

BATHS

SHAKERS

STIRRERS

HOTPLATES

INCUBATORS

HEATING
MANTLES



HOTPLATES

ALUMINIUM TOP HOTPLATES



**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**

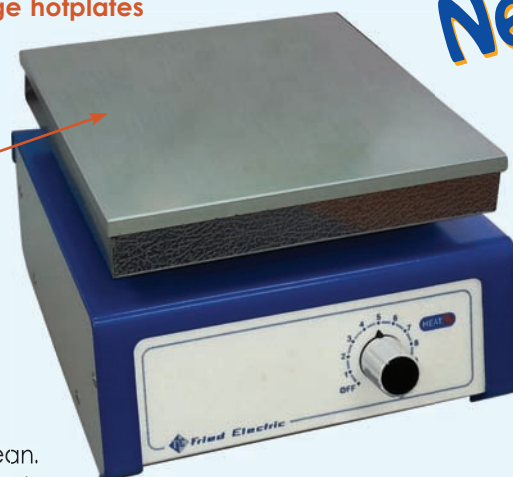
Compact & lightweight hotplate, great to use in limited space. Making possible for processing of delicate materials at low critical temperatures.



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

**HP-6-xxx
Large hotplates**

**400x400mm
400x600mm
600x600mm
Digital or Analog**



New

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

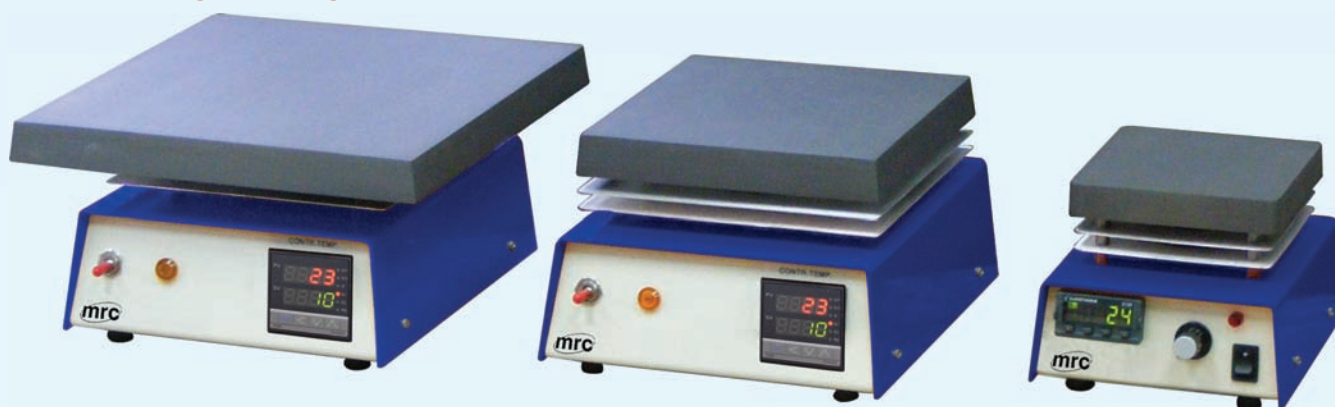
Features:

- Chemical resistant top plate, easy to clean.
- Excellent heat conduction distributes the heat evenly and uniformly 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

DIGITAL & PROGRAMMABLE HOTPLATES, ALUMINIUM TOP

HP-D Series Digital & Programmable Hotplates, Aluminium Top



GHP-4D
250x250mm Hotplate

HP-4D
175x175mm Hotplate

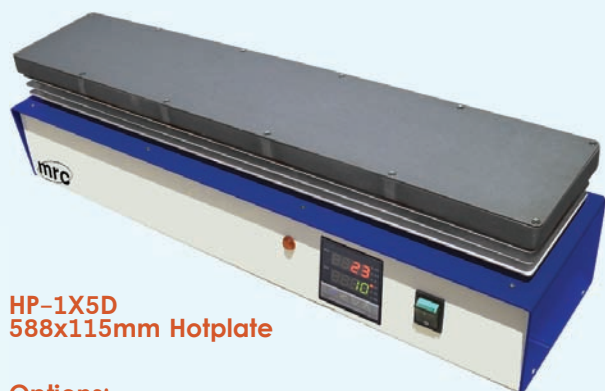
HP-1D
115x115mm Hotplate

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
- Warming/curing applications-pastes, adhesives, and solder
- Viscosity studies
- Reaction optimization
- Solubility studies
- Safety thermostat.

