

Laboratory Equipment



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ECHnology Pty Ltd

Australian Distributors; Importers & Manufacturers

NEW PRODUCTS 2009

Autoclaves

Centrifuges

Cryogenic Containers

Dry Baths

Electrophoresis

Freeze Dryers

Incubators

Microscopes

Ovens

Peristaltic Pumps

Shakers

Water Baths



Selection • Innovation • Support

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Distributed By:

A Autoclaves

Model: STE-Ten, Mini-Fast Autoclave

STE-Ten



Voltage V/Hz	Power W	Capacity L	Chamber size Ømm	Packing Size mm	Weight Kg
220/50	1100	1	90x160	570x470x500	30(net:28)

It adopts B-wclass (prED-13060), with 3-times pre-vacuum preceding vacuum drying. Residual humidity is <0.2, vacuum measurement reaches -0.7bar. It sterilizes and sanitizes miscellaneous packed or unpacked medical instruments, whether solid or A-type hollow, whether with multi-apertures or inset pipes. It efficiently rid air from every hollow area of any hollow instrument, such as hand-piece, making sure that water steam reaches every corner. It is installed with BOWIC & DICK which measures the penetration of water steam. Mini printer can be attached to record the process of sterilization.

Model: STE-23L, Class B 23 Liter Autoclave

STE-23L



Voltage V/Hz	Power W	Capacity L	Chamber size Ømm	Packing Size mm	Weight Kg
220/50	2300	23	247x450	760x550x495	64(net:50)

It adopts B-wclass (prED-13060), with 3-times pre-vacuum preceding vacuum drying. Residual humidity is <0.2, vacuum measurement reaches -0.7bar. It sterilizes & sanitizes miscellaneous packed or unpacked medical instruments, whether solid or A-type hollow, whether with multi-apertures or inset pipes. It efficiently rid air from every hollow area of any hollow instrument, such as hand-piece, making sure that water steam reaches every corner. It is installed with BOWIC & DICK which measures the penetration of water steam. Mini printer can be attached to record the process of sterilization.

Models: UTFB/UTFBS/UTKBS, Vertical Preassure Large Autoclave, 30,50,75,100,150,200 Liter

- Computer control auto recycle sterilizature
- LCD screen indicate working state
- Temp. scope 50-126 deg C
- Time scope 0-99h
- Overpressure auto-discharging 0.145-0.165MPa
- Automatic shut down with beep reminding after sterilization



UTFB

Stainless steel
sterilizing chamber



UTFBS

Full stainless steel



UTKBS

- Full stainless steel
- Hand wheel type of quick-open door structure.
- Pressure safety lock

Specifications:

MODEL	UTxxx*-30LV	UTxxx*-50LV	UTKB-75LV	UTKBS-100LV	UTKBS-150LV	UTKBS-200LV
VOLUME	30L	50L	75L	100L	150L	200L
POWER SOURCE	220V	220V	220/380V	380V	380V	380V
CONSUMED POWER	3kw	3.5kw	3.5/4.5kw	4.5kw	6.0kw	6.0kw
DIMENSION OF STERILIZING CHAMBER (mm)	Ø350x330	Ø350x520	Ø388x650	Ø500x550	Ø500x760	Ø500x1000
WEIGHT	60kg	80kg	90kg	100kg	120kg	140kg
DIMENSION (mm)	580x580x1000	600x580x1250	600x600x1400	630x630x1300	630x630x1450	630x630x1690

*xxx=FBS,FB,KB,KBS

Models: Fuego SCS basic/Fuego SCS, Gas Burner



- With stainless steel foot pedal
- 2 standard-programs for foot pedal For Basic Model Adjustable IR-Sensor reaction distance, DoubleClick IR-Sensor (connectable)
- 4 standard-programs for IR-Sensor and foot pedal with count down display
- SCS (Safety Control System) with BHC (Burner Head Control)
- Removable and decomposable burner head
- Tilt mechanism, right/left
- Holding device for 3 inoculation loop holders
- Nozzles for natural gas, propane / butane gas
- Turbo flame
- Wrench 17 mm for gas connection
- Screwdriver for burner head & cover of burner shaft
- Tubing connector with swivel nut
- Switching power supply (global)
- Instruction manual and 1-year warranty

Specification:

