD500xH500	W600xD500xH800
Outside dimensions (mm)	W525xD420xH595	W620xD520xH620	W720xD620xH720	W720xD620xH1020
Volume (Liters)	36	80	150	240
Shelves fitted	2	2	2	3
Max. Shelves	7	10	13	23
Weight	34kg	52kg	75kg	85kg



- Automatic high and low temperature alarm to prevent the temperature from going too high and dropping too low
- Built-in circulating fan for temperature uniformity
- Illumination and Timer can be install if required
- The compressor will be delayed to start working if power cut & with timer for defrost.
- Using environmental protection cold-media R134a
- Internal Power socket.

BOD-80/150

The MRC model BOD-80/150/175x2

Cooled incubator designed to obtain freezing, incubating, drying & test temperatures between 0°C and +70°C (or -10°C and +60°C). It has stainless steel chamber and two doors, when the outer metallic door is opened there is inner glass door. Very good uniformity is achieved by forced air circulation. A PID temperature controller provides constant and accurate temperature. Inside power socket enable the use of the shaker rotator or other instrument inside. Cable port with cup is available upon request.

The MRC model BOD-400/550/590

Is ideal for BIOCHEMICAL OXYGEN DEMAND of sewage and waste water. Other applications includes fermentation studies, drug stability tests. Excellent temperature uniformity is obtained by forced air circulation. A PID microprocessor temperature controller provide accurate and constant temperature. Dual display of setpoint and chamber temperature. Hermetically sealed compressor and automatic defrost.

Options: 38mm cable port • Gas inlet • Day/Night Light+Timer

Model	BOD-590	BOD-550	BOD-400	BOD-150	BOD-175 Dual	BOD-80
Temp. range	0°C~70°C (or -10°C to 60°C)					
Temp. Accuracy/Uniformity	±0.1°C / ±1°C at 37°C			±0.1°C / ±0.5°C at 37°C		
Temp. control	PID					
Temp. Display	LED digital display actual and setting temperature					
Temp. Sensor	PT-100Ω					
Heater	900W	1200W	1200W	900W	900W x 2	900W
Volume	590L	550L	400L	150L	175L x 2	80L
Shelf (Adjustable)	4	4	4	2	2	2
Inside Material	Strengthen white porcelain	SUS 304				
Refrigerator	1/3HP			1/4HP		
Inside dimensions WxDxH(mm)	680x600x1450	680x580x1400	600x500x1350	600x500x500	700x500x500	500x400x400
Outside dimensions WxDxH(mm)	815x800x1940	760x820x1860	670x740x1820	680x700x825	780x690x1720	560x550x670
Weight	90Kg	200Kg	180Kg	78Kg	150Kg	50Kg



PGI-550RH

PGI-550H/550RH/550V/550VH, Plant Growth Incubator 550 Liter

- Customized design
- Apply to microorganism Lab / Cell culture / Biotechnology experiments / Analytical Lab / Food Science and Technology / Agricultural Lab / The Fisheries Laboratory / Gardening / Plant Research / Seeds.

Illuminated growth chamber controllers, allow setting of two temp. conditions day & night & an On/Off illumination cycle relative to the program selected. Timers can be set to adjust cycles from 10 minutes up to 24 hours.

Each system operates independently allowing for simulation of a diurnal cycle, such as an eight hour day cycle of 30°C with light followed by a sixteen hour night cycle of 18°C without light.

Forced air circulation ensures the most reproducible test conditions. The chamber air is gently & continuously circulated at a rate that ensures temp. uniformity of all test samples. The unit is equipped with a hermetically-sealed compressor & an independent over temp. safety controller. It also includes a circuit breaker to protect from electrical overload, 5 shelves, adjustable leveling feet, steel exterior with welded seams & corners, & double-coated, baked enamel finish.

MRC Diurnal growth chambers are designed for studies requiring day and night time simulation. Standard models come with flourescent illumination. Optional led illumination.



Internal

PGI-500H: Horizontal illumination

PGI-500RH: Horizontal illumination with humidity control

PGI-500V: Vertical illumination

PGI-500VH: Vertical illuminationn with humidity control.

Model	Horizontal illumination	PGI-550H	PGI-550RH with Humidity
	Verticalal illumination	PGI-550V	PGI-550VH with Humidity
Temperature Range		0°C ~ 60°C	
Temperature Control		PID temperature controller, PV actual value and SV setting value displayed at the same time	
Temperature Precision		±0.1°C	
Touch Setting		Power, cooling temperature, humidity, illumination timer device	
Safety Device		overheat and over low cut off device. 2-stage protection with safety protection alarm and indicator, compressor delay-start, high and low pressure of cold media protection device	
Heater		1200 W SUS 304#	
Refrigerator		1/3 HP R134a	
Humidity Display		-	PID Humidity controller, PV actual value and SV setting value displayed at the same time
Humidity Control		-	30% RH ~ 95% RH
Control Precision		-	± 3%
Humidity Display		-	Dligital
Humidity Device		-	Ultrasonic wave stainless steel (Back-mounted)
Illumination		4000-8000 LUX	
Timer		24H Temperature and light control	
Shelf / Inner Chamber		5 psc / SUS 304# stainless steel	
Inside Dimension (WxDxH)		680 x 580 x 1400 mm (Approx 550 L)	
Outside Dimension (WxDxH)		760 x 820 x 1870 mm	
Volume		550 L	
Power Voltage		110V/220V14A/7A	110V/220V16A/8A
Weight		200 kg	210 kg

GROWTH INCUBATORS Large, Flourescent Illumination



PGI-2660

PGI-2460/PGI-2460H/PGI-2660/PGI-2660H, Growth Chamber with High Illumination

- Animals, plant cell culture
- Insect
- Plant culture
- Tissue culture
- Domestication treatment
- Algae culture
- Pathology observation
- Biochemical experiment.



Model	Without Humidity	PGI-2460	PGI-2660
	With Humidity	PGI-2460H	PGI-2660H
Temperature range	0°C ~ 45°C		
Temperature control	Micro-computer PID temperature controller, PV actual value and SV setting value displayed at the same time, with independent day/night temperature		
Control Precision	±0.02°C dpi 0.1°C		
Touch Setting	Power, cooling, temperature, humidity, light, timer, all using touch setting		
Safety Device	Electronic LCD display, precision setting 0.1°C, overheat and over low cut off device. 2-stage protection with safety protection alarm and indicator, compressor delay-start, high and low pressure of cold media protection device		
Heater / Cooler	1KW SUS 304# / 7000 BTU		1.5KW SUS 304# / 12000 BTU
Humidity Control	Micro-computer PID temperature controller, PV actual value and SV setting value displayed at the same time		
Humidity Range	30% RH ~ 90% RH		
Control Precision	±0.02% dpi: 0.1%RH / ±3% RH		
Display / Safety Device	Digital display/Electronic setting precision 0.1%RH, with high or low humidity alarm		
Humidifier	Ultrasonic wave stainless steel humidifier		
Illumination Device	4-sides glasses heat insulation illumination: 0-30000LUX for choose, independent light control		
Timer Device	24h temperature and light control		
Shelf / Material	5pcs		10pcs
Inside Dimension (WxDxH)	620 x 620 x 1300 mm		1200 x 690 x 1300 mm
Outside Dimension (WxDxH)	910 x 930 x 2070 mm		1490 x 1000 x 2070 mm
Volume	500 L		1076 L
Power Voltage	220V 50/60Hz		

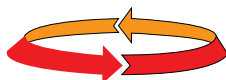
TOU-50



Flask Holders

- Min. noise & no vibration, maximum load 20kg
- Automatic stop of shaking, when the door is opened
- Accommodate flasks up to 2000ml
- Auto restart after power failure.

Optional: Universal spring tray



Tube holders

Universal spring tray for various sizes of flasks



LOM-65/TOU-50/TOU-120, Orbital Shaking Incubator, BenchTop

Applications

- Areas of application: cultivation of cell & tissue cultures or micro organisms. molecular biology, cell and insect culture, and entomology studies.
- Production of secondary natural substances and biogenetic pharmaceuticals etc.

Features:

- Space saving with transparent window in the front which provide good visibility that minimize the need to open the chamber, automatic cutout of shaker when lid is open to protect operator.
- Platform 300 x 400 mm or 450 x 450mm accept flasks up to 2 Liter, test tubes racks and gel trays.
- Shakers feature a triple eccentric drive that handles heavy workloads, provides uniform agitation, smooth quiet enables continuous 24-hour operation even at high speeds.
- Precisely monitor and control chamber temperature over complete range with $\pm 0.1^{\circ}\text{C}$ accuracy at 37°C with PID temperature controller
- AC brushless motor & precise speed control from 25 to 250rpm or 40 to 400rpm, controlled by a digital controller
- Speed programmability: Continuous or multi-step RPM programmability in which a timed run consisting of a sequence of up to 9 timed steps, each at a set speed & direction of rotation. Each timed run can be repeated up to 999 times.



LOM-65 – Front opening with one standing shelf

Model	TOU-50	TOU-120	LOM-65
Type	Flip-up door		Front door
Temp. range	Ambient + 4°C ~ 70°C		
Temp. Accuracy/Uniformity	$\pm 0.1^{\circ}\text{C}$ / $\pm 0.5^{\circ}\text{C}$ at 37°C		
Speed/Temp. control	PID		
Temp. Display	LED		
Speed programmer	20~250 rpm (optional 40~400 rpm), 9 steps of speed & direction of rotation		
Shaking Orbit	25 mm		
Timer	1 minute to 99 hours & 99 minutes or continuous operation		
Volume	66L	102L	65L
Shelve	N/A	N/A	1
Shaking Plate Size (mm)	400x300	450x450	400x300
Inside dimensions (mm)	W455xD390xH380	W500xD540xH380	W450xD390xH370
Outside dimensions (mm)	W460xD510xH540	W510xD650xH540	W520xD550xH610
Weight (Approx.)	30Kg	40Kg	50Kg

Capacity of flask holders

Model	111-1-110050	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000
Flask clamps	50ml	125ml	250ml	500ml	1000ml	2000ml
TOU-50N	35	20	12	6	4	2
TOU-120N	64	36	25	16	9	5
LOM-65	35	20	12	6	4	2



LOM-150



LOM-150-Series, 150Liter Shaking Incubator, Orbital Motion

This multipurpose model can shake, incubate & refrigerate. The 480x380mm platform accepts flasks up to 6 Liter.

Large viewing window & internal light provide clear chamber visibility, with moveable window blind.

One stationary shelf for incubating added samples with a front opening door, the LOM-150 can be used on the bench or on the floor, wide temp. range 0°C to 60°C.

Model LOM-150D: two stage shaker enable to shake two platform simultaneously.

Useful for biological culture under various temperature.

- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brushless AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature uniformity.

Optional:

Day/night light+timer.



LOM-150

Model	LOM-150	LOM-150D
System	Forced air circulation	
Shaking system	Orbital	
Shaking platform	Single	Double
Temp. range	0°C~70°C	
Temp. constancy	±0.1°C	
Temp. uniformity	±1°C (at 37)	
Temp. control/display	PID/LED	
Temp. sensor	PT-100Ω	
Inside material	SUS-304	
Speed Programer	20~300 rpm (option 400 rpm)	20~150 rpm
Shaking width	25 mm	
Shaking plate	W480xD380	W480xD380 Double platform
Refrigerator	1/4 HP	
Heater: Incubator	900W	
Safety devices	Short circuit breaker, over heat protector, refrigerator over load protector, sensor abnormality, over low protector	
Inside dimensions (mm)	W600xD500xH500	
Outside dimensions (mm)	W680xD690xH860	
Volume (Liter)	150	
Shelves	1 (Adjustable)	N/A
Power supply	110/220V, (8.5A)	
Weight	98Kg	100Kg

Capacity for flasks holders:

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-150	30	20	12	6	5	4	2	1
LOM-150D	30x2 set	20x2 set	12x2 set	-	-	-	-	-



LOM-175-Dual

LOM-175-Dual/LOM-175D-Dual, Orbital Dual Shaking Incubator**Features:**

- Useful for biological culture under various temperatures
- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Optional day/night light with timer.
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brushless AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature stability.

Optional: Tube Holders**Flask Holders**

Model	LOM-175-Dual	LOM-175D-Dual
Platform	Single	Double
Temp. range	0°C~70°C	
Temp. Accuracy	±0.1°C	
Temp. control	PID	
Temp. Display	LED 2-screen digital display actual and setting temperature	
Speed Programer (9 steps)	20~250 rpm (option 400 rpm)	20~150 rpm
Shaking width	25 mm	
Timer	999h / 999min / 999sec	
Heater	900 W each chamber	
Refrigerator	1/4HP	
Volume	Each chamber 175L	
Shaking Plate Size (mm)	640x440	
Inside dimensions (mm)	W700xD500xH500	
Outside dimensions (mm)	W780xD690xH1720	
Shelves	1 Adjustable	N/A
Weight (Approx.)	170Kg	180Kg

Capacity of flask holders

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-175-Dual	40	28	20	12	6	6	2	2
LOM-175D-Dual	40x4 set	28x4 set	20x4 set	-	-	-	-	-

LOM-200/400, Precise Shaking Incubator, Top Door, Orbital Motion With Digital PID Control Up To 70°C



LOM-400

Optional: Tube Holders

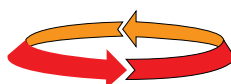


Flask Holders



Features:

- Useful for biological culture under various temp.
- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Optional day/night light with timer.
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brushless AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature stability.
- Speed programmer: 9 steps of speed & direction of rotation.



LOM-200
With optional
day/night
illumination+timer



Model	LOM-200	LOM-400
System	Forced air circulation	
Shaking system	Orbital	
Temp. range	0°C~70°C	
Temp. constancy	±0.1°C	
Temp. uniformity	±1°C (at 37)	
Temp. control / display	PID / LED	
Temp. sensor	PT-100	
Inside material	SUS-304	
Speed Programmer	20~250rpm (optional 400rpm), 9 steps of speed & direction of rotation	
Shaking width	50 mm (25 mm)	
Shaking plate (mm)	W600xD480mm	W960xD600mm
Refrigerator	1/4 HP	1/3 HP
Heater: Incubator	1200W	
Safety devices	Short circuit breaker, over heat protector, refrigerator over load protector, sensor abnormality, over low protector	
Inside dimensions	W680xD560xH540mm	W1040xD680xH540mm
Outside dimensions	W1010xD640xH870mm	W1370xD760xH870mm
Volume (Liters)	205	381
Power supply	110/220V, 50/60Hz, (8.5A)	
Weight	200Kg	300Kg

Capacity of flask holders

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-200	48	30	20	12	9	6	6	4
LOM-400	96	60	40	24	15	15	12	8

LOM-560/LOM-834, Orbital Shaking Incubator, Large Vertical Type



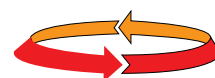
LOM-834D

Features:

- Useful for biological culture under various temperature.
- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Optional day/night light with timer.
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brushless AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature stability.
- Speed programmer - 9 steps of speed & direction of rotation.