Features:

- Temperature can be displayed in °C or °F.
- Digital timer and ramp to temperature function.
- 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 & uniformity 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-1X5D
588x115mm Hotplate

Options:

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

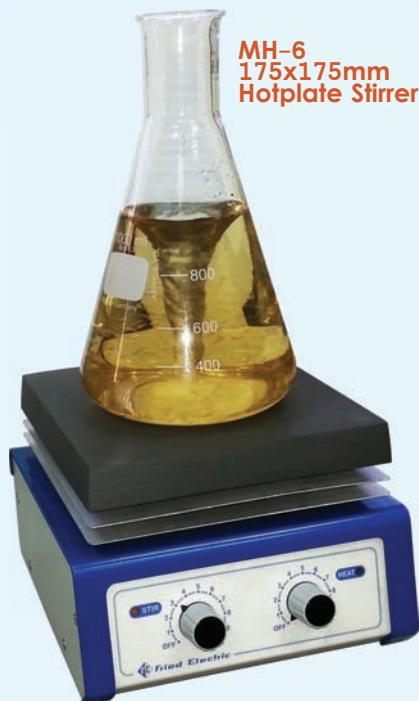


GHP-4X2D
500x250mm Hotplate
Large surface for large loads

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
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

MAGNETIC STIRRERS ALUMINIUM TOP HOTPLATES

MH-Series Hotplate Magnetic Stirrers



MH-6
175x175mm
Hotplate Stirrer



GMH-5
250x250mm
Hotplate Stirrer



MH-1

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

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

Features:

- Chemical resistant top plate, easy to clean.
- Excellent heat conduction distributes the heat evenly & uniformity over the entire heating surface.
- 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.
- 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.
- Designed for continuous use, to handle fluids of varying viscosities in up to 30Liter capacity
- Gentle or vigorous stirring

Applications:

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

MH-1 115x115mm Hotplate Stirrer
GMH-5 For large capacity up to 30Liter, stir viscous solution

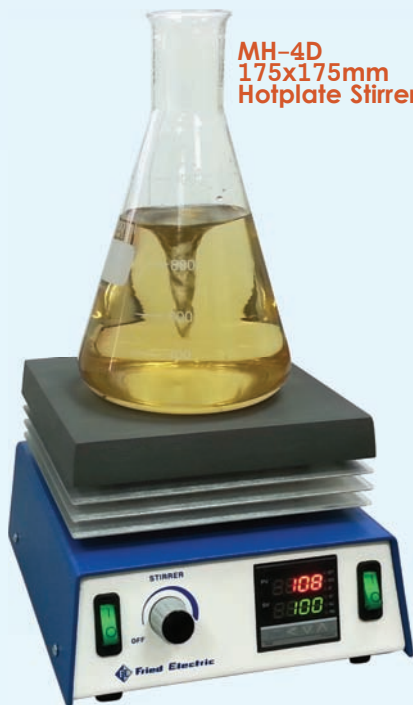


Specifications:

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

DIGITAL MAGNETIC STIRRERS ALUMINIUM TOP HOTPLATES

MH-D Series Digital Magnetic Stirrers



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

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



Features:

- Temperature can be displayed in °C or °F.
- Digital timer and ramp to temperature function.
- 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 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 models to accommodate most laboratory applications requiring mixing and temperature control.
- Gentle or vigorous stirring.

Specifications:

Model	Temp. range	Speed range	Capacity max.	Top plate	Dimensions	Watt	Weight
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

CERAMIC HOTPLATES / STIRRERS

MHK-1 & MHK-6, Analog Models



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



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 and stirring
- Sample drying
- Media preparation
- General microbiological applications.

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

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 Communication
- RS485 Communication
- 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

MULTI-POSITION HOTPLATE STIRRERS

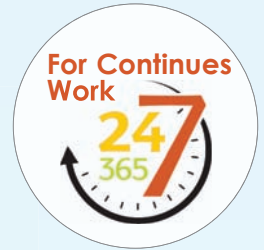


MH-1/6, 6 position hotplate stirrer

MH-1/4, 4 position hotplate stirrer

MH-1/3 3 position hotplate stirrer

MH-1/2
2 position
hotplate stirrer



MH-1/2x2,
4 position hotplate stirrer



MH-1/3x2,
6 position 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-1/3, 3 positions, 1200watt

Model MH-1/2, 2 positions, 800watt

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.



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.
- Multi position hotplate stirrer with 2,3,4,6 positions.
- Independent Heating and Stirring Control.
- Maximum Temperature of 300°C (optional 350°C).
- 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.

CERAMIC HOTPLATE STIRRERS MULTI-POSITION



MHK-1/6, 6 Positions

115x115mm hotplate

MHK-1/4, 4 Positions

MHK-1/3, 3 Positions

MHK-1/2
2 Positions

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 Free Design**
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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-1/3 3 positions, power 1200watt
Model: MHK-1/2 2 positions, power 800watt

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

Model: MHK-4/2 2 positions, 175x175mm plate,
 2x1100watt=2200watt.