Technology For scs Basic: For scs:	Microprocessor Also LC- Display (EN, DE, FR, ES)
Programs For scs IR-Sensor: Foot pedal:	Start-Stop with timer, 1 sec - 2 h Auto-Off with timer, 1 sec - 2 h Standard (flame during pressed foot pedal) Start-Stop with timer, 60 min for Basic, 1sec-2h for scs
Safety features Safety Control System (SCS) with gas safety cut off:	ignition and flame control temperature monitor burner head clogging and assembly monitor (BHC) automatic unit switch off, 4 h for Basic, 1-120min for SCS
Gas supply and consumption Gas connection: Gas types: Connected load: Continuous cartridge operation:	residual heat display 1/4" left with gas filter I12ELL3B/P: natural gas E/LL, 18-25mbar liquid gas, 20-50mbar 70 g/h liquid gas CV360 - 40mm, Express 444-50min, CG 1750-150 min, C 206-170 min, CP250-210min, CV470-370min
Temperatures Flame temperature: Temperature threshold level:	1350°C on liquid gas 1300°C on natural gas (E) 1.0 kW liquid gas, 1.0 kW natural gas
Electrical IR-Sensor coverage for SCS: Power consumption: Power connection:	5-50 mm, adjustable only for SCS 2VA for bouth, 100-240 V/50/60 Hz/max. 0.3 A 9VDC/1A
Mechanical Casing and operating controls: Burner head: Cover of burner shaft: Measurements (wxhxd): Weight:	stainless steel/glass, UV & solvent resistant removable & decomposable, stainless steel Ø23mm, with drains 103x49x130mm 700g
Licenses DIN-DVGW Reg.-No.: CE: EEC guidelines:	NG-2211AS0167 EN 61326-1, EN61000-3-2, EN 61010 89/336/EEC, 73/23/EEC

Models: Dragon-100/200/220, Lab Gas Burner



- Electronic instant ignition
- High temperature attainable: 1300°C
- Safety, clearing
- Adjustable flame
- Refillable butane fuel tank

- Sterilizing
- Digestion
- Brazing
- Heating
- Welding
- Cooking

Specification:

Model	Dragon 100	Dragon 200	Dragon 220
Max. Temp.	1300°C	1300°C	1300°C
Fuel capacity (g)	45	45	45
Working Time (min)*	60	60	60
Safety lock	Yes	-	-
Dimension (mm)	H161xW137xD79	H92xW115xD79	H94xW115xD78
Dry weight (g)	380	407	425

C Centrifuges-mini

Clinical Centrifuges, Eight Places Rotor of 15ml Tubes, 2500rpm or 6000rpm



DSC-158T

DSC-N158T

DSC-N158A

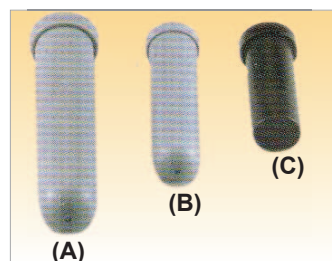
These centrifuges are widely used in many fields such as biology, medicine, pharmacology, veterinary laboratory & other regions. They are small, compact, strong and easy and safe for operation. The centrifuge operate smoothly and steadily. The design is up to date, beautiful outlook and durable. ABS outer shell can resist collision. It could accommodate 7ml, 10ml and 15ml centrifuge tubes without changing the rotor.

With safety lock, when cover is opened, the motor can be stopped. Precision mechanical timer with bell can be set from 0 to 30 minutes. Speed is linear and stable.

Auto balancing system. Vacuum rubber feet provide stable: "not walking" unit.

Specifications

Model	Power Supply	Speed range	Rotor angle	Max. RCF(xG)	Dimensions Weight	Timer	Max. Capacity
DSC-158T	220V/50Hz or 110/60Hz	up to 2500rpm or up to 3200rpm	45°	1210xG	(HxWxDmm) 220x255x255 3kg	0-30min	15ml x 8 Optional adaptors for 7ml and 10ml
DSC-N158T	110V/60Hz or 220V/60Hz	300-6000rpm	45°	4100xG	(HxWxDmm) 270x255x255 5kg	0-30min	15ml x 8 Optional adaptors for 7ml and 10ml
DSC-N158A With Tachometer	110V/60Hz or 220V/60Hz	300-6000rpm	45°	4100xG	(HxWxDmm) 270x255x255 5kg	0-30min	15ml x 8 Optional adaptors for 7ml and 10ml



Options:

(A) Standard 10~15ml tube holder; inner size: Ø17.5mm x L98mm.