LOM-560D



Flask Holders

Model	LOM-560	LOM-560D	LOM-834	LOM-834D
Shaking platform	Single	Double	Single	Double
Temp. range	0°C~70°C			
Temp. Accuracy	±0.1°C			
Temp. control	Micro-computer PID temperature controller			
Temp. Display	LED 2-screen digital display actual and setting temperature			
Speed Programmer	20~250 rpm	20~150 rpm	20~250 rpm	20~150 rpm
Shaking width	50 mm			
Timer	999h / 999min / 999sec			
Heater	1600 W			
Illumination	Fluorescent lamp 20 W			
Shelves (Adjustable)	2	1	2	1
Refrigerator	1/3HP		1/2HP	
Volume	560L		834L	
Shaking Plate Size (mm)	740x480		960x600	
Inside dimensions (mm)	W860xD600xH1100		W1100xD690xH1100	
Outside dimensions (mm)	W940xD800xH1840		W1190xD920xH1840	
Weight (Approx.)	280Kg		300Kg	

Capacity of flask holders

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-560	48	40	24	12	9	6	6	4
LOM-560D	96	60	40	24	-	-	-	-
LOM-834	78	50	36	18	10	10	8	8
LOM-834D	156	100	72	36	-	-	-	-

DFO-Series, 36 Liter, 80 Liter, 150 Liter, 240 Liter Ovens

DFO Series units are primarily used in applications needing rapid drying and sterilization. Totally homogenous temperature distribution and/or rapid dynamic response. This modern range of ovens is available in 4 sizes. DFO Series offers excellent uniformity and stability & are used for many applications as Glassware drying, warming, sterilizing, ageing, curing, softening, annealing, preheating and testing, drying slides. The inner case is constructed from polished stainless steel. All units are provided with wire plated shelves with multi-position settings. All models are with fan assisted air circulation, the chamber ventilation and exhaust vent are easily adjustable. Wide choice of control options is available, PID controller & timer is fitted as standard with dual display of measured value and setpoint.

Options:

- RS-232 / 485 communication model: 3216E
- 4 programs of 16 segments model: 2416P4
- 5 programs of 8 segments model: 3216CP
- 38, 50, 75, 100mm cable entry port
- Gas inlet
- Interior light.

**Typical oven applications include:**

- Drying of glassware
- Warming
- Sterilising
- Ageing
- Curing
- Burning-in
- Long term stability testing
- Softening
- Annealing
- Enamelling
- Baking
- Bending
- Tempering
- Pre-heating
- Soldering.

Specifications:

Model	DFO-36	DFO-80	DFO-150	DFO-240
Temp. range	5°C above ambient to - 250°C			
Temp. constancy	±0.1°C			
Temp. uniformity	±1°C at 100°C	±1°C at 100°C	±2°C at 100°C	±2.5°C at 100°C
Temp. control	PID			
Circulation	Forced air – two speed selectable with a switch			
Heater: Oven	1100W	1500W	1800W	2200W
Inside Material	SUS-304			
Timer	1 minute to 99 hours an 59 minutes or continuous			
Window (mm)	W200xH300			W200xH500
Safety devices	Short circuit breaker, over heat protector, sensor abnormality			
Inside dimensions (mm)	W400xD300xH300	W500xD400xH400	W600xD500xH500	W600xD500xH800
Outside dimensions (mm)	W525xD420xH595	W620xD520xH620	W720xD620xH720	W720xD620xH1020
Capacity (Liters)	36	80	150	240
Shelves	2	2	2	3
Max. No. of Shelves	7	10	13	23
Weight	34kg	52kg	75kg	85kg



DFO-480

DFO-270/480, Large Force Convection, Single Door

- Ideal for Large Volume Baking Electronic Parts, Drying, Conditioning and Sterilizing
- Inner case is SUS 304 and outside body is powder painting.
- Tempered Safety Glass Window to see inside without door opening
- Install double over temperature protection.
- All models are with fan assisted air circulation, air vent on both sides
- Brake wheels easy to move.

Model	DFO-270	DFO-480
Temp. range	Ambient + 5°C–250°C	
Temp. Accuracy	±1°C	
Temp. control / Display	PID	
Temp. Sensor	K type	
Volume	270L	480L
Timer	1 minute to 99 hours and 59 minutes or continuous	
Shelf (Adjustable)	4	
Power Voltage	220V 50/60Hz 1PH	
Heater Watage	3.6Kw	4.4Kw
Inside dimensions (mm)	W600xD500xH900	W800xD600xH1000
Outside dimensions (mm)	W780xD620xH1520	W980xD720xH1620
Weight	130kg	s



DFO-2160

DFO-600/720/1008/2160, Large Force Convection, Double Door

- Ovens are used for many applications as baking, drying, conditioning, sterilizing, electroplate, plastic, chemical industry, printing, hard ware, pharmacy, tea fired, bake industry etc
- Inner case is SUS 304 and outside body is powder painting.
- Tempered Safety Glass Window to see inside without door opening
- Install double over temperature protection.
- All models are with fan assisted air circulation, air vent on both sides
- Brake wheels, easy to move
- Silent fan motor.

Model	DFO-600	DFO-720	DFO-1008	DFO-2160
Temp. range	Ambient + 5°C–250°C			
Temp. Accuracy	±1°C			
Temp. control / Display	PID			
Temp. Sensor	Thermocouple K type			
Volume	600L	720L	1008L	2160L
Timer	1 minute to 99 hours and 59 minutes or continuous			
Shelf (Adjustable)	4			
Power Voltage	220V 50/60Hz 1PH		220V 50/60Hz 3PH	
Heater Watage	6Kw		9Kw	15Kw
Inside dimensions (mm)	W1000xD600xH1000	W1200xD600xH1000	W1400xD600xH1200	W1800xD1000xH1200
Outside dimensions (mm)	W1250xD750xH1580	W1450xD750xH1580	W1650xD750xH1820	W2000xD1200xH1980

SHAKERS

Benchtop Platform Orbital Shakers



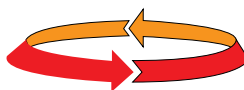
TOS-4030FD
400x300mm



TOS-4838FD
480x380mm



TOS-6048FD
600x480mm



BenchTop Platform Shakers:

Applications:

- Cell cultures
- Bacterial suspensions
- Solubility studies
- Staining
- Extraction procedures
- Destaining
- Diagnostic tests
- Washing Procedures
- General Mixing
- Hybridization

Features:

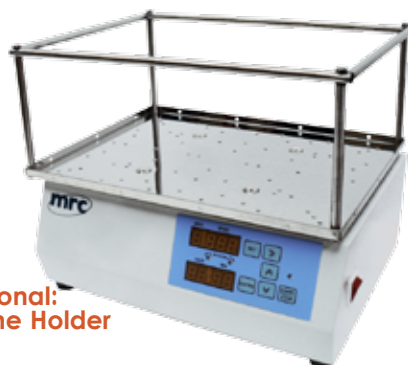
- Triple eccentric drive enables continuous 24-hours operation, handles heavier loads and provides smooth uniform agitation of full or unbalanced loads even at high speeds.
- Units operate in temperature range of 4 to 40°C and humidity conditions from 20 to 80% non condensing enabling them to be used in incubators, warm rooms, environmental chambers and refrigerators.
- Easy to adjust speed up to 300rpm.
- Easy to adjust timer up to 9999 minutes.
- Memory of speed when power cut.

orbital shakers are for shaking in ambient conditions on the bench or in incubator or warm room or cool room. These shakers are available in three models. Platform accommodate a mix of flask clamps. A powerful, quiet, space saving, reliable, either for gentle shaking of liquids or vigorous mixing of materials. Maintenance free, the tray is proof against aggressive liquids. Flexible platform system. All kinds of dishes can be placed on the platforms: beakers, erlenmeyer flask, test tube racks etc. All models feature a large easy to read LED display. A specific run time can be entered or continuous running can be selected. These medium size orbital shakers are well engineered & provide smooth operation when under maximum load and speed. The top tray of each model has threaded holes to accommodate flask holders from 50ml to 6000ml. Maximum load up to 20kg.

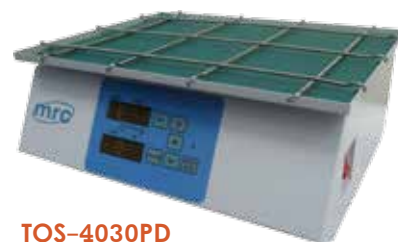
Optional: Tube Holders



Optional: Universal spring tray for TOS-4030FD



Optional: Frame Holder



TOS-4030PD

Model	TOS-4030PD	TOS-4030FD	TOS-4838FD	TOS-6048FD
System shaking	Orbital			
Speed programer	20-300 rpm			
Shaking orbit	25m			
Shaking plate (mm)	W400xD300		W480xD380	W600xD480
Outside DIM. (mm)	W400xD330xH165		W480xD380xH165	W600xD480xH210
Shaking plate	Plate	Flask rack	Flask rack	
Power supply	110/220V, 60/50Hz (1A)			
Weight	11ka	12ka	18ka	25ka

Accessories:

Model	111-1-110050	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000	111-1-116000
Model/flask clamps	50ml	125ml	250ml	500ml	1000ml	2Liter	3Liter	4Liter	5Liter	6Liter
TOS-4030F Capacity	35	20	12	6	4	2	1	1	-	-
TOS-4838F Capacity	48	30	20	12	6	4	2	2	1	1
TOS-6048F Capacity	80	48	30	20	12	6	6	4	2	2

Large Digital Shakers:



MRC large open air shakers designed to uniformly shake hundreds of samples, day-in & day-out, under the extreme conditions of an environmental room. New engineering concepts in load balancing minimize stress & vibrations, even when fully loaded & running at the maximum speed. Accepts hundreds of samples on up to 2 accessory platforms. As pictured, platforms have easy access to all glassware, & lock in place without tools. Maintenance free, the tray is proof against aggressive liquids. A powerful, quiet, reliable, either for gentle shaking of liquids or vigorous mixing of materials.

Unique Advantage:

Shakers feature a triple eccentric drive that handles heavy workloads, provides uniform agitation, smooths

and quiet enables continuous 24-hour operation even at high speeds. Precisely balanced, extremely stable shaker mechanism with massive cast-iron base need not be bolted to the floor.

Four large capacity Orbital Shakers available. They are well engineered and have heavy duty orbital mechanisms that provide smooth operation when under maximum loading and speed. The top plate is 6mm aluminium and has tapped holes to accommodate flask holders from 50ml up to the heavy flasks sizes: 1 Liter to 6 Liter. Both models feature an easy to use digital control with speed and timer display and are attractively finished in a durable grey powder coating.

A specific run time can be entered or continuous running can be selected.

Speed programmability: Continuous or multi-step RPM programmability in which a timed run consisting of a sequence of up to 9 timed steps, each at a set speed & direction of rotation. Each timed run can be repeated up to 999 times.

Optional: Tube Holders**Optional: Flask Holders**

Model	TOS-6048-2	TOS-6048-5	TOS-9660-2	TOS-9660-5
Shaking system	Orbital			
Speed programmer	30-400 rpm	20-250 rpm	30-400 rpm	20-250 rpm
Shaking orbit	25 mm	50 mm	25 mm	50 mm
Shaking plate	W600xD480		W960xD600	
Outside dimensions (mm)	W600xD480xH210		W960xD600xH210	
Weight	63 kg		75 kg	

Accessories:

Model	111-1-110050	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000	111-1-116000
Flask clamps	50ml	125ml	250ml	500ml	1000ml	2Liter	3Liter	4Liter	5Liter	6Liter
TOS-6048-2/5 Capacity	80	48	30	20	12	6	6	4	2	2
TOS-9660-2/5 Capacity	160	96	60	40	24	15	8	8	6	6

SHAKERS

Double Platform Large Orbital Shakers

Double Platform Large Orbital Shakers



MRC large open air shakers designed to uniformly shake hundreds of samples, day-in & day-out, under the extreme conditions of an environmental room. New engineering concepts in load balancing minimize stress & vibrations, even when fully loaded & running at the maximum speed. Accepts hundreds of samples on up to 2 accessory platforms. As pictured, platforms have easy access to all glassware, & lock in place without tools. Maintenance free, the coated tray is proof against aggressive liquids. A powerful, quiet, reliable, either for gentle shaking of liquids or vigorous mixing of materials.

Unique Advantage – Precisely balanced, extremely stable shaker mechanism with massive cast-iron base need not be bolted to the floor.

Four large capacity Orbital Shakers available. Both are well engineered and have heavy duty orbital mechanisms that provide smooth operation when under maximum loading and speed. The top plate is

6mm aluminium and has tapped holes to accommodate flask holders from 50ml up to the heavy flask sizes: 1 Liter to 6 Liter. Both models feature an easy to use digital control with speed and timer display and are attractively finished in a durable grey powder coating. A specific run time can be entered or continuous running can be selected.

Speed programmability: Continuous or multi-step RPM programmability in which a timed run consisting of a sequence of up to 9 timed steps, each at a set speed & direction of rotation. Each timed run can be repeated up to 999 times.

Optional: Tube Holders



Flask Holders



Model	TOS-6048D-5D	TOS-9660D-5D
Shaking system	Orbital	
Speed programmer	20–250 rpm	20–250 rpm
Shaking orbit	50 mm	50 mm
Shaking plate	W600xD480 Double	W960xD600 Double
Outside dimensions (mm)	W600xD480xH560	W960xD600xH560
Weight	75 kg	95 kg

Accessories:

Model	111-1-110050	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000
Flask clamps	50ml	125ml	250ml	500ml	1000ml	2Liter
TOS-6048D-5 Capacity	160	96	60	40	25	15
TOS-9660D-5 Capacity	320	192	120	80	48	30

WBH-Series, Digital Precise Circulation Water Bath

There are 2 sizes with internal circulation pump, 10 & 20 Liters. The immersion circulator bridge can easily remove for easy cleaning of the tank.



WBH-100

WBH-200

Features:

Ideal for Biotechnology, Clinical, Environmental, Medical, Petroleum, Food Industry, Pharmaceutical or Industrial Applications

- Powerful Circulation Pump

Assures Temp. Uniformity.: Internal and optional external Circulation

- Stainless Steel Bath(#304) for Superior Durability & High Thermal Efficiency
- Stainless Steel lid Prevents Evaporation and keeps Constant Temperature.



WBH-100IN With External Circulation

Model	WBH-100	WBH-100IN	WBH-200	WBH-200I
Temp. range	Ambient +5°C to 100°C			
Temp. constancy	±0.1			
Temp. control	PID			
Internal circulating pump	9Liter/Minute			
External circulating pump	No	Yes	No	Yes
Heater	800W		1000W	
Safety devices	Short circuit, over head protector, sensor abnormality			
Bath opening (mm)	W200xD235xH150		W400xD295xH150	
Inside dimensions (mm)	W295xD235xH150		W495xD295xH150	
Outside dimensions (mm)	W340xD280xH320		W540xD340xH320	
Volume	10L		20L	
Weight	7kg		10kg	

WBO-Series, Unstirred Up To 80°C Water Bath

The MRC stainless steel water bath are available in 2 sizes: 10 & 20 Liters. Model WBO-100 and WBO-200 unstirred bath are used for general applications in laboratories. They provides excellent temperature uniformity of the liquid. A PID temperature controller provides instant and accurate temperature. The tank of the bath is made of corrosion resistant stainless steel with round corners for easy cleaning. Include hood cover.