MHK-1/2x2
4 Positions

115x115mm hotplate

MHK-1/2x3
6 Positions

175x175mm hotplate

MHK-4/2
2 Positions

175x175mm hotplate

MHK-4/3
3 Positions

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+Timer, 175x175mm

HEATING TAPES



HT1-1 & HT1-2

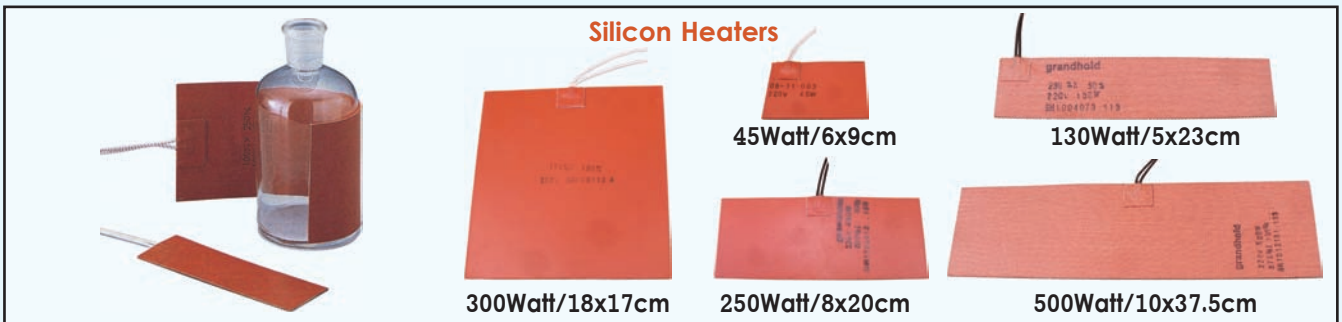
Heating Tapes Width 1" up to 450°C

- 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.



HT11-2.5

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



Silicon Heaters

300Watt/18x17cm

45Watt/6x9cm

250Watt/8x20cm

130Watt/5x23cm

500Watt/10x37.5cm

For control of heating tapes, max. watt – 2000 watt. Power regulator: 0-100%

- Solid state electronics make this variac the perfect instrument for research and especially teaching labs.
- Safety features include sparkless solid state regulation of voltage output to oil baths, heat lamps, heating mantles, or virtually any heater.

TEMPERATURE CONTROLLER/PROGRAMMER

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 sockets



ISR

USA

EURO

UK

CHIN



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	

OVENS

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 mm cable port
- Gas inlet



Specifications:

Model	DFO-36	DFO-80	DFO-150	DFO-240
Temp. range	Room temperature - 250°C			
Temp. constancy	±0.1°C			
Temp. uniformity	±2%			
Temp. control	PID			
Temp. sensor	Thermocouple K			
Heater: Oven	1100W	1500W	1800W	2200W
Inside Material	S.S-430			
Timer	99hr 59min			
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			3
Weight	34kg	47kg	60kg	76kg

LARGE OVENS



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 side t
- Brake wheels easy to move.



Fan motor



Wheels

Model	DFO-270	DFO-480
Temp. range	Ambient + 5°C~210°C (250°C)	
Temp. Accuracy	±1°C	
Temp. control / Display	PID / LED digital display	
Temp. Sensor	K type	
Heater	4000 W	
Volume	270L	480L
Timer	99 h / 59 min	
Keep Warm	Rock wool fiber	
Shelf (Adjustable)	4	
Power Voltage	220V 50/60Hz 1PH	
Inside dimensions (mm)	W600xD500xH900	W800xD600xH1000
Outside dimensions (mm)	W780xD620xH1520	W980xD720xH1620



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 side t
- Brake wheels, easy to move
- Silent fan motor.



Fan motor



Wheels

Model	DFO-600	DFO-720	DFO-1008	DFO-2160
Temp. range	40°C~200°C (250°C)			
Temp. Accuracy	±0.1°C			
Temp. control / Display	PID / LED			
Temp. Sensor	Thermocouple K type			
Keep Warm	Mineral wool/Glass wool			
Safety Device	EGO (Double over temperature protection)			
Volume	600L	720L	1008L	2160L
Timer	99 h / 59 min			
Shelf (Adjustable)	4			
Power Voltage	220V 50/60Hz 1PH		220V 50/60Hz 3PH	
Inside dimensions (mm)	W1000xD600xH1000	W1200xD600xH1000	W1400xD600xH1200	W1800xD1000xH1200
Outside dimensions (mm)	W1250xD750xH1580	W1450xD750xH1580	W1650xD750xH1820	W2000xD1200xH1980

SLIDE HEATERS



HPS-1
Up to 10 slides

HPS-6
Up to 21 slides

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.



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	±0.1°C	
Accuracy	±0.2°C	
Power Consumption	400 Watt	900 Watt
Electrical Requirements	230V, 50/60Hz	
Dimensions	WxHxDmm	
Weight	1.3Kg	2.4Kg

Available Products Catalogs:



MRC LTD. Laboratory Products
 Offices: 3 Hagavish st. Holon 5881702 Israel
 Tel: 972-3-5595252 Fax: 972-3-5594529
 Website: www.mrclab.com E-mail: mrc@mrclab.com
 Fried Electric
 Factory: 19 Marconi St. Haifa 31250 Israel