(B) Optional 5~7ml tube holder; inner size: Ø13.5mm x L69mm.

(C) Optional 0.5~2.0ml tube holder; inner size: Ø11.0mm x L42mm.

Model: MiniSpan Plus, Mini Centrifuge, up to 14,500rpm, 12 places of 1.5/2ml



Features:

- Extremely quiet. Low noise levels
- LCD display. Easy-to-follow digital display
- Capacity: 12 x 1.5/2.0ml tubes, adapters are available for spinning smaller tubes
- Separate short-spin key
- Low sample heating (only 12°C after 30 min. at max. speed)
- Autoclavable rotor (121 deg.C, 20min)
- RMP/RCF setting as required
- Includes standard rotor made of anodized aluminum
- Timer can be set up to 99min
- The small size of the unit makes it convenient for use on the bench, under a hood or in refrigerated environments



Capacity	12x1.5/2.0ml tubes
Max. rotational speed	14,500 rpm/min
Relative centrifugal force (RCF)	14,000 x g
Timer	20sec~99min
Acceleration time to max. speed	25s
Braking time from max. speed	18s
Dimensions in cm (WxDxH)	24x21.2x13.8
Power requirement	105W
Power supply	100V-240V 50/60Hz

Swing 3000/5000 Centrifuges

Swing 3000 centrifuge frame is made of high strength plastic, so its weight is low. The noise is low when it is running. It is controlled by microcomputer, can be operated simply & conveniently. It has the function of self-balance. It is safe & reliable because of being equipped with electronic lock. It can be used for qualitative analysis to serum, plasma, in the fields of biology, chemistry, medicine and so on.

Specifications

0-5,000rpm (4,000 g) ● Brushless DC motor ● 8 test-tube (4-15ml) capacity ● Max. tube size 17mm x 100mm ● Programmable time and speed

Controls

Touch-pad time & speed controls ● 4-character digital display screen ● 1-60 minute programmable timer ● 500-5,000rpm programmable speed Includes ● 3-prong power cord ● 8 tube shields

Model	Swing 3000	Swing 5000
Speed	3050RPM	5000RPM
Angle Rotor Capacity	15ml x8, 50mlx4(Optional)	
Dimensions	L460xW365xH370mm	
RCF	1450 (Xg)	5000 (Xg)
Time	0-30 Min	0-60 Min
Power	110V/220V 60Hz	110V/220V 60Hz/250W
Weight	20KG	



Advantages

Straight-line separation for accurate processing ● Reduces high potassium results ● Tighter gel line reduces re-mixing ● Eliminates most re-spins ● Very high g-forces for fast separation ● Fast & accurate veterinary fecal flotations ● Platelet-Poor and Platelet-Free-Plasma in minutes

Design Features

Rubber feet to prevent slipping ● Impact-resistant lid with view port ● Zero-rpm interlocking lid ● Wide mouth for easy clean-up ● Metal rotor and tube shields



Standard rotor:
8 x 15ml



Optional rotor:
4 x 50ml

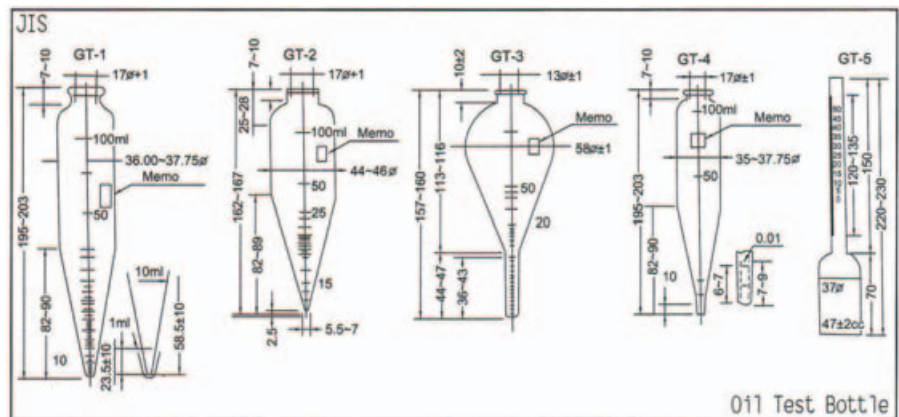
Models: COD-1004/1008, Oil Test Type Centrifuges

This machine can be applied to test the water content and sediment in the oil or the insolubility ingredient in the lubricant.