WBO-200

Features:

- Ideal for biotechnology, clinical, environmental, medical, petroleum, food industry
- Stainless steel lid prevents evaporation & keeps constant temperature
- Excellent uniformity & stability
- Seamless, corrosion-resistant, stainless steel chamber
- Available in 10, 20 Liters
- Gable cover included.



WBO-100

Applications:

- Incubate cultures
- Warm bacteriological media
- Perform chemical reactions
- Thaw samples.

Model	WBO-100	WBO-200
Temp. range	Room temperature ~ +5°C to 80°C	
Temp. constancy	±0.1	
Temp. control	PID	
Heater	300W	600W
Safety devices	Short circuit, over head protector, sensor abnormality	
Bath opening (mm)	W295xD235xH150	W495xD295xH150
Inside dimensions (mm)	W295xD235xH150	W495xD295xH150
Outside dimensions (mm)	W420xD280xH185	W620xD340xH185
Volume	10L	20L
Weight	6.5 kg	9 kg

WBL-Series, Digital Precise Refrigerated Bath, Internal and External Circulator



WBL-200

WBL-100

Refrigerated Circulating Baths

- Compact design.
- For external & internal temperature applications.
- Low noise level.
- Rapid cool down and heating time.
- Water drain for easy cleaning of the inner tank.
- Models WBL-200 has casters.
- Water level protector.
- Ideal for direct immersion of samples or external circulating system in the field of biotechnology and laboratories.
- Powerful circulation pump ensures temp. uniformity: internal and external circulation.
- Connection with evaporator or viscometer is applicable.

Options:

- Display resolution to 0.01°C
- Build in RS-232/485
- PT-100Ω temperature probe for direct measurements and control of external systems
- Analog inputs and outputs for external programmer and temperature recorder.

Model	WBL-100	WBL-101	WBL-200
Temperature range	-30°C~100°C		
Temp. constancy	±0.1°C		
Temp. control	PID		
Temp. sensor	PT-100Ω		
Circulation pump	9L/min. max. head 2m	18L/min. max. head 7m	27L/min. max. head 7m
Heater	1600W		2500W
Refrigerator	1/3HP		1 HP
Cooling capacity at 20°C	660Watt/2252 BTU/hour		1000Watt/3412 BTU/hour
Safety devices	Short circuit breaker, over heat protector, sensor abnormality, overload protector		
Bath opening (mm)	W200xD150xH150		W300xD210xH180
Bath dimension	W200xD300xH150		W300xD360xH180
Outside dimensions	W315xD450xH630		W420xD530xH800
Volume	9.0L		19.4L
In/Output	9.5mm		12.5mm
Weight	35kg		63kg

WBH-060N, External Heating Circulation Bath

The MRC WBH-060N, 6 Liter heating bath, is the most user-friendly baths available. This heating circulator is mainly used for temperature controlling larger external systems such as heating



WBH-060N

plates, autoclaves or reaction vessels. Combined powerful pressure/suction pumps provide a good heat exchange and optimum temperature accuracy; robust design using high grade stainless steel inside and outside the bath. MRC heating circulator with stainless steel bath tank is mainly used for internal and external temperature tasks. simultaneous temperature applications of smaller objects can also be carried out directly in the internal bath of the circulator.

Model	WBH-060N
Working range	Ambient +5°C~100°C
Volume	6 Liter
Stability	±0.05°C
Setting&Readout	Digital
Heater	500W
Pumping flow	7L/min, 0.2kg/cm ²
Reservoir(mm)	W150xD255xH150
Overall(mm)	W210xD315xH330
Power source	110/220V 60/50Hz 5/2.5A

WBLD-Series, Refrigeration Capacity Recyclable Coolers



WBLD-Series

Features:

- Closed circulating system can avoid refrigerating medium evaporation and pollution, save energy.
- Circulating system is equipped with filter apparatus, clean refrigerating medium avoids instrument lin clogging
- With built-in liquid-level monitor, liquid-level inside the bath can be checked visually.
- Circulating system is equipped with pressure gauge, displays circulating system pressure.

Model	WBLD-1000	WBLD-1000G	WBLD-2000	WBLD-2000G	WBLD-3000	WBLD-3000G	WBLD-6000	WBLD-6000G
Temp. range (°C)	-10 ~ 25							
Temp. stability (°C)	±2							
power supply (V/Hz)	220V/50Hz						380V/50Hz	
Cooling capacity(W)	1000@15°C		2000@15°C		3000@15°C		6000@15°C	
Refrigeranting Madium	R134a							
Pump Flow (L/min)	30	≥7	30	≥7	30	≥16	40	≥16
Pump Pressure (Bar)	1	1-10	1	1-10	1	1-10	1.4	1-10
Dimensions L×W×H(mm)	675×426×695		675×456×775		740×490×830		1020×635×1030	

Model		WBLD-3-300	WBLD-3-700	WBLD-3-1000	WBLD-3-2500
Temp. range (°C)		-30 ~ 25			
Temp. stability (°C)		±2			
power supply (V/Hz)		220V/50Hz			380V/50Hz
Cooling capacity(W)	0°C	1240	1750	2820	7500
	-10°C	780	1070	1810	4600
	-20°C	300	700	1000	2500
	-30°C	-30	300	520	1040
		R410a			R404a
Refrigerating Medium		R410a			
Pump Flow (L/Min)		30	30	30	30
Pump Pressure (Bar)		1	1	1	1.4
Dimensions (L×W×H) (mm)		675×426×695	675×456×775	740×490×830	1020×635×1030

WBT-200/400/401/450, Digital Precise Shaking Water Bath, 22 & 38 Liter, & Digital PID Control, Reciprocating Motion, 20~200rpm, to 100°C, $\pm 0.1^\circ\text{C}$, up to 1 Liter Flask



These reciprocating water bath shakers are available in three models. Model WBT-200 small platform 250x300mm, Model WBT-400 large platform 300x400mm & Model WBT-401 refrigerated to 0°C . Temperature control is precise, temp. range of 5°C above ambient to 100°C , speed range 20 – 200 rpm, heat loss and evaporation minimized with use of stainless steel hood cover. Easy emptying through a drain at the lowest point. Micro processor temperature PID controller with dual display of measured temperature and set temperature. WBT-450: orbital motion with large platform.

Options:

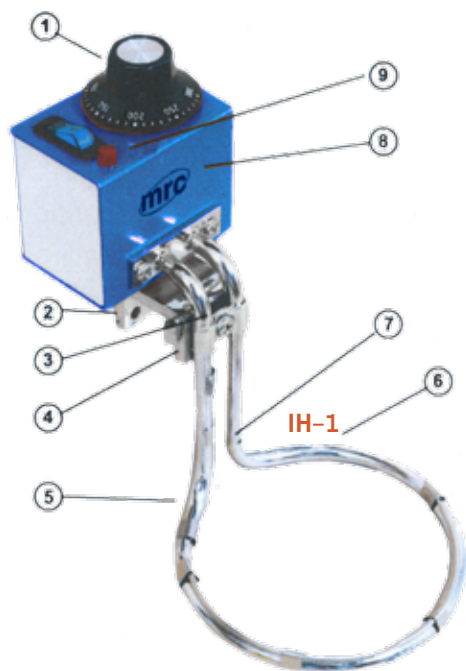
- Water level protector.
- Universal platform.

Features:

Stainless Steel Bath for Superior Durability & High Thermal Efficiency • Innovative Easy-to-Use Digital PID Controller • Electronically Controlled Shaking Mechanism Provides Quiet Reciprocating Motion and Precise Speed Control • Universal Stainless Steel Spring Rack (Optional): for various kind of Flasks dishes and Tubes (optional) • Patent shaking mechanism: minimum noise and vibration.

Model	WBT-200	WBT-400	WBT-401	WBT-450
System	Reciprocation shaking circulation			Orbital circulation
Temp. range	Room temperature - 100℃		0℃-100℃	R.T-100℃
Temp. constancy	±0.1℃			
Temp. control	PID			
Temp sensor	PT-100Ω			
Inside material	SUS304			
Rate of shaking	20~200 rpm			
Shaking width	20 and 40 mm variable			25 mm
Shaking plate (mm)	300x240mm	400x300mm		470x320mm
Refrigerator			1/4HP	
Heater	1200watt	1600watt		1200watt
Safety devices	Short circuit breaker, over heat protector, sensor abnormality, refrigerator over protector			
Inside dimensions (mm)	W500xD300xH150	W600xD350xH180		W560xD405xH200
Outside dimensions (mm)	W700xD350xH300	W830xD415xH350	W980xD415xH430	W740xD530xH450
Volume (Liters)	22.5	37.8		
Weight	25kg	30kg	53kg	80kg

Capacity of flasks	50 ml	125 ml	250 ml	500 ml	1000 ml	2000 ml
WBT-200 number of flasks	20	12	6	4	2	1
WBT-400/401 number of flasks	35	20	12	6	4	2
WBT-450 number of flasks	35	24	15	12	6	2



IMMERSION HEATER IH-1

- 1- Temperature setting in °C
- 2- Threaded hole for attachment to stand
- 3- Height adjustment permits wide range of application
- 4- Mounting bracket (patented design) with teflon-tipped disc permitting secure clamping to all surfaces, including glass
- 5- Heating element chromium-plated copper sheath: also available in stainless steel on special order
- 6- Fast-acting thermostat also serves as low-level cut-out, preventing element burn-out and fire hazard
- 7- Shallow immersion depth (3 cm)
- 8- The control housing is located outside the vessel and thus protected against vapors and temperature effects
- 9- Indicator light

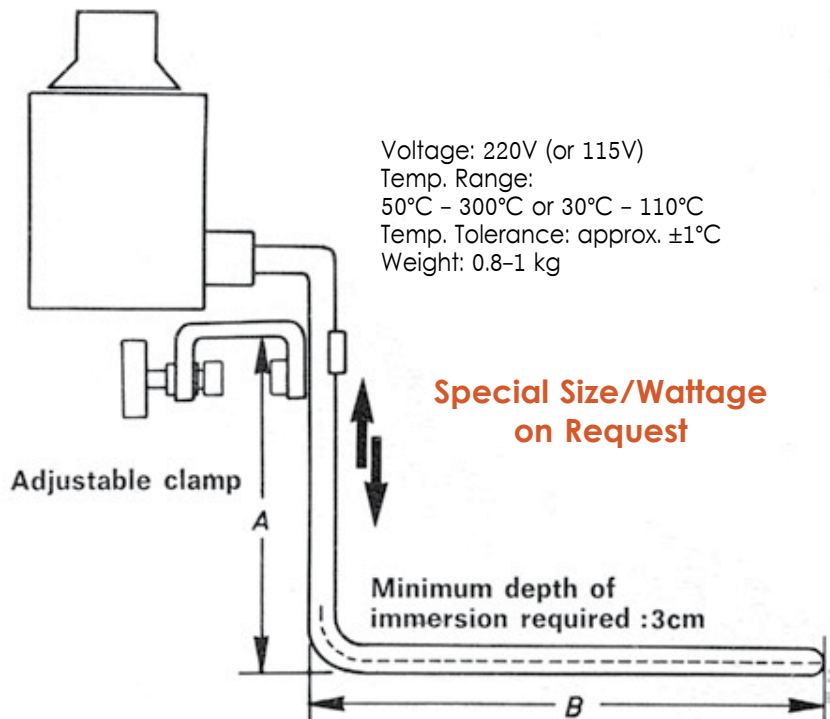


IH-Series, Thermostatic Controlled Immersion Heaters

Immersion heat:

Thermostatically Controlled Immersion Heaters.

Reliable element for accurately heating liquids to temperatures of up to 300°C with a tolerance of approx. $\pm 1^\circ\text{C}$. Designed for trouble-free application. Suitable for use in science and industry for: Distillation, evaporation, sterilization, rotary evaporation, ultrasonic cleaning, photographic bath etc.



Voltage: 220V (or 115V)
Temp. Range:
50°C - 300°C or 30°C - 110°C
Temp. Tolerance: approx. $\pm 1^\circ\text{C}$
Weight: 0.8-1 kg

**Special Size/Wattage
on Request**

Model 50-300°C	Digital 50-300°C	Model 50-110°C	Digital 50-110°C	Watts	"A" mm	"B" mmΦ
IH3/13	IHSD-3/13	IH1/13	IHSD-1/13	500	100	130
IH3/15	IHSD-3/15	IH1/15	IHSD-1/15	750	110	150
IH3/17	IHSD-3/17	IH1/17	IHSD-1/17	750	120	170
IH3/19	IHSD-3/19	IH1/19	IHSD-1/19	1000	130	190
IH3/21	IHSD-3/21	IH1/21	IHSD-1/21	1000	150	210
IH3/23	IHSD-3/23	IH1/23	IHSD-1/23	1250	180	230
IH3/25	IHSD-3/25	IH1/25	IHSD-1/25	1500	200	250
IH3/27	IHSD-3/27	IH1/27	IHSD-1/27	1500	200	270

Immersion heater Features:

- Easily converts any container into a thermostatically controlled bath from ambient to 300°C.
- Rugged, reliable, convenient, maintenance-free, energy-saving & reasonable priced.
- Fully valid substitute for expensive water and oil baths.
- Permits utilization of the entire contents of the container, without effecting the functioning of stirrers.
- Heat is applied directly to the liquid, ensuring rapid rise of temperature.
- Safe - fast acting thermostat server as low-water level cut out.
- You get the temperature you set.
- Control box is located on the outside and is unaffected by vaporous and temperature effects.

WB-Series, For Full Visibility Of Samples



WBS-14
14 Liter



WBS-5
5.5 Liter

WBS-Series, With Safety Thermostat

These Water Baths are identical to the WB models but are equipped with an additional Safety Thermostat.

Removable Modular Heating Assembly enables convenient cleaning of all parts & makes it usable in other vessels.



Features:

- Low-cost fully compatible substitute for expensive Water Bath.
- Seamless transparent polycarbonate tank-withstands temperature 120°C.
- Fast-Acting thermostat also serves as low-water-level protector, preventing heating-element burn-out & fire hazard.
- Temperature setting in °C from ambient to +100°C
- Temperature control accuracy of approximately $\pm 1^\circ\text{C}$ ensures precise test conditions
- Robust & reliable – designed for years of trouble-free service.

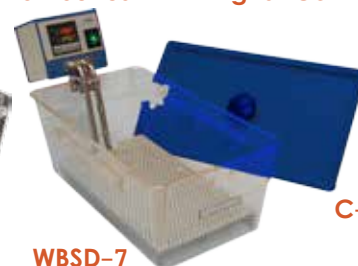
Options:

WB-Special:



According to
customer dimensions

WBSD Series: With Digital Control



WBSD-7

C-7

WBSD Series, Transparent Polycarbonate Thermostatic Bath

Ideal for sample pre treatment in QC, pathology and educational purposes, routine laboratory purposes, procedures requiring visibility of reactions inside the vessels & as a 'personal' water bath for scientists needing only a small working area with a compact footprint. Temperature control accuracy of approximately $\pm 0.2^\circ\text{C}$ ensures precise test conditions.