Features:

LED speed, centrifugal force & time display ● Auto power off for rotor imbalance ● Auto cover lock when running ● 10 memory programs for preset parameters ● See-through window.

Model	Speed (rpm)	Max. RCF (x g)	Oil Test Bottle (pcs)	WxDxH Size(cm)
COD-1004	500~2,000	1,030	4	69×77×104
COD-1008	500~2,000	1,120	8	69×77×104

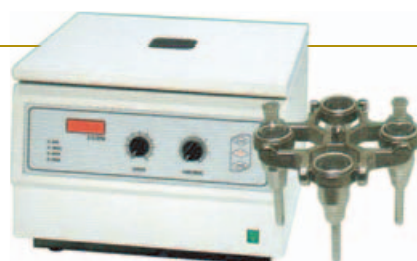


Model: CN-4000, Sulphameter

The machine makes use of centrifugal precipitation to test the density of sulfate in electroplating solution.

Features:

Easy operation, Auto buzzer when finish ● Stainless steel chamber & rotor ● Auto power off when open ● Timer: 0-6 min ● Auto power off for rotor imbalance.



C Centrifuges-Refrigerated



Model: Neofuge-13R, Refrigerated Centrifuge, 24 Places 1.5/2ml, 32 Places 0.2ml

Neofuge13R equipped with a brushless induction motor runs quietly. The rotor can be accelerated to 17.458xg, which is sufficient for all standard applications. A "quick spin" key is used for short processing runs. The powerful CFC-free refrigeration unit can control temp. range from -5°C to +40°C. LCD can display more detailed failure information Speed, chamber temp. & run time can be set by the user & the value can change during centrifugation.



Features:

Max. speed 13,800rpm, max. RCF 17,458xg • Microprocessor control, all parameters are set by control panel • Low-noise brushless drive motor, maintenance-free • Refrigerated table-top centrifuge, CFC-free (R134a) • Rotor can be kept in low temp. at max. speed • Aerosol tight • Autoclavable (20 min, 12TC)

	1301: Fixed angle rotor 24x1.5/2ml
	1302: Fixed angle rotor 32x0.2ml

Max. Speed	13,800rpm
Max. RCF	17,458xg
Max. Capacity	24x1.5/2.0ml
Temp. Range	-5°C to +40°C
Run Time	≤9h 59min. quick spin
Step	10rpm
Drive	Brushless induction motor
Control	Microprocessor control
Weight Without rotor	39Kg
Power	300VA
Refrigerant	R134a (CFC-free)
Dimensions (HxWxD)	320mm x 285mm x 480mm






Model: Neofuge-15R, Refrigerated Centrifuge

Features:

Maximum speed at 16,000rpm & max. RCF at 24,905xg • Easy control for parameter setting & precise control by microprocessor • Electronic imbalance detection • Automatic rotor identification • Low noise brushless drive motor, free of maintenance • Refrigerated by CFC-free unit (R134a), temp. range-10-40 • Precooling rotors function during standby • Standard accessory of #1501 fixed angle rotor (24x1.5/2.0ml)

Neofuge 15R laboratory centrifuge, providing excellent centrifugal effect & easy to use with high reliability & safety, are widely used in routine laboratories research in the fields of bioscience, medicine & industry.

	1501: Fixed angle rotor 24x1.5/2ml
	1502: Swing-bucket rotor Maximum 4x100ml
	1503: Fixed angle rotor 6x50ml

Max. Speed	16,000rpm
Speed Min.	300rpm
Steplength	10rpm
Max. RCF	24,905xg
Max. Capacity	4x100ml
Braking/acceleration curves	9/9
Refrigerant	R134a (CFC-free)
Power Supply	220W/50Hz(standard) 220V/60Hz(optional)
Drive	Brushless induction motor
Noise at max. speed	≤60dB
Temp. Range	-10°C to +40°C
Control	Microprocessor control
Running Time	≤9h 59min. quick spin
Dimensions (HxWxD)	315mm x 580mm x 520mm
Net Weight Without rotor	74Kg

Model: Neofuge-18R, Laboratory Refrigerated Centrifuge



Neofuge 18R laboratory centrifuge, providing excellent centrifugal effect and easy to use with high reliability & safety, are widely used in the fields of molecular & biochemical research, & medical diagnosis