Temp. Range: from slightly above ambient to +100°C (with cover) Accuracy: approx.: 0.3°C at 37°C (depending on operating conditions). Voltage: 230 V, 50 Hz (or 120 V, 50/60 Hz).							Accessories		
Standard model	With safety thermostat model	Digital model	Bath capacity (Liters)	Inside dim's (cm) W1xD1xH1	Outside dim's (cm) W2xD2xH2	Watts	Bath cover model	Floating balls model	Evaporation lid model
WB-3	WBS-3	WBSD-3	2.7	10 x 17 x 10	15 x 31 x 24	500	C-3	FB-3	-
WB-4	WBS-4	WBSD-4	4.5	10 x 27 x 10	16 x 41 x 24	600	C-4	FB-4	-
WB-5	WBS-5	WBSD-5	5.5	16 x 20 x 11	22 x 34 x 24	750	C-5	FB-5	EL-5
WB-7	WBS-7	WBSD-7	7.0	16 x 3 x 11	22 x 44 x 24	1000	C-7	FB-7	-
WB-8	WBS-8	WBSD-8	8.5	21 x 35 x 12	28 x 50 x 26	1000	C-8	FB-8	-
WB-11	WBS-11	WBSD-11	11.0	18 x 27 x 16	24 x 43 x 30	1200	C-11	FB-11	-
WB-14	WBS-14	WBSD-14	14.0	21 x 35 x 16	28 x 50 x 30	1500	C-14	FB-14	EL-14
WB-30	WBS-30	WBSD-30	30	32 x 51 x 18	38 x 66 x 24	*2000	C-30	FB-30	EL-30/8/11

*1500W at 120V

Accessories:



WB

Balls Blanket

Floating balls

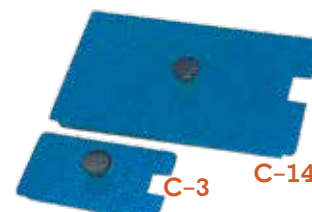
A balls blanket of Floating Polypropylene Balls is most effective for reducing evaporation and loss of heat from the Water Bath. The Balls act as effectively as a lid (flat or gabled), while enabling immersion and removal of flasks & other vessels without having to lift a lid. Usable UP to 110°C.



EL-30/8

Evaporation lids

Evaporation Lids (EL) for use with WB and WBS Baths. Each Lid has openings equipped with concentric rings. The rings reduce the diameters of the openings to accommodate containers of all sizes. The EL-5 Lids, for use with WB(S)-5 Baths, have four 80mm diameter openings.



C-3 C-14

Bath covers

TEPS-1

**TEPS-1, Immersion Circulator – Basic Model****Features:**

- Temperature range: ambient to 100°C (with cooling +10 to 100°C).
- Accuracy: approx. ± 0.3 to $\pm 1^\circ\text{C}$.
- Pumping capacity: up to 12 l/min.
- Safety Cut Off.
- 12L/min max. head 2m.
- Immersion depth: min. 6cm, max. 15.5cm.
- Optional: Glass Thermometer
- **Optional: External circulation apparatus.**

TEPS-4

**TEPS-4, Digital Immersion Circulator****Features:**

- Digital set and display of actual operating temperatures.
- PID controller provides very precise temperature control.
- Adapts to many different containers.
- Temperature range: ambient +5°C to 100°C (with cooling -10°C to 100°C),
- Accuracy: approx. $\pm 0.1^\circ\text{C}$.
- Pumping capacity: up to 12 l/min.
- Immersion depth: minimum 6 cm, maximum 15.5 cm.
- Safety Cut Off.
- **Optional up to 200°C (for oil).**

Model	TEPS-1	TEPS-4
Temperature range	up to 100°C	
Temperature stability	$\pm 0.3^\circ\text{C}$ to 1°C	$\pm 0.1^\circ\text{C}$
Controller	Basic analog	PID Digital
Readout	Thermometer	Digital $^\circ\text{C}/^\circ\text{F}$
Pumping flow	12 Liter/min	
Immersion	Minimum 60mm, Maximum 155mm	
Heater	1000Watt (optional, 1500, 2000watt)	
Over temp. safety	Adjustable	
Dimensions (mm)	W200xD240xH90 / W120xD140xH135	W200xD240xH90 / W120xD140xH135
Weight	2kg	2.3kg

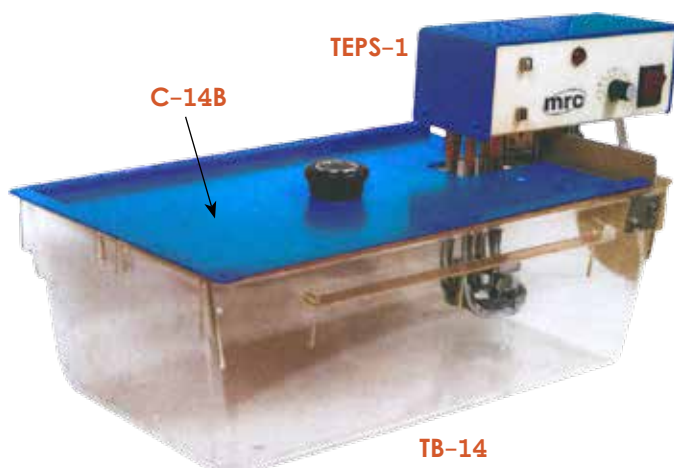
TB-Series, Polycarbonate Tank TB Type For Immersion Thermostat / Circulator

PC Tank with bridge for fixing immersion circulator TEPS-1/TEPS-4, Seamless Transparent Polycarbonate Tank - withstands 120°C. Heating circulators are commonly used for cell cultures, enzyme assays, coliform testing, DNA incubation & procedures.

TB-7	16x30x13cm-Height, 7 Liter
TB-8	21x35x14cm-Height, 8.5 Liter
TB-11	18x27x18cm-Height, 11 Liter
TB-14	21x35x18cm-Height, 14 Liter
TB-30	32x51x20cm-Height, 30 Liter

TEPS-1

C-14B



TB-14

WBSI-150,

The heaters, temperature sensor, water level protection are positioned under removable protection tray positioned over the base of the tank provides effective liquid mixing by pump and prevents sous vide packs from coming into contact with the heated tank bottom. No snagging of packs on heating coils or stirrers, no difficult places to clean/keep clean, just lots of unobstructed, temperature controlled space for you to work with.

A removable lid supplied with the bath minimises evaporation of water & helps maintain bath temperature. Should the bath accidentally be run with little or no water, a safety cut-out ensures that you and your workplace remain safe. Baths is made of a stainless steel inner tank housed

within a stainless steel enclosure and drainage for fast emptying. Robust, durable, easy to clean.

Simple and safe to operate- just select the desired temperature using the dial, and the large, easy to read, illuminated digital display gives you instant confirmation of the set temp.



*Non Standard
Request Wellcome*



WBSI-150

Model	WBSI-150
Tank Capacity	150 liter
Temperature Range	Ambient +5°C~95°C
Stability & Unloaded at 70°C	±0.2°C
Temperature Setting	Via control knob
Display	3 digit LED
Display Resolution	0.1°C
Working Volume	H350 x W950 x D550mm
Overall Dimensions	H900 x W1050 x D640mm
Electrical Supply	3 phase 380V
Heater Power & Overall Consumption 3 x 380V	9KW
Safety	Water Level Protector
Flow	33 liter/Minute

TEPS-V6, Portable clip-on digital immersion circulator

MRC immersion heaters and water baths with a precise temperature controlled environment, to produce consistently perfect results Ideal for sous vide and other demanding applications.

MRC immersion circulator is a space saving clip on heater/stirrer unit. It can be easily fitted to a standard stainless or polycarbonate gastronorm square tank or round (minimum depth 18cms) and maximum volume of approximately 60 Liters.

For large tanks and pots there are several immersion heaters with higher wattage and immersion lengths. Precise temperature achieved by PID high precision controller, accuracy and repeatability are guaranteed. Actual temperature is clearly displayed to 0.1°C. Temperature settings are retained in memory even after 'power off'. Temperatures can be easily and rapidly set with the push button, wipe clean control panel. Easy clamping method, safety protection for low water level and optional sturdy handle for easy carrying. The case is constructed from high quality stainless steel. If the water drops below the recommended minimum level or the unit is inadvertently switched.

TEPS-V6



TEPS-V6SPL



Longer immersion heater for deep and large containers

Applications:

- Laboratory water baths
- Calibration baths
- Sous vide.

Model	TEPS-V6
Display/resolution	Digital LED/0.1°C
Temp. range	Ambient + 5°C – 95°C
Temp. setting	Push button
Stability	±0.1°C
Display/resolution	Digital LED/1 min. increments
Dimensions (mm)	Stirrer case: W122 x D153 x H200 (includes handle) Guard: W122 x D132 x H148 Allow 90mm at rear of unit for mains cable/ventilation
Electrical supply	230V
Power consumption	1kW (Optional: 2000, 2600, 3000 watt)

For intensive cleaning, degassing emulsifying, homogenization, & the acceleration of chemical processes in the research, production, and maintenance sectors.

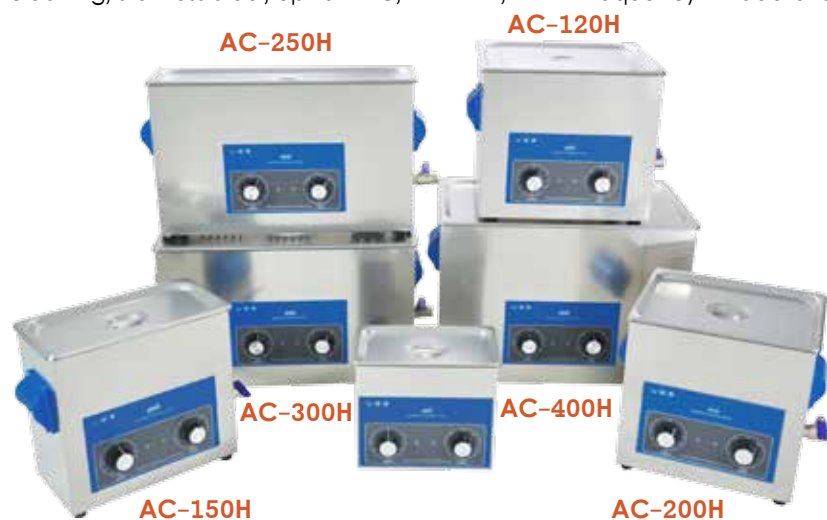
Features:

- Useful for Cleaning and Removing Dirt, Grease, Waxes and Oil from all Lab Instruments by Ultrasonic Frequency
- Made of Stainless Steel, Finished Surface
- Convenient Preset Function: Heating and Timer
- Bottom-Mounted Drain (except AC-120H)
- Include basket & lid.

Laboratories	Cleaning, degassing, homogenizing, emulsifying,
Hospital, Clinics	Cleaning surgical instrument, manufacture of implants and stents
Dental, Tatoo	Cleaning instruments for dental treatment, cleaning dental prostheses
Optics	Cleaning spectacles, optical lenses before coating etc.
Jewelry & watches	Cleaning chains, rings, straps, watches parts etc.
Chemical sector	Cleaning reactors, acceleration of chemical reactions etc.
Plastics industry	Cleaning injection moulds etc.
Car & Aircraft industry	Cleaning engine parts carburetors etc.
Mobile phones & Electronics	Cleaning PCB boards
Printing shops	Cleaning ink cassetes

AC-Analog Series

Ultrasonic cleaner-set with analog timer & temperature controller, with wire basket & lid, highly effective & efficient cleaning, stainless steel, up to 80°C, 0~20min, 40kHz frequency. Made of stainless steel, finished surface.



ACP-Series, Power adjustable ultrasonic cleaner

- Power adjustable from 30% to 100% -suitable for different cleaning (from 3L and above)
- With mechanical control timer & heater
- Memory function
- Stamping tank without welding gap for better waterproof
- Timer: 0-30 minutes
- Ceramic heaters for better heating effect.



ACP-200H
With power control

Analog	AC-120H	AC-150H	AC-200H	AC-250H	AC-300H	AC-400H
Analog+Power controll	ACP-120H	ACP-150H	ACP-200H	ACP-250H	ACP-300H	ACP-400H
Operating Frequency	40Khz	40Khz	40Khz	40Khz	40Khz	40Khz
Tank capacity (Liters)	3	6	9	13	20	27
Internal tank size(mm)	L240xW140xH100	L300xW155xH150	L300xW240xH150	L330xW300xH150	L500xW300xH150	L500xW300xH200
External DIM.(mm)	L270xW170xH240	L330xW180xH310	L330xW270xH310	L360xW330xH310	L550xW330xH310	L550xW330xH360
Internal tank stuff	SUS 304 #1.0t					
External stuff	Steel plate toast paint					
LID cover stuff	Stainless steel SUS 304					
Timer	1-20 min (ACP-Series: 1-30 min)					
Ultrasonic power (AC Series)	100W	150W	200W	300W	400W	500W
Power adjustable (ACP Series)	30 – 100W	45 – 150W	60 – 200W	90 – 300W	120 – 400W	150 – 500W
Heating Power	100W	300W	300W	400W	500W	500W
Net Weight	3.2Kg	6.2Kg	8.2Kg	10.2Kg	13.2Kg	14.9Kg
Drainage	None	Have				
Power source	AC100~120V/AC220~230V 50/60Hz					



DC-Power Full Series

Digital Ultrasonic Cleaner-set, with Wire Basket & Lid, Highly Effective & Efficient Cleaning, Stainless Steel, up to 70°C ,0-99min., Frequency 40KHz

- Useful for Cleaning to Remove Dirt, Grease, Waxes and Oil from all Lab instruments by Ultrasonic Frequency.
- Microprocessor Control: Timer, Temperature and Output Control.
- Frequency: up to 40kHz.
- Temperature Range from Ambient to 70°C.
- Convenient Pre-set Function: Heating and Timer.
- Bottom - Mounted Drain (Except DC-80H & DC-120H).
- Maximum 99 minutes Set Cleaning Time.
- Include Basket & Lid.



DCG-200H
With degas function

DCG-H Series, Digital Ultrasonic Cleaners with Degas Function

Features:

- Turbo power: Normal and soft function to resolve the cleaning blind spot
- Auto-degas function for laboratory purposes
- Memory function
- Automatically ultrasonic frequency tracking
- LED display for temperature and timer
- Timer: 1-99 minutes
- Temperature: 0-80°C
- SUS304 tank. Stamping tank without welding gap for better waterproof
- User-friendly and clear panel.
- High-performance transducer systems
- Drainage and cool fan are available for 6L and above volume models, convenient to use.
- Ultrasonic Frequency: 40KHz.



DCG-80H
With degas function

Applications:

- Hospital and Dental Clinics • Optical Stores and Makers • Biology and Chemical Labs • Jewelry Store & Maker • Watch Service Shops • Mobilephone and Electronics Service Shops • Shooting Clubs & Printing Shops • Automotive shop • Hardware • Tattoo • Aerospace & marine parts.