Features:

Refrigerated by CFC-free unit (R134a), temperature range -10-40 C • Maximum speed at 18,000rpm & maximum RCF at 31,515xg • Easy control for parameter setting & precise control by microprocessor • Electronic imbalance detection • Automatic rotor identification • Low noise brushless drive motor, free of maintenance • Precooling rotors function during standby • 9 acceleration/deceleration curves available • Multi-function by 8 optional rotors

	2302: Fixed angle rotor 24x2ml
	1801: Fixed angle rotor 32x2ml
	1802: Fixed angle rotor 10x10ml
	2304: Fixed angle rotor 6x94ml
	2305: Fixed angle rotor 8x50ml
	1803: Fixed angle rotor 10x15ml
	1804: Swing-Out rotor Maximum 4x250ml
	1805: Microplate rotor with 2 racks 2 Microplates

Max. Speed	18,000rpm
Min. Speed	300rpm
Steplength	10rpm
Max. RCF	31,515xg
Max. Capacity	4x250ml
Braking/acceleration curves	9/9
Programs	15(pre-cooling program)
Power Supply	220V/50Hz
Drive	Brushless induction motor
Noise at max. speed	≤60dB
Temp. Range	-10°C to +40°C
Control	Microprocessor control
Running Time	≤9h 59min. quick spin
Dimensions (HxWxD)	405mm x 565mm x 600mm
Net Weight Without rotor	115Kg



Model: Neofuge-23R, Laboratory Refrigerated Centrifuge

Neofuge 23R laboratory centrifuges providing excellent centrifugal effect & easy to use with high reliability & safety are widely used in the fields of molecular & biochemical research, & medical diagnosis

Features:

Refrigerated by CFC-free unit (R404a), temperature range -20-40 C • Maximum speed at 23,300rpm & maximum RCF at 50,377xg • Easy control for parameter setting & precise control by microprocessor • Electronic imbalance detection • Automatic rotor identification • Low noise brushless drive motor, free of maintenance • Precooling rotors function during standby • 9 acceleration/deceleration curves available • Multi-function by 8 optional rotors

	2301: Fixed angle rotor 24x1.5ml
	2302: Fixed angle rotor 24x2ml
	2303: Fixed angle rotor 16x16ml
	2304: Fixed angle rotor 6x94ml
	2305: Fixed angle rotor 8x50ml
	2306: Fixed angle rotor 6x50ml
	2307: Swing-Out rotor Maximum 4x100ml
	2308: Microplate rotor with 2 racks 2 Microplates

Max. Speed	23,300rpm
Min. Speed	300rpm
Steplength	10rpm
Max. RCF	50,377xg
Max. Capacity	4x180ml
Braking/acceleration curves	9/9
Programs	9(pre-cooling program)
Power Supply	220V/50Hz
Drive	Brushless induction motor
Noise at max. speed	≤66dB
Temp. Range	-20°C to +40°C
Control	Microprocessor control
Running Time	≤9h 59min. quick spin
Dimensions (HxWxD)	400mm x 765mm x 590mm
Net Weight Without rotor	150Kg

C Centrifuges-Medium Size

Model: CN-3101, Economy Centrifuge, up to 5000rpm, Max. Capacity 400ml



Features:

LCD speed display • Regressive 30 min. timer or continuous operation • Stable and stepless speed change • Stainless steel inside bowl • Breakdown indication and fuse safety device • Auto current-restraining function • Overheat and overload safety protection • Hidden auto-balance device • Safety door lock and cover open indication • Auto accelerating & decelerating functions. • Auto-cooling air circulation • See-through window • Optional rotor selections for various tube size (See in page 19 in the full product catalog) • Low noise.

Speed(rpm)	Max. RCF(x g)	Max. Capacity(ml)	Timer(min:sec.)	Weight(kg)	W×D×H Size(cm)
500~5,000	3,790	400	0~30 or "ON"	20.5	36×48×34

Model: CN-3301, Brushless General Purpose Centrifuges, up to 6500rpm, Max. Capacity 400ml



Features:

LCD speed display • Regressive 30 min. timer or continuous operation • Quiet brushless motor • Stable and stepless speed change • Stainless steel inside bowl • Breakdown indication & fuse safety device • Auto current-restraining function • Overheat and overload safety protection • Hidden auto-balance device • Safety door lock and cover open indication • Auto accelerating & decelerating functions • Auto-cooling air circulation • See-through window • Optional rotor selections for various tube size • Low noise.