Model – Digital	DC-80H	DC-120H	DC-150H	DC-200H	DC-250H	DC-300H	DC-400H
Model – Degasing	DCG-80H	DCG-120H	DCG-150H	DCG-200H	DCG-250H	DCG-300H	DCG-400H
Operating frequency	40 KHz						
Tank Capacity (Liters)	2	3	6	9	13	20	27
Internal tank size (LxWxH) (mm)	150x140x100	240x140x100	300x155x150	300x240x150	330x300x150	500x300x150	500x300x200
External dimension (LxWxH) (mm)	190x170x220	270x170x240	330x180x310	330x270x310	360x330x310	550x330x310	550x330x360
Internal tank stuff	SUS 304 #1.0t						
External stuff	Steel plate toast paint						
LID cover stuff	Stainless steel SUS 304						
Timer	1-99min						
Ultrasonic power	50W	100W	150W	200W	300W	400W	500W
Heating Power	100W	100W	300W	300W	400W	500W	500W
Net weight	1.9kg	2.9kg	5.8kg	8.8kg	10.2kg	13.2kg	14.9kg
Drainage	None	None	Have				
Power source	AC100~120V/AC220~240V 50/60Hz						

SONICA-36/57/90/112/145/235L, Industrial Ultrasonic Water Bath Cleaners**Applications:**

Industry Ultrasonic Cleaner can be used in industry & mining enterprise, universities, colleges and scientific research unit laboratory; Hospital; Electronic workshop assembly line; Clock and watch eyeglasses shop, jewelry; Jeweler's shop, Electronic products, mechanical hardware fitting, eyeglasses, jewelry, clock and watch, money, fruit and so on. The Industry Ultrasonic can also be used in household, to clean personal articles such as gold and silver jewelry, necklaces, earrings, glasses & nozzles.

**SONICA-90L****Features:**

- Whole machine made of SUS304 stainless steel for acid-proof, anti-corrosive, 2mm thickness.
- Industrial grade ultrasonic transducer, moisture-proofed PCB
- Temperature can be set from 30–110°C
- Industrial grade for 24 hours continuous working
- Advanced generator, sweep frequency, high quality, better effect
- Ultrasonic frequency: 28Khz (optional: 40, 68, 80 or 120Khz)
- Material: Stainless steel with diamond-shaped figures. (Tank, Housing, Basket, Lid)
- High-performance transducer, steady & durable performance
- Secure and stable PCBA
- Ultrasonic power can be adjusted from 0–100%.

Model	SONICA-36L	SONICA-57L	SONICA-90L	SONICA-112L	SONICA-145L	SONICA-235L
Operating frequency	28KHz (optional: 40/68/80/120KHz)					
Tank Capacity (Liters)	36	57	94	112	145	235
Internal tank size (LxWxH) (mm)	510×300×250	470×340×360	590×400×400	600×470×400	650×500×450	650×600×600
External dimension (LxWxH) (mm)	700×400×500	635×470×580	790×580×650	790×650×650	850×660×730	850×800×880
Internal tank stuff	SUS 304 #1.0t					
External stuff	Steel plate paint coated					
LID cover stuff	Stainless steel SUS 304					
Ultrasonic power	720W	1080W	1440W	1800W	2160W	2520W
Heating Power	500W	3000W	1200W	4000W	6000W	6000W
Net weight	23kg	45kg	89kg	81kg	117kg	190kg
Drainage	Have					
Power source	AC100~120V/AC220~240V 50/60Hz					

CAV-METER-2, Cavitation Meter

Our Ultrasonic Cleaning Cavitation Intensity Meter instantly measures ultrasonic energy (cavitation) directly in ultrasonic cleaning tanks. It is used to measure ultrasonic energy simply by dipping the cavitation meter probe into an ultrasonic tank. It is very rugged and built to last a lifetime. The solid stainless steel probe can be used in any harsh chemical & extreme environments.

**CAV-METER-2****With our cavitation meter, one can:**

- Detect loss of ultrasonic energy with periodic readings
- Calculate best work loads
- Determine most efficient baskets & work fixtures
- Compare energy from tank to tank
- Compare energy level over life of tank
- Compare energy in tank loaded & unloaded
- Day to day comparative readings.



Model	CAV-METER-2
Range	0–100, 0–1000, 0–5000 Cavins
Self powered	No batteries
Weight	1Kg
Temperature range	Probe –100°C to +400°C, Meter 0 to +50°C
Standard probe	16" stainless steel indestructible
Optional probes	22", 28", or remote
Case	ABS
Meter	3.75" analog with glass window

Stirring Assembly:

Electronic speed control provides constant torque over a speed range from 100 to 1200 RPM, regardless viscosity changes of the medium.

Application:

Stirring viscous gels • Stirring latex mixtures • Mixing polymers, starches & Molasses • Standard reagent mixing • Stir up to 4 Liters of aqueous solution • Aluminium top plate remains cool while stirring • For safe operation, all models include a power indicator light that illuminates when power is applied to the control • Quiet stirring at a gentle 100rpm as well as at a vigorous 1000 rpm operation • Strong magnetic coupling ensures that stir bar remains coupled with drive magnet, even in viscous solutions.



F-43S
305x285mm
Stirrer
up to 30Liter
(Stainless steel case)

F-23, Magnetic Stirrer, Up To 8 Liter (H₂O)

Powerful drive magnet • Strong motor-stirs up to 8 Liter water • Compact design maximizes use of available bench space • Variable speed control up to 1200rpm • Electronic speed control with "OFF" position • Available as 4-position stirrer, & 6-position stirrer • Powerful motor & strong magnet provide exceptional stirring even with a solution that has a viscosity similar to cooking oil • Durable, easy-to-clean, corrosion-resistant top plate available.



F-23
130x145mm
Stirrer
up to 8Liter

★ ★ ★
German AC Motor
Robust & Maintenance
Free Design
★ ★ ★

F-33, Magnetic Stirrer, Up To 8 Liter

Similar to F-23 but with bigger plate 18.5 X 17.5 cm.

F-33S, Medium-High Volumes Stirrer, Up To 20Liter

Magnetic stirrer 185 x 175 mm with a heavy duty brushless (non sparking) induction motor with condenser. Exclusive powerful magnet is especially designed for most efficient magnetic coupling. Stir up to 20 Liter water • Gentle or vigorous stirring • Integral ring-stand holder • Include rear bracket for support rod.



F-33D
185x175mm
Stirrer
up to 8Liter

F-43, Large Volume Stirrer, Up To 30Liter

The giant stirrer is similar to the above described Model F-33 but with a 30.5 x 28.5 cm. top plate. The giant size top plate easily accommodates stirring loads as large as 30 Liter water.

Optional Rod.

Analog Models:

Model	Top plate	Capacity	Speed range	Dimensions (WxHxD)	Weight
F-23	W130xD145 mm	8 Liter	100 to 1200 rpm	130x125x186 mm	1.2 kg
F-33	W185xD175 mm	8 Liter	100 to 1200 rpm	186x125x197 mm	3.2 kg
F-33S	W185xD175 mm	20 Liter	100 to 1400 rpm	186x125x197 mm	3.2 kg
F-43	W305xD285 mm	30 Liter	100 to 1400 rpm	305x125x305 mm	4.2 kg

Digital Models:

Model	Top plate	Capacity	Speed range	Dimensions (WxHxD)	Weight
F-33D	W185xD175 mm	8 Liter	100 to 1200 rpm	130x125x186 mm	1.2 kg
F-33SD	W185xD175 mm	20 Liter	100 to 1400 rpm	186x125x197 mm	3.2 kg
F-43D	W305xD285 mm	30 Liter	100 to 1400 rpm	305x125x305 mm	4.2 kg

Multi-Magnetic Stirrer, Separate Speed Controller For Each Channel

The Multi-magnetic Stirrer provides 4 or 6 stirring places. Separate stirrer control knobs & pilot lamps are provided, so that each stirrer can be independently controlled. 220V/50Hz. (On request 115 V/60Hz).

- Multichannel series remains cold even after several days of continuous operation
- Chemical resistant top plate
- Support devices at the rear of the base
- Independent controlled stirring positions
- Powerful magnets for strong magnetic coupling.

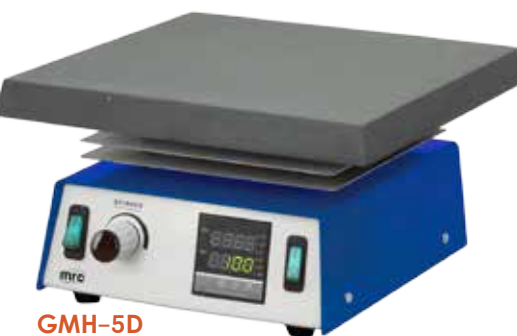
**F-13/6****F-13/3x2****F-13/2x2****F-13/4**

Model		F-13/4	F-13/6	F-13/3x2	F-13/2x2
Speed range		0~1300 rpm			
Distance between stirring point Maximum diameter of beaker		133 mm		150 mm	
Capacity		One point maximum – 8L			
		2–6 Liter each			
Material		Plate: Aluminium			
Weight		5kg	7.5kg		5kg
Dimensions (mm)		W600xD146xH80	W800xD146XH120	W450xD300XH120	W300xD300XH80
VA		80VA	120VA		80VA
Power		AC110/220/230V, 50/60Hz			
Unit	F-13/4 / F-13/2x2	4 Point magnetic stirrer			
	F-13/6 / F-13/3x2	6 point magnetic stirrer			

MH-Series Hotplate Magnetic Stirrers



MH-4D
175x175mm
Hotplate Stirrer



GMH-5D
250x250mm
Hotplate Stirrer

MH-6
175x175mm
Hotplate Stirrer

Application:

- Warming/mixing applications – gels, pastes, & adhesives.
- Standard reagent mixing and heating.
- Preparing culture media.
- Evaporation and distillation procedures.
- Titration requiring heating & stirring of solution.
- General microbiological applications.
- Gentle heating.
- Micro scale chemistry.
- General lab heating & stirring.
- Sample drying.
- Media preparation.

Options:

- RS232 Communication
- RS485 Communication
- Separate Control box.
- Programmer
- Up to 400°C
- External temp. sensor 200mm length, 3.2mm diameter
- Separate control box.



Features:

- Temperature range :above ambient to 300°C (optional 400°C).
- Chemical resistant top plate, easy to clean.
- Excellent heat conduction distributes the heat evenly and uniformity over the entire heating surface.
- Pilot lamp indicates when heat is on.
- Special radiation shields keep apparatus relatively cool during continuous operation.
- Designed for continuous use, to handle fluids of varying viscosities in up to 30Liter capacity.
- Available in 3 sizes to accommodate most laboratory applications requiring mixing and temperature control.
- Gentle or vigorous stirring.

Digital:

- Temperature can be displayed in °C or °F.
- Digital set-point and read-out of actual temperature.
- PID microprocessor controller provides precise temperature regulation all over the temp. range, include the low temp close to the ambient.
- Temperature may be controlled either at the plate surface by internal sensor, or at the sample by a Thermocouple Immersion probe.
- Safety: in the event of broken sensor, power to the heater is shut-down.

Analog:

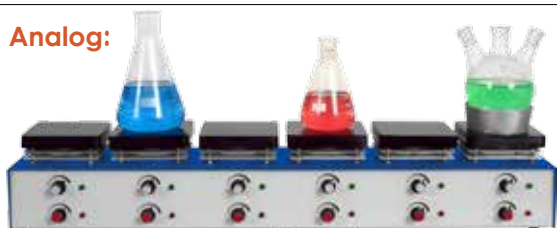
- Sensitive "stepless" temperature control is maintained by means of a hydraulic thermostat with minimum overshoot & undershoot Making possible the processing of delicate materials at low critical temperatures.

- **German AC motor robust & maintenance free design.**
- **365 days a year, 24 hours a day, 7 days a week.**

Specifications:

Model	Temp. range	Speed range	Capacity max.	Top plate	Dimensions	Watt	Weight
MH-1	40–300°C (optional 350°C)	100–1200rpm	8 Liter	115x115mm	W140xH110xD220mm	450W	1.9kg
MH-6	40–300°C (optional 350°C)	100–1200rpm	10 Liter	175x175mm	W200xH150xD260mm	750W	3kg
MH-5	40–300°C (optional 350°C)	100–1400rpm	25 Liter	175x175mm	W200xH150xD260mm	750W	3.4kg
GMH-5	40–300°C (optional 350°C)	100–1400rpm	30 Liter	250x250mm	W250xH150xD260mm	1500W	4.4kg
MH-4D	40–300°C (optional 400°C)	100–1200rpm	10 Liter	175x175mm	W200xH150xD260mm	750W	3kg
MH-5D	40–300°C (optional 400°C)	100–1400rpm	20 Liter	175x175mm	W250xH150xD260mm	750W	3.1kg
GMH-5D	40–300°C (optional 400°C)	100–1400rpm	30 Liter	250x250mm	W500xH150xD250mm	1500W	3.5kg

Analog:



MH-1/6, 6 position hotplate stirrer

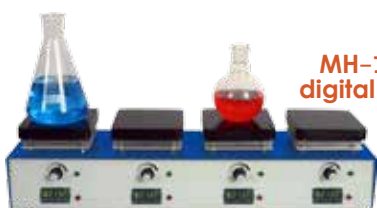


MH-1/4, 4 position hotplate stirrer

Digital:



MH-1/6D 6 position digital hotplate stirrer



MH-1/4D 4 position digital hotplate stirrer

Model: MH-1/6, 6 Positions**Dimensions:** Overall W81xH14.5xD22cm
(Includes support rod clamp)**Power:** 230V (or 115V), 50/60Hz, 2400W-6x400W**Net weight:** 12Kg.**Model: MH-1/4, 4 Positions****Dimensions:** Overall W60.5xH14.5xD22cm**Power:** 1600 watt-4x400 watt.**Weight:** 8Kg.**Model: MH-1/6D** 6 positions, 2400watt, Digital**Model MH-1/4D** 4 positions, 1600watt, Digital.**Model: MH-1/2x2, 4 Positions****Dimensions:** Top plate 11.5x11.5cm

Overall W30xH14.5xD31cm

(D includes support rod clamp)

Placed in two rows 2+2

Power: 230V (or 115V), 50/60Hz, 1600W-4x400W**Net weight:** 8Kg.**Model: MH-1/3x2****Dimensions:** Top plate 11.5x11.5cm,

Overall W45xH14.5xD31cm

Power: 2400 watt-6x400 watt.**Weight:** 12Kg.For Continuous
WorkMH-1/2x2,
4 position hotplate stirrer

300°C

MH-1/3x2,
6 position hotplate stirrer

★ ★ ★
German AC Motor
Robust & Maintenance
Free Design
★ ★ ★

Multi-Position Hotplate Stirrers, 2,3,4 Or 6 Places

- Aluminium Top Plate 115x115mm
- Independent Heating & Stirring Control
- up to 300°C (optional 350°C)/1600 rpm
- Excellent for multi-use and a wide various sample testing.
- Aluminium tops are chemical resistant & heat up quickly and uniformly. Great for low temperature applications.
- Units are built from durable cast aluminium cases & painted with chemically resistant paint.
- Individually controlled stirring and heating positions.
- Each position can be used to stir only, heat only or heat and stir at the same time.
- Ideal for a narrow bench-top or for applications needing support rack system.
- Stirrers are equipped with strong magnets and high torque motors. Up to 8 Liter of water for each position.