Speed(rpm)	Max. RCF(x g)	Max. Capacity(ml)	Timer(min:sec.)	Weight(kg)	W×D×H Size(cm)
500~6,500	4,500	400	0~30 or "ON"	18	36×48×34

Model: CN-350, Medium Size Centrifuge, up to 6500rpm, Max. Capacity 400ml



Features:

LCD, speed and time display with RCF setting • Quiet brushless motor • Microprocessor control • 10 memory programs for preset parameters • Auto power off when open • Auto cover lock with motor running • Overheat and overload safety protection • Auto power off for rotor imbalance • Auto buzzer when finish • Hidden auto-balance device • Power pilot light and fuse safety device • Auto accelerating & decelerating functions • See-through window • Optional rotor selections for various tube size • Low noise.

Speed(rpm)	Max. RCF(x g)	Max. Capacity(ml)	Timer(min:sec.)	Weight(kg)	W×D×H Size(cm)
500~6,500	4,500	400	99:59	20.5	36×48×34

Model: CN-350RD, Medium Size Refrigerated Centrifuge, up to 5000rpm, Max. Capacity 480ml






















Features:

LCD, temperature, speed and RCF setting also display • Temp. range : 0°C~40°C • 10 memory programs for preset parameters • Overheat and overload safety protection • Stainless steel inside bowl • Microprocessor control • Auto power off for rotor imbalance • Auto buzzer when finish • High function & high effective control system • Breakdown indication & fuse safety device • Auto accelerating & decelerating functions • Auto-cooling air circulation • Low noise.

Speed(rpm)	Max. RCF(x g)	Max. Capacity(ml)	Timer(min:sec.)	Weight(kg)	W×D×H Size(cm)
500~5,000	4,640	480	0~30 or "ON"	40	45×56×38

Optional Rotors & Adapters For Centrifuges CN-350RD/350/3101/3301

Rotor		Max. Speed (rpm)	Max. RCF (x g)	Capacity (ml x pcs)	Tube Size (x 1)mm Max. Min.		Cat. No.
RS-50		3,500	1,990	100x4	45x112	42x95	2-3400-21
		4,000	2,600	50x4	35x117	32x90	2-3400-22
		4,000	2,600	50x4TC	29.5x120	26.5x90	2-3400-23
		3,500	1,990	15x16	16.7x115	13.5x86	2-3400-32
		3,500	1,990	15x12TC	17x120	15x85	2-3400-24
		3,500	1,990	10x24	15.5x113	14x85	2-3400-25
		3,500	1,700	6x40	12.7x88	11x63	2-3400-26
		3,500	1,700	6x36	12x106	11x85	2-3400-27
		3,500	1,330	1.5x48	11x56	10x36	2-3400-28
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RS-1508		3,500	1,990	15x8	17x122	15x90	2-3000-14
RA-1508		6,000	3,940	15x8	16.7x122	15x90	2-5052-11
RA-1512H		6,000	4,500	15x12	16.7x122	15x90	2-6000-15
RA-1516		4,000	2,250	15x16	16.7x115	15x90	2-3000-12
RA-1024		3,500	1,840	10x24	16.7x107	15x90	2-3000-13
RA-5004		6,000	3,980	50x4	29.5x130	27.5x94	2-5052-12
RA-5006		6,000	3,980	50x6	29.5x130	27.5x90	2-5052-22
RA-5008		6,000	4,500	50x8	29.5x117	27.5x90	2-1000-12
REA-1520		6,000	3,140	1.5x20	11x50	10x40	2-5052-13

C Centrifuges-Large Size

Model: CN-5101, Economy Centrifuge, Up to 5000rpm, Max Capacity 1000ml



Features:

LCD speed display • Regressive 30 min. timer or continuous operation • Stable and stepless speed change • Stainless steel inside bowl • Breakdown indication and fuse safety device • Auto current-restraining function • Overheat & overload safety protection • Hidden auto-balance device • Auto cover lock with cover open indication • Auto accelerating & decelerating functions • Auto-cooling air circulation • See-through window. Optional rotor selections for various tube size • Low noise.