MHK-1 & MHK-6, Analog Models



500°C

German AC Motor
Robust & Maintenance
Free Design

Features:

- High impact strength, Acid and alkali resistance
- Heats rapidly up to 500°C in 8 minutes
- Stepless heat control
- Ceramic top remains perfectly flat to ensure maximum heat transfer.
- Reflective white top makes sample viewing easy.
- Not recommended for use with metal vessels.

Applications:

- Models are excellent for microscale chemistry
- General lab heating & stirring
- Sample drying
- Media preparation
- General microbiological applications.



HPK-4D & MHK-4D, Digital Models Measures Temp. in Sample



Features:

- Microprocessor closed-loop control
- Digital display of all parameters for easy operation. Temperature can be displayed in °C or °F
- PID microprocessor controller provides precise temperature regulation all over the temp. range, include the low temp close to the ambient.
- Temperature may be controlled either at the plate surface by internal sensor, or at the sample by a Thermocouple Immersion probe.

Description:

- Solid state feedback control monitors & adapts to sudden changes in ambient or sample temperature, preventing boil-overs, ruined samples, and lost time.
- Digital display for quick and easy observation.
- Previous set point is stored in memory & will appear on the display when the unit is switched on.

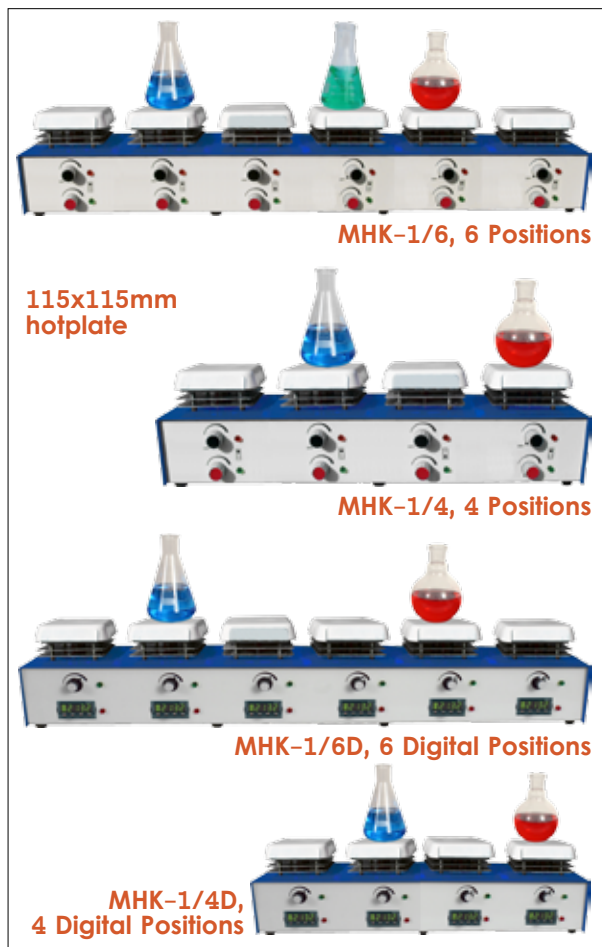
Options:

- RS232 or RS485 Communication
- Programmer
- Separate Control box.

Back Panel

support device at the rear of the base to hold standard rod.

Model	Temp. range	Top-plate	Temp. control	Magnetic stirrer
HPK-4	up to 500°C	175x175mm	Analog	No
HPK-4D	up to 500°C	175x175mm	Digital	No
MHK-6	up to 500°C	175x175mm	Analog	100~1200rpm
MHK-4D	up to 500°C	175x175mm	Digital	100~1200rpm
HPK-1	up to 500°C	115x115mm	Analog	No
HPK-1D	up to 500°C	115x115mm	Digital	No
MHK-1	up to 500°C	115x115mm	Analog	100~1200rpm



★ ★ ★
German AC Motor
Robust & Maintenance
Free Design
★ ★ ★

Model: MHK-1/6, 6 Positions

Dimensions: Overall W81xH14.5xD22cm
(Includes support rod clamp)
Power: 230V (or 115V), 50/60Hz, 2400Watt-6x400W
Net weight: 12Kg

Model: MHK-1/4, 4 Positions

Dimensions: 60.5x14.5x22cm
Power: 1600 watt-4x400 watt
Net weight: 8 kg

Model: MHK-1/6D 6 digital positions, power 2400watt
Model: MHK-1/4D 4 digital positions, power 1600watt

Model: MHK-1/2x3

Dimensions: Overall W45xH14.5xD31cm
(Includes support rod clamp)
Placed in two rows 3+3
Power: 230V (or 115V), 50/60Hz, 2400W-6x400W
Net weight: 12Kg

Model: MHK-1/2x2

Dimensions: 30x14.5x31cm
Power: 1600 watt-4x400 watt
Weight: 8 kg

Model: MHK-4/3 3 positions, 175x175mm plate,
3x1100watt=3300watt



MHK-1/2x2
4 Positions

115x115mm
hotplate



MHK-1/2x3
6 Positions



MHK-4/3
3 Positions

For Continuous
Work



Ceramic Hotplate Stirrers Multi-Position, 2,3,4 Or 6 Places, 115x115mm or 175x175mm

- Heat to 500°C on plate surface in minutes
- Stir from up to 1600 rpm on each stirring position with individual controls.
- Plate size for all units is 115x115 or 175x175mm.
- Solid ceramic heater surface for excellent chemical resistance.
- Multi position hotplate stirrer with 2,3,4,6 positions.
- Individually controlled stirring and heating positions.
- Each position can be used to stir only, heat only or heat and stir at the same time.
- Ideal for a narrow bench-top or for applications needing support rack system.
- Stirrers are equipped with strong magnets & high torque motors, up to 8 Liter of water.



MHK-4/3D, Digital temp. Controller, 175x175mm

500°C



HP-6
175x175mm
hotplate

HP Series Aluminium Top Hotplates

Uniform Heating at a Reasonable Price!

This modern range of aluminium hotplates provides superior temperature uniformity and stability is available in 7 sizes.

GHP-4
250x250mm
hotplate



HP-1
115x115mm
hotplate

Compact & lightweight hotplate, great to use in limited space. Making possible for processing of delicate materials at low critical temperatures.



E-1
Iron hotplate,
up to 450°C, dia. 80mm



HP 1-5
115x588mm
hotplate

Application:

- Distillations, extractions & digestions
- Heat aqueous reagents
- Semiconductor baking
- Acid/Base digestions – trace metal analysis. etc.
- Sample drying
- General reagent heating
- Heating TLC plates
- Evaporations
- Warning/curing applications – pastes, adhesives, & solder
- Ideal for general lab heating
- Liquid evaporations

Features:

- Chemical resistant top plate, easy to clean.
- Excellent heat conduction distributes the heat evenly and uniformity over the entire heating surface.
- Sensitive "stepless" temperature control is maintained by means of a hydraulic thermostat with minimum overshoot and undershoot Making possible the processing of delicate materials at low critical temperatures.
- Pilot lamp indicates when heat is on.
- Special radiation shields keep apparatus relatively cool during continuous operation.
- Supplied with a 3-wire line cord and sturdy screw type support device at the rear of the base to hold standard rod.

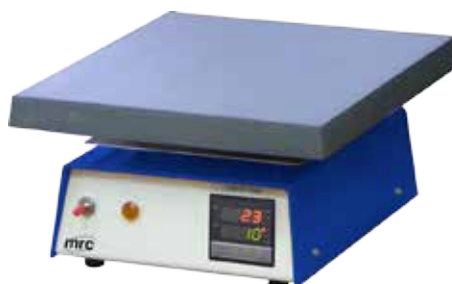
Model	Temperature range	Top plate	Dimensions	Watt	Weight
HP-1	40–300°C (optional 350°C)	115x115mm	W140xH110xD220mm	450W	1.2kg
HP-6	40–300°C (optional 350°C)	175x175mm	W200xH150xD260mm	750W	2.3kg
GHP-4	40–300°C (optional 350°C)	250x250mm	W250xH150xD260mm	1500W	3.3kg
E-1	up to 450°C	Diameter 80mm	W120xH120xD180mm	450W	1.1kg
HP 1-5	40–300°C (optional 350°C)	115x588mm	W600xH140xD120mm	2000W	5kg

HP-D Series Digital & Programmable Hotplates, Aluminium Top

Special Request Wellcome



HP-4D
175x175mm Hotplate



GHP-4D
250x250mm Hotplate



HP-1D
115x115mm Hotplate

Application:

- Distillations, extractions and digestions
- Heat aqueous reagents
- Semiconductor baking
- Acid/Base digestions - trace metal analysis. etc.
- Sample drying
- General reagent heating
- Heating TLC plates
- Evaporations
- Warning/curing applications-pastes, adhesives, and solder
- Viscosity studies
- Reaction optimization
- Solubility studies
- Safety thermostat.



GHP-4X2D
500x250mm Hotplate
Large surface for large loads

Options:

- RS232 Communication
- RS485 Communication
- Separate Control box.
- Programmer
- Up to 400°C

Features:

- Temperature can be displayed in °C or °F.
- Digital timer & ramp to temperature function (HP-1D only)
- Digital set-point and read-out of actual temperature.
- PID microprocessor controller provides precise temperature regulation all over the temp. range, include the low temp close to the ambient.
- Temperature may be controlled either at the plate surface by internal sensor, or at the sample by a Thermocouple Immersion probe.
- Safety: in the event of broken sensor, power to the heater is shut-down.
- Temperature range: above ambient to 300°C (optional 400°C).
- Chemical resistant top plate, easy to clean.
- Excellent heat conduction distributes the heat evenly & uniformly over the entire heating surface.
- Pilot lamp indicates when heat is on.
- Special radiation shields keep apparatus relatively cool during continuous operation.
- Support device at the rear of the base.
- Option: External temp. sensor 200mm length, 3.2mm diameter.



HP-400
400x400mm
Hotplate

Model	Temp. range	Top plate	Temp. stability	Dimensions	Watt	Weight
HP-1D	40-300°C (optional 400°C)	115x115mm	±1°	W140xH110xD220mm	450W	1.3kg
HP-4D	40-300°C (optional 400°C)	175x175mm	±1°	W200xH150xD260mm	750W	2.4kg
GHP-4D	40-300°C (optional 400°C)	250x250mm	±1°	W250xH150xD260mm	1500W	3.4kg
HP-400	Up to 370°C (optional 400°C)	400x400mm	±1°	W400xH150xD400mm	3000W	12kg
HP-600	Up to 370°C (optional 400°C)	400x600mm	±1°	W400xH150xD600mm	4500W	18kg
GHP-4X2D	40-300°C (optional 400°C)	500x250mm	±1°	W500xH150xD250mm	3000W	6.6kg
HP-1X5D	40-300°C (optional 400°C)	588x115mm	±1°	W600xH150xD145mm	2000W	5kg

HOTPLATES

Sand Baths

SHP-4x2D/HP-400S, Digital Sand Baths

- Robust construction
- Eloxidised aluminium heating surface
- Good uniformity over the entire heating surface, including the corners and edges
- Temperature can be displayed in °C or °F.
- Top plate size: 400x400mm
- Temp. stability: $\pm 1^\circ$
- PID temperature controller
- Digital set-point & read-out of actual temperature
- 220Volt/50Hz 3400watt.

Model	SHP-4X2D	HP-400S	HP-600S
Working range	up to 400°C		
Stability	$\pm 1^\circ\text{C}$		
Setting & Readout	Digital		
Heater	3000W	3400W	4500W
Top-Plate(mm)	250x500mm	400x400mm	400x600mm
Dimensions WxHxD (mm)	500x220x250	400x270x400	400x270x600
Power source	220V 50Hz		



SHP-4x2D



HP-400S

HOTPLATES

Slide Heaters

HPS-1/6, Slide Heater

Our modern aluminium slide heater is designed for cytology, histology, pathology & other biological applications in industrial & clinical lab environments. Easy slide pickup, Excellent temp. accuracy, Uniformity, Stability.

Application:

- Slide warming
- Slide drying
- In situ hybridization
- Slide incubation
- Histology
- Heictology
- Imuno histochemistry
- Fish.

Optional:

Up to 42 slides



HPS-1
Up to 10 slides

HPS-6
Up to 21 slides

Options:

Programmable RAMP/SOAK

2 programs of 8 Segments each.

Model	HPS-1	HPS-6
Capacity	Up to 10 slides	Up to 21 slides
Temperature Adjust	Digital front panel	
Temperature Range	RT +5 – 99.9°C (°C/ °F selection)	
Digital Microprocessor	PID controller	
Temperature Stability	$\pm 0.1^\circ\text{C}$	
Accuracy	$\pm 0.2^\circ\text{C}$	
Power Consumption	400 Watt	900 Watt
Electrical Requirements	230V, 50/60Hz	
Dimensions	WxHxDmm	
Weight	1.3Kg	2.4Kg

DBD-001N/DBD-002N, Dry Bath Incubators

Useful for variety of applications in molecular biology and histology as well as clinical, environmental & industrial settings, including restriction digests, denaturing DNA, BUN, melting agar, coagulation studies, hybridization and Hot Start thermo-cycled reaction. The dry baths feature a broad temperature range, up to 150°C, and excellent uniformity. A microprocessor regulates the high wattage heater to provide precise, accurate control and rapid heating. The Aluminium block chamber ensures an even transfer of heat from the heating element to the block.

Temperature is easily set using arrow keys while the value is shown on the large display. The user calibration function allows for easy calibration to in-house standards when required. Interchangeable blocks are available to accommodate a wide variety of tubes, plates and slides. Solid blocks are also available for custom machining.

Each dry bath is supplied with a block lifter that enables the user to exchange blocks easily, even when the block is hot.

**DBD-001N**

Model	Type	Description
301-01081-01	BK01	49 x Ø6mm
301-01081-02	BK02	49 x Ø7mm
301-01081-03	BK03	25 x Ø10mm
301-01081-04	BK04	25 x Ø12mm
301-01081-05	BK05	25 x Ø13mm
301-01081-06	BK06	12 x Ø15mm
301-01081-07	BK07	16 x Ø15mm
301-01081-08	BK08	12 x Ø16mm
301-01081-09	BK09	16 x Ø16mm
301-01081-10	BK10	12 x Ø19mm
301-01081-11	BK11	16 x Ø19mm
301-01081-12	BK12	9 x Ø20mm
301-01081-13	BK13	9 x Ø26mm
301-01081-14	BK14	4 x Ø28mm
301-01081-15	BK15	4 x Ø40mm
301-01081-16	BK16	49 x 0.5ml tubes
301-01081-17	BK17	25 x 1.5ml tubes
301-01081-18	BK18	25 x 2.0ml tubes

Features:

- Large block 96x96x49mm
- Precise microprocessor control.
- Broad temp. range, to 150°C (Optional: up to 250°C).
- Large digital with dual display.
- User friendly calibration.
- Rapid temperature increasing rate.
- Optional: RS-232 communication.