Speed	Max.RCF	Max.Capacity	Timer (min)	Weight	W×D×H Size
500~5,000rpm	4,640x g	480ml	0 30 or "ON"	38kg	45×56×38cm

Model: CN-5301, Economy Centrifuge, Up to 6500rpm, Max Capacity 1000ml



Features:

LCD speed display • Regressive 30 min. timer or continuous operation • Stable and stepless speed change • Quiet brushless motor • Stainless steel inside bowl • Breakdown indication and fuse safety device • Auto current-restraining function • Overheat & overload safety protection • Hidden auto-balance device • Auto cover lock with cover open indication • Auto accelerating & decelerating functions • Auto-cooling air circulation • See-through window • Optional rotor selections for various tube size • Low noise.

Speed	Max.RCF	Max.Capacity	Timer (min)	Weight	W×D×H Size
500~6,500rpm	4,900x g	1000ml	0 30 or "ON"	38kg	45×56×38cm

Model: CN-650, Large Size Centrifuge, Up to 6500rpm, Max Capacity 1000ml



Features:

LCD, speed & time display with RCF setting • Quiet brushless motor • Microprocessor control • 10 memory programs for preset parameters • Auto power off when open • Auto cover lock with motor running • Overheat & overload safety protection • Auto power off for rotor imbalance • Auto buzzer when finish • Hidden auto-balance device • Power pilot light and fuse safety device • Auto accelerating and decelerating functions • See-through window • Optional rotor selections for various tube size • Low noise.

Speed	Max.RCF	Max.Capacity	Timer	Weight	W×D×H Size
500~6,500rpm	4,900x g	1000ml	99:59min:sec.	40kg	45×56×38cm

Model: CN-650R, Large Size Refrigerated Centrifuge, Up to 6500rpm, Max Capacity 1000ml



Features:

LCD, temperature, speed and RCF setting and display • Temperature range: 4°C~40°C • 10 memory programs for preset parameters • Overheat & overload safety protection • Stainless steel inside bowl • Microprocessor control • Auto power off for rotor imbalance • Auto buzzer when finish • Auto current-restraining function • Breakdown indication & fuse safety device • Auto accelerating and decelerating functions • Auto-cooling air circulation • Low noise.

Speed	Max.RCF	Max.Capacity	Timer	Weight	W×D×H Size
500~6,500rpm	4,900x g	1000ml	99:59min:sec.	112kg	52×58×90cm

Model: CN-650RD, Large Size Refrigerated Centrifuge, Up to 6500rpm, Max Capacity 1000ml



Features:




























LCD, temperature, speed and RCF setting and display • Temperature range: 4°C~40°C • 10 memory programs for preset parameters • Overheat & overload safety protection • Stainless steel inside bowl • Microprocessor control • Auto power off for rotor imbalance • Auto buzzer when finish • Auto current-restraining function • Breakdown indication & fuse safety device • Auto accelerating & decelerating functions • Auto-cooling air circulation • Low noise.

Speed	Max.RCF	Max.Capacity	Timer	Weight	W×D×H Size
500~6,500rpm	4,900x g	1000ml	99:59min:sec.	75kg	80×56×38cm

Centrifuges-Large Size

C

Models: CN-650R, CN-650RD, CN-650, CN-5101, CN-5301, Optional Rotors & Adapters For Centrifuges