**Special Blocks
On Request****Special blocks
on request****DBD-002N**

Model	DBD-001N	DBD-002N
Display	LED Display	
Heating power	400W	800W
Unit dimension (WxLxH)	195x305x112 mm	290x305x112 mm
Controller	PID Digital microprocessor controller	
Heating chamber	Molded aluminum alloy chamber	
Temp. control range	5°C Above ambient to 150°C	
Temperature increment	0.1°C	
Temp. uniformity in working area at 37°C	±0.2°C	
Temp. accuracy in working area at 37°C	±0.2°C	
Temperature calibration	Yes	
Operating temperature	Ambient to 40°C	
Block material	Aluminum alloy	
Block type	Standard & customized type are available	
Data log	RS232	
Weight	approx. 2.85kg	approx. 3.95kg
Rated voltage	220V, option: 110V	

HEATING MANTLES Spillproof Heating Mantles

Specialty Spillproof Heating Mantles



K-2

K-1

Heating Mantle with Magnetic Stirrer



KM-2

KM-1

- Units are designed with a built-in stainless steel liner that gives electrical & mechanical protection against spillage & enables easy cleaning
- Built-in electronic controller regulates heating element from ambient to 750°C, 2 ranges: low & high
- Durable housing is chemically resistant
- Accept a large range of flasks
- For maximum operator protection, models are grounded should spillage or flask breakage occur
- All models include support rod holder at the back.

Three Flask Size In One Mantle

Model K-1

- For flasks up to 1000ml.
- Stepless heat control.
- Operating temp. up to 750°C.

Model K-2

- For flasks up to 2000ml.



KM-1D
Digital Temp. control

Features:

- Three in one design accommodates 250, 500 or 1000ml round bottom flasks (K-1, KM-1).
- Three in one design accommodates 500, 1000 or 2000ml round bottom flasks (K-2, KM-2).
- Different vessel sizes, spill proof heater.
- Includes rear bracket for support rod.
- Stepless heat control up to 750°C (650°C with stirrer)
- Variable speed control up to 1800rpm (KM-1, KM-2).
- Heater on light.
- Element temperature range of ambient to 750°C.

Heating Mantle With Magnetic Stirrers

Model KM-1/KM-2

- Stepless heat control up to 650°C
- Variable speed control up to 1800 RPM

Specifications:

Analog Model	Digital Model	Temp. range	Capacity	Stirring	Dimensions	Weight	Watt
K-1	K-1D	up to 750°C	250-1000ml	-	W12xD17xD18cm	1.2kg	550
K-2	K-2D	up to 750°C	500-2000ml	-	W21xD20xD24cm	1.4kg	750
KM-1	KM-1D	up to 650°C	250-1000ml	up to 1600rpm	W16xD17xD23cm	2.3kg	550
KM-2	KM-2D	up to 650°C	500-2000ml	up to 1600rpm	W21xD20xD24cm	2.5kg	750

E-Series, Multi Position Round Top Extraction Heater



E-6

- Optional: Aluminium top mould for round bottom flasks up to 250ml/500ml for extraction apparatus soxhlet.
- Digital temperature control.

The Multi Heating Apparatus offers such versatility that is suitable for many laboratory purposes: extractions, distillations, digestions, evaporation etc. The 6 separate heat controls allow the heaters to be used for several different projects or multiple runs of the same project. The Multi Heating Apparatus in conjunction with interchangeable top mould for round bottom flasks - solves the most varied heating problems.

Model E-6

- Six individual heat controls with pilot lights
- Built-in temperature regulator
- For 6 places, 220 Volt (on request 115 V), 2700 Watts (6x450 W)
- Approximate temp.: 40 - 450°C
- Hotplate top 85 mm. dia.
- Dimensions (WxD): 80x17x20 cm
- Accessories: Optional: 6 interchangeable aluminum top moulds for round bottom flasks up to 100 ml or 250 to 500ml (Kjeldahl flasks 500-800 ml)
- 4 support rods 800x12 mm. with 4 clamps.

Model E-4 as described above, but for 4 places 220Volts 1800Watts (4x450W). DIM. (WxD): 60x17x20 cm.

K-Series, Multi Unit Macro Kjeldahl Apparatus



K-6

Model K-6, 6 Positions

Up to 6 flasks • 220 Volt (or 110V), 6x550 Watt •
Dimensions: (WxHxD) 80x19x20 cm (D includes rear
bracket for support rod) • Nett weight: 6.8 Kgs.

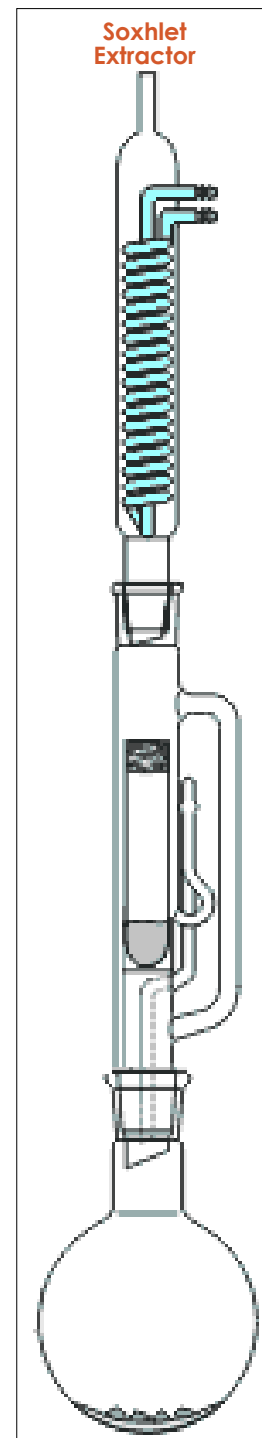


K-4

Model: K-4, 4 Positions

Up to 4 flasks • 220 Volt (or 110 V), 4 x 550 Watt •
Dimensions: (WxHxD) 60x19x20cm (D includes rear
bracket for support rod) • Net weight: 4.8 Kgs.

- For flasks 250 up to 1000 ml.
- Spillproof–Stainless Steel Heater.
- Stepless– heat control.
- Operating temp.: up to 750°C.
- Includes 4 support rods and 4 clamps.
- Durable housing is chemically resistant.
- Built-in electronic controller regulates element temp. to 750°C, 2 ranges: low & high.
- Robust aluminium construction permits operation of the units as required by extraction and distillation processes.
- "Heat on" light for each recess indicates when power is being supplied to the heater.
- For maximum operator protection, models are grounded should spillage or flask breakage occur.
- Units are designed with a built-in stainless steel liner that gives electrical and mechanical protection against spillage & enables easy cleaning.
- Lower profile for space-saving convenience.
- Ideal for repetitive extracting (kjeldahl, soxhlet, and other extraction procedure), refluxing & distilling laboratory applications.
- Analog controller built-in system.
- Rods & clamps are offered as standard.
- Ideal for all brands round flasks.
- Highly-processed aluminium case offers robust standing, easy handling.



Soxhlet Extractors

For the extraction from solids with solvents. The solvent is recirculated continuously and distilled from the extracted sample before contacting the solid again. The extract is concentrated in the distillation flask.

The method allows an effective separation with relatively small amounts of extracting solvents.

The complete apparatus consists of

- round bottom flask
- compact and robust designed extractor with NS 29/32 flask connection.

Cat.No.	Extractor ml	Condenser NS	Flask ml	Condenser
5.3600.25	30	29/32	100	dimroth
5.3600.31	70	34/35	100	dimroth
5.3600.37	100	45/40	250	dimroth
5.3600.43	150	45/40	250	dimroth
5.3600.46	200	45/40	250	dimroth
5.3600.49	250	45/40	500	dimroth
5.3600.52	300	60/46	500	dimroth
5.3600.58	500	60/46	1000	dimroth
5.3600.70	1000	71/51	2000	dimroth

HEATING MANTLES Digital Metal Case Mantles



K-5, Metal Case Mantles, Digital Control, Up to 450°C

- Digital set-point and read-out of actual temperature.
- PID microprocessor controller provides precise temperature regulation all over the temp. range, include the low temp close to the ambient
- External temp. sensor 200mm length, 3.2mm diameter
- Support device at the rear of the base to hold standard rod
- External sensor input.

Options:

- Programmer
- Separate Control box: You can have your controller separated for wide variety of applications for example for glove-box.
- With magnetic Stirrer.
- Analog economy control.

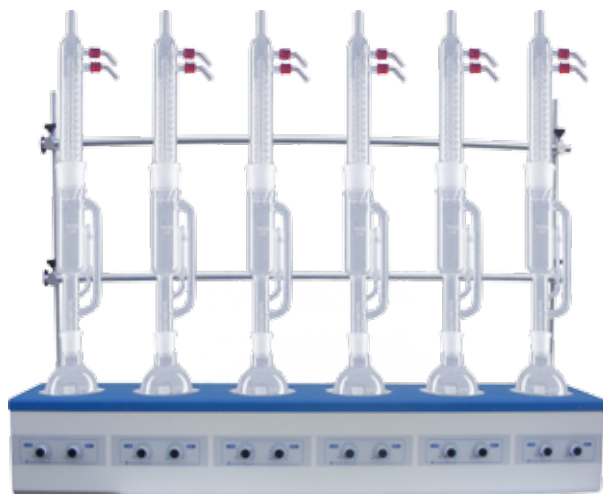
Aluminum housing is chemical resistant, tough, lightweight & easy to clean • Max. temp. 450°C • Full pid temperature controller. Ensure high temp stability. Process accuracy. Dual display of set value & process • 7 series mantles sizes available from 50 to 3liter • Unique air flow through ventilation slots beneath & around the case keeps the exterior safe to touch • Flexible coiled heating element provides good heat transfer while absorbing shock minimizing risk of flask breakage • Heating element & insulation form an easily replaceable heating cartridge • A "Heater On" light indicates when power is being supplied to the heaters • Aluminium housed case, rigid housing to support the weight of the vessel • Provide uniform heating of vessel without the danger of open frame • Covering only the bottom half of the vessels & provide full view of the contents of the vessel • Fabric mantles for effective heating and protection of glass vessels from thermal shock.



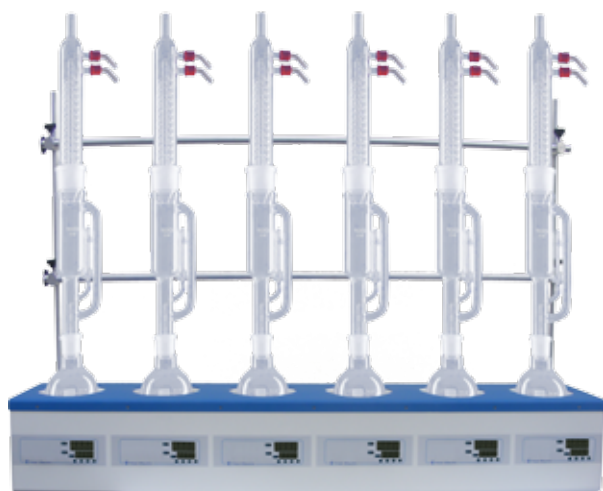
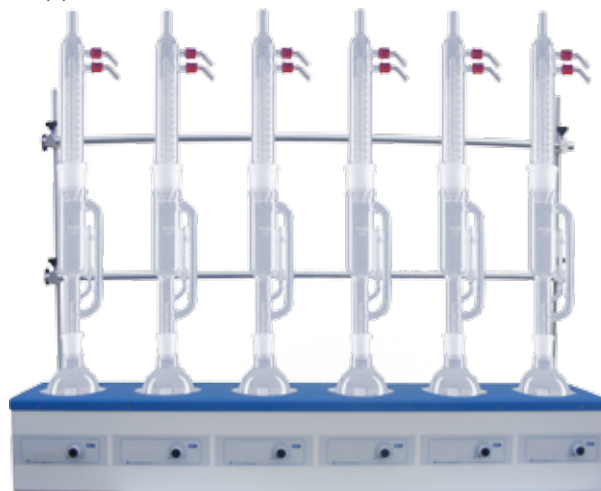
Model	Capacity	Power
K-5-50D	50ml	60W
K-5-100D	100ml	80W
K-5-250D	250ml	200W
K-5-500D	500ml	300W
K-5-1000D	1000ml	400W
K-5-2000D	2000ml	500W
K-5-3000D	3000ml	600W

K/KM-5 Series/K/KM-5D Series, Multi Analog/Digital Position Heating Mantles With 3/6 Heating Places

- Choice of three or six recesses
- Build-in electronic controller
- Choice of heater only or heater/stirrer combination
- Vented case ensures case remains "cool to the touch".

**KM-5-6-1000****With Magnetic Stirrer****Product Description:**

- Individual built-in solid state electronic controls enable easy regulation of each heater, while removing sparking associated with mechanical switching.
- Units include three 0.5" (12.7mm) diameter support rods.
- The robust construction permits continuous operation of the units as required by routine extraction tests.
- MUS models incorporate a stirring module that allows the solution to be stirred and heated at the same time.
- MUS stirrer models include stirring control for each heater.
- Element temperature range to 450°C.
- Stirrer models include a stirring speed range of 50-1000 rpm.
- The coiled heating element is suspended within a thermal insulating cartridge to provide maximum heat transfer and support while removing sparking associated with mechanical switching.
- Heater cartridge can readily be replaced when necessary.
- For additional operator protection a safety earth (ground) screen encloses the heaters.
- Unique air flow ensures unit is safe to the touch.
- Pilot lights indicate when power is on, supplied to heaters and supplied to stirrers.

**K-5-6-1000D****Digital****K-5-6-1000****Analog**

Analog	Digital	Capacity	Units	Total watts
K-5-3-250	K-5-3-250D	250 ml	3	600W
K-5-3-500	K-5-3-500D	500 ml	3	900W
K-5-3-1000	K-5-3-1000D	1000 ml	3	1200W
K-5-6-250	K-5-6-250D	250 ml	6	1200W
K-5-6-500	K-5-6-500D	500 ml	6	1800W
K-5-6-1000	K-5-6-1000D	1000 ml	6	2400W

Models With Stirrers

Analog	Digital	Capacity	Units	Speed Range	Total watts
KM-5-3-250	KM-5-3-250D	250 ml	3	0~1200 rpm	600W
KM-5-3-500	KM-5-3-500D	500 ml	3	0~1200 rpm	900W
KM-5-3-1000	KM-5-3-1000D	1000 ml	3	0~1200 rpm	1200W
KM-5-6-250	KM-5-6-250D	250 ml	6	0~1200 rpm	1200W
KM-5-6-500	KM-5-6-500D	500 ml	6	0~1200 rpm	1800W
KM-5-6-1000	KM-5-6-1000D	1000 ml	6	0~1200 rpm	2400W

DBR-001N/DBD-002N, Dry Bath Incubators

Chemical digestion of the samples is a prerequisite such as: tests, determination of COD, TOC, total phosphate, nitrogen etc.

The required temperature & reaction time are programmed using the membrane keypad on the front of the reactor. When digestion is complete, the reactor automatically switches off & sounds an alarm. DBR-001 COD reactor is designed to meet USEPA 410.4 method. It can be used to digest closed I micro reflux COD vial and other samples which diameter is 16mm.

Further, it is safer and easier than traditional open macro reflex method.

Unique COD program let DBR-001N/002N to be a truly automatic reactor.

When the reactor is powered on, just click the start/stop button, then it starts to heat to 150°C and keep for 2 hours then stop heating with an audio alarm. Samples are ready to be measured by colorimeter when they cool down.

DBR-001N/002N COD reactor is compatible with any COD detectors which use 16mm COD vials. In addition to COD program, DBR-001N/002N is a microprocessor controlled block heater, with temperature range from 60°C to 200°C and timer from 0 to 999 minutes or continuous operation.

For The Digestion Of:

- COD (150°C)
- TOC (120°C)
- Total chromium (100°C)
- Total nitrogen (100°C)
- Total phosphate (100°C)



DBR-001N



DBR-002N

Features:

- Safer & easier than traditional open reflex method.
- Save lab top space, power & water consumption.
- Reduce waste & maximize safety.
- Unique COD program makes it truly automatic.

Model	DBR-001N/002N COD REACTOR
Read out	4 Digital LED of set temperature, set time, process temperature, residual time display
Timer	1~999 minutes with audible alarm and automatic shut off or continuous operation
Accuracy	±2°C (at 150°C)
Temperature	60°C~200°C, adjustable
Block capacity	25 of 16mm Ø sample vials, Option block(with 8x20mm Ø and 6x25mm Ø vial holes) is available
Structure	Housing: aluminium steel with powder paint coating, Block: Anodized aluminum
Power	AC110 or AC220V, 50/60Hz, 220Watt
Dimensions	W18.9xH11.6xD31.5mm
Weight	Net 4.5kg Gross 6.1kg

Box-3216, Precise Digital Temperature Controller For Control Of Heating Tapes, Heating Mantles, Hotplates, Ovens , Water Baths, Immersion Heaters, incubators etc.



Front



Back

- Wide range of temperature controls to match most heating applications: mantles, hotplates, heating tapes, small ovens & other resistive heating loads up to 3500 Watt.
- Quick connections for load and temperature sensor.
- Digital dual display for set point and process temperature indication.
- Easy to operate.
- Non-volatile memory retains temp. settings during power Interruptions.
- Models are available for use with Type-K (other T/C optional).
- Supplied with Thermocouple Probe.
- Fuzzy modified PID control.
- Auto tune function.
- Soft start ramp and dwell timer.
- Bright dual color display.
- Fast sampling rate 5meas/sec.
- Power 110-250VAC 50/60Hz.
- High accuracy 18 Bit A/D converter.
- Max. temp. 1370°C dec point to 999.9.
- Size: W185xD190xH115mm.
- Weight: 1.4kg.

Available power sokets



Box-3216

Model	Function	Thermocouple	Temp. range	Power output
Box-3216	Control with ramp to set point & 100 hrs timer	K	-50~1200°C	3500 watt 230V/50Hz
		T	-20~400°C	
Box-2416P4	Programmer with 4 programs of 8 segment	K	-50~1200°C	3500 watt 230V/50Hz
		T	-20~400°C	

Heating Tapes

HEATING

Heating Tapes Width 1" up to 450°C



HT1-1 & HT1-2



HT11-2.5

- Extremely flexible.
- Exceptional durability.
- Rapid temp. response.
- Max. Exposure temp. 450°C
- Choice of power plugs
- Temp. or voltage controller required.
- Electrical cable length 80cm.
- Perfect for heating of curved parts of irregular shapes such as valve, pump, vacuum line, pipe, flange, elbow, etc.
- It must be used with a separate temperature voltage controller.
- Insulation type fiber glass.
- Technical Data:
 - Heating Element: Ni-chrome wire.
 - Heating Element Temperature: Up to 450°C
 - Power Supply: AC220 ~230V, 50/60Hz
- Products are not waterproof.

Model	Width (") x Length (m)	Wattage
HT 1-1	1"x1m	200 W
HT 1-1.5	1"x1.5m	250 W
HT 1-2	1"x2m	300 W
HT 1-2.5	1"x2.5m	350 W
HT 1-3	1"x3m	400 W
HT 1-4	1"x4m	460 W

Diamond Cleaner



ICE PRIME

Tube Heater, Up to 600°C



ICE PRIME-MINI

CP-13/17, Circulation Pumps



CP-13

Pumping Capacity up to 13 liter/minute.
Model CP-13:
Max. Immersion Depth 13 cm.
Model CP-17:
Max. Immersion depth 17 cm.

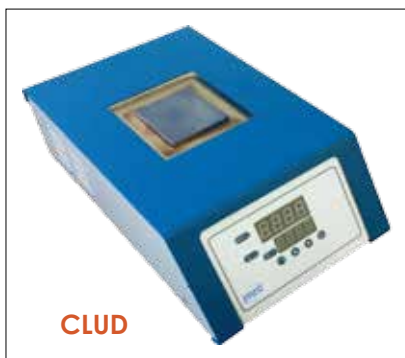
OEM Request Wellcome

-100°C to 200°C



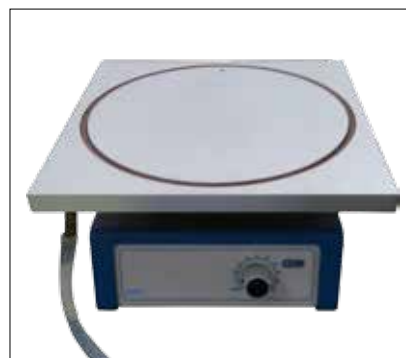
LN2-COOL-HOT-PLATE

600°C Titanium Hotplate



CLUD

Vacuum Hotplate



MIXER

High Speed Type Stirrer, 1000 ,750Wats



Operation Faceplate

RC-1000

RC-750/1000, High Speed Type Stirrer

Features:

- Stirring shaft is 08mm and its operational height is adjustable
- Overheated protection device and indicators
- With a digital tachometer
- With an analog ammeter.

Standard Accessories:

Shaft: Ø8x600mm

Propeller: No. 11 Ø50mm, Ø80mm.

Stand base: W400xD315xH54mm, 8kg.

Holder

Pole

Model	RC-750	RC-1000
Motor	750W	1000W
Speed (rpm)	0 ~ 5,000	0 ~ 6,000
Torque (kg-cm)	7	18
Net weight (kg)	22	25
Power	AC 110/220V, 50/60Hz	

RC-750





ARIMAD-3000S

- Standard gasket fits all crops with up to 6mm (0.25") petiole like cotton.
- Optional supply of gasket for citrus leaves, corn, sorghum etc. upon request.

Specifications:

- Accuracy: $\pm 1\%$ full scale.
- Size: W355 x D280 x H175mm.
- Weight: 7kg.
- Battery: 9V.
- Data hold.
- Memory record-Max./Min.
- RS-232 output for datalogger option.
- Applicable software windows version.

Pressure Meter:

- Certified under ISO-9001, CE, IEC-1010 regulations.
- Can cooperate with various sensors for different plant species (5,10,20,35,70bar).

Ordering Information:

Arimad-3000S - □
5,10,20,35,70

ARIMAD-3000/3000S, Plant Water Potential Measurement Device for Agricultural use

- Pressure chamber method demonstrating the plant's reaction to moisture excess or deficiency.
- Enables adjustments of irrigation schedule.

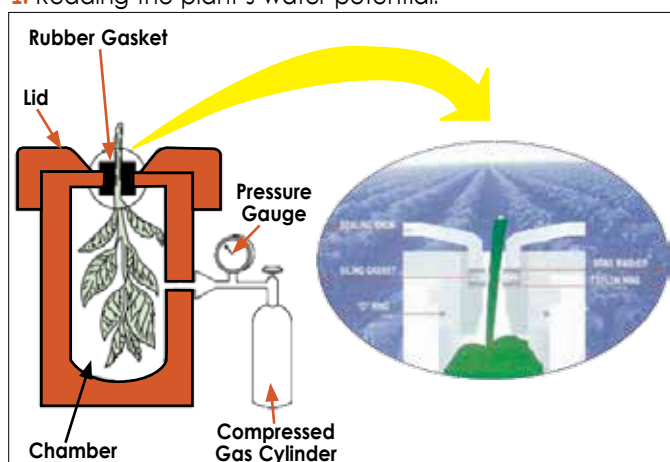
ARIMAD keeps you in touch with your crop's water status!

Provides Indication of:

- Prevailing soil moisture stress.
- Influence of environmental changes-heat load, humidity, wind, salinity etc.
- Plant moisture stress.
- Changes in growth, proteins & photosynthesis.

Simple & Short Procedure of 4 Steps:

1. Selecting a representative leaf.
2. Preparing the instrument.
3. Inserting pressured gas in the chamber.
4. Reading the plant's water potential.



Low Tension values (~3bar) - High water potential, sufficient water for plant growth.

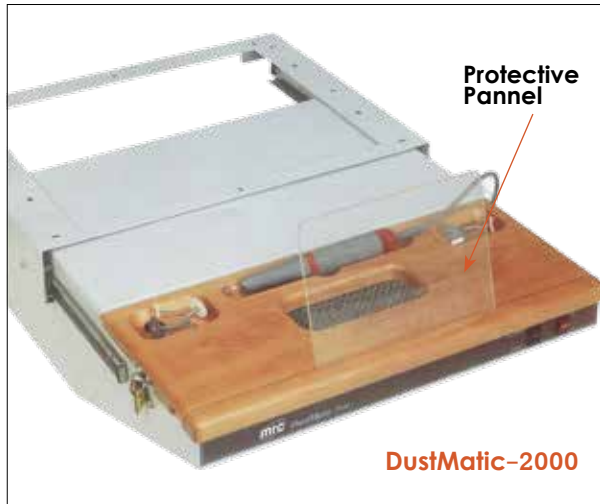
High Tension values (~20bar) - Low water potential, adjustments of water supply needed.

ARIMAD-3000

Measuring Range:

Sensor type	5 bar		10 bar		20 bar		35 bar		70 bar	
	Max. range	Resolution	Max. range	Resolution	Max. range	Resolution	Max. range	Resolution	Max. range	Resolution
bar	5	0.005	10	0.01	20	0.02	35	0.05	70	0.1
psi	72.5	0.1	145	0.2	290	0.2	508	1	1015	2
Kg/cm2	5.095	0.005	10.19	0.01	20.40	0.02	35.7	0.05	71.38	0.1
mm/Hg	3750	5	7500	10	15000	20	26252	50	52504.5	100
inch/Hg	147.6	0.1	295.2	0.2	590.5	0.5	1033	1	2067	2
meter/H2O	50.95	0.05	101.9	0.1	204.0	0.2	356.9	0.5	713.8	1
inch/HF2O	2006	2	4010	5	8020	10	14052	20	28103	50
Atmosphere	4.935	0.005	9.87	0.01	19.74	0.02	34.54	0.05	69.08	0.1

DustMatic-2000/2001, Dust Drawer



A dust-suction drawer of optimal quality and design, featuring innumerable advantages & improvements in almost all fields of operation, efficiency, user-friendliness, etc.

- Operation is fully automatic: on starting the micromotor, the drawer starts operating, on stopping the micromotor, suction switches off after 20 seconds have elapsed.
- Ergonomic design and construction with first quality materials.
- The working surface is made of beech-wood, giving it a modern look, and allowing for comfortable working.
- Silent, powerful, maintenance-free low pressure induction motor.
- Large-dimensioned, easy-to-change, filter bag (according to international Standards).
- Small-dimensioned drawer, capable of fitting most lab workbenches, with ample leg-room.
- Low operational costs. Easy to install, requires no special tools or training.

Applications:

- Dental
- Ear Phones manufacturer
- Artificial Eye manufacturer
- Archaeology Laboratory
- Beauty manicure
- Jewelry manufacturer.

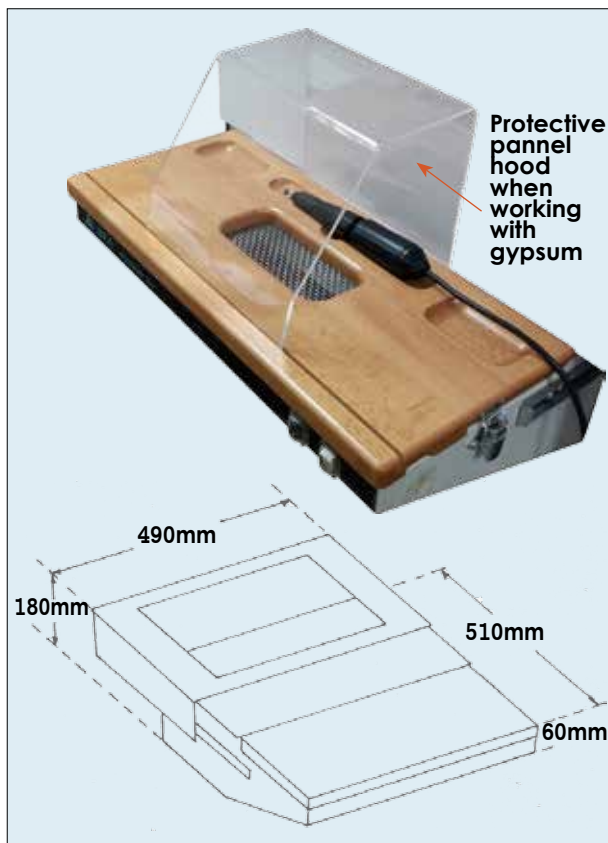
Include:

Suction drawer complete, with micro-respirable dust filter bag & protective panel.



- Effective suction with large suction bag.
- Silent, maintenance free & applicable for continuous operation.
- Easy mountable under every table.

Model	Power	Air Volume	Size (mm)	Weight	Operation
2000	100W	350m³h	490x510x180	14kg	Auto/Manual
2001	100W	350m³h	490x510x180	13.5kg	Manual only



Goren Microscope

A portable, yet versatile and capable, microscope for extra-laboratory research to solve the demand of traveling scientists for rugged and capable instruments.

High versatility, multi-functionality, compact design, good ergonomics, and affordable production costs.



Applications:

- Geology
- Archeology
- Biology
- Education
- Forensic
- Earth Science
- Palaeontology
- Botany
- Medicine & Tropical Diseases
- Pathology
- Art studies
- Mineralogy.



Model	GOREN-POL	GOREN-BIO
Eyepiece	X10 WF 20	
Eyepiece grid	Crosshair standard configuration, Optinal Micrometer eyepiece	
Objectives – standard	4x, NA0.08,working distance[w.d.] 16 mm; 10x, NA0.25, w.d. 3.6 mm; 40x, NA0.60, w.d. 0.6 mm	4x, NA0.08,working distance[w.d.] 16 mm; 10x, NA0.25, w.d. 3.6 mm; 40x, NA0.60, w.d. 0.6 mm X100 oil
Optional objectives	X20, X60, X100 Oil	X60
Condenser	Original patented condenser	
Polarizer+Analyzer	Standard configuration	Optional
Optional Compensators	1/4λ, λ	
Mechanical Stage	Round rotating stage with slide clips	X-Y mechanical stage
Illumination	LED 3W	
Power supply	3 x AAA Batteries, Optional: USB power supply or 110v/240v mains	
Dimensions	WxDxH 140x170x300 mm	
Weight	~1.5 Kg	
Carrying Case	Optional	