Applicable Model	Rotor		Max. Speed (rpm)	Max. RCF (xg)	Capacity (ml x pcs)	Tube Size (φ x 1)mm		Cat. No.									
						Max.	Min.										
CN-650R CN-650RD CN-650 CN-5301	RS-250		3,500	2,250	1.5x96	10.7x100	8x41	2-6000-21									
					6x112	12x110	8.5x60	2-6000-22									
					10x80	15.8x100	12x60	2-6000-23									
					15x40TC	16.5x122	14x60	2-6000-25									
					15x48	17.2x122	14.5x60	2-6000-24									
					50x16TC	29.5x125	27.5x50	2-6000-26									
					250x4	62x130	58x70	2-6000-27									
			2-6000-21		2-6000-22		2-6000-23		2-6000-25		2-6000-24		2-6000-26		2-6000-27		
	RS-1548		3,500	2,430	15x48	17.5x107	14x80	2-6000-12									
	RS-2504		3,500	2,480	250x4	65.5x130	61x90	2-6000-13									
CN-650R CN-650RD CN-650 CN-5101 CN-5301	RS-9602		2,500	1,060	96micro x4	129x86	126x83	2-6000-14									
	RS-100		3,500	2,090	6x56	13x105	10x50	2-5400-21									
			3,500	2,150	10x48	16x107	13x50	2-5400-22									
			3,500	2,150	15x16TC	16.7x135	13.5x86	2-3400-32									
			3,500	2,150	15x32	17.5x115	14x80	2-5400-23									
			4,000	2,770	50x4	35x135	32x90	2-3400-22									
			5,000	4,640	50x4TC	29.5x137	26.5x90	2-3400-23									
			3,500	2,120	50x8	35x120	32x90	2-5400-24									
			3,500	2,120	50x8TC	29.5x127	26.5x90	2-5400-25									
			4,000	2,930	100x4	45.5x130	42x95	2-3400-21									
			2-5400-21		2-5400-22		2-3400-32		2-5400-23		2-3400-23		2-5400-24		2-5400-25		2-3400-21
	RS-50		4,500	3,350	15x16	16.7x115	13.5x86	2-3400-32									
			4,000	2,600	50x4	35x117	32x90	2-3400-22									
			5,500	5,270	50x4TC	29.5x120	26.5x90	2-3400-23									
			5,000	4,200	100x4	45x112	42x95	2-3400-21									
			2-3400-32		2-3400-22		2-3400-23		2-3400-21								
	RA-5008		6,000	4,500	50x8	29.5x118	27.5x90	2-6000-16									
	RA-1512H		6,000	4,500	15x12	16.7x130	13.5x86	2-6000-15									

C Cryogenic Containers

Models: YDS Serie Liquid Nitrogen Biological Container for Storage

The series products are of small capacity, which are designed for transferring or transporting biological samples stored by manual work, especially for the customers in the mountainous area, featuring portable, less static evaporation loss mass of liquid nitrogen & being economical in usage.

Main Features:

- High-strength aluminum alloy structure.
- Encoding canisters, for easy recognition and convenient accessing of samples;
- Protecting jacket, portable and preventing collision;
- Protecting biological samples stored (except 30mm caliber);
- Multi-layer thermal isolation design.



Specifications:

Small Capacity

Model	YDS-1-30	YDS-2-30	YDS-3	YDS-4	YDS-5	YDS-6	YDS-10	YDS-10-80	YDS-10-90	YDS-10A
Capacity (L)	1.0	2.0	3.15	4.0	5.0	6.0	10.0	10.0	10.0	10.0
Empty Weight (Kg)	2.0	2.9	3.4	4.0	4.9	5.0	6.2	6.5	6.7	6.5
Neck Diameter (mm)	30	30	50	50	50	50	50	80	90	50
Outer Diameter (mm)	180	217	224	224	287	287	303	303	303	287
Height (mm)	320	365	425	485	435	445	530	545	545	600
Atatic Evaporation Loss Mass (L/d)	0.06	0.06	0.10	0.10	0.09	0.10	0.10	0.18	0.18	0.09
Static Holding Time (d)	16	32	31	42	53	63	101	57	55	110
Canister Outer Diameter (mm)	26	19	38	38	38	38	38	63	70	38
Canister Height (mm)	120	120	120	120	120	120	120	120	120	120/276
Number of Canisters (n)	1	3	6	6	6	6	6	6	6	6
Straw Holding Capacity (0.5ml)	60	90	792	792	792	792	792	2040	2244	792
(Single Level) (0.25ml)	120	204	1788	1788	1788	1788	1788	4584	5022	1788
Straw Holding Capacity (0.5ml)	-	-	-	-	-	-	-	-	-	1284
(Double Level) (0.5ml)	-	-	-	-	-	-	-	-	-	2832
Number of Canes (n)	-	-	-	-	-	-	-	-	-	24
Number of Vials (n)	-	-	-	-	-	-	-	-	-	120

Specifications:

Medium Capacity

Model	YDS-13	YDS-15	YDS-16	YDS-20	YDS-26
Capacity (L)	13.0	16.0	17.0	20.0	26.0
Empty Weight (Kg)	7.0	8.2	8.5	11.2	12.5
Neck Diameter (mm)	50	50	50	50	50
Outer Diameter (mm)	303	355	355	409	409
Height (mm)	615	600	620	655	705
Atatic Evaporation Loss Mass (L/d)	0.10	0.10	0.10	0.10	0.11
Static Holding Time (d)	131	161	171	202	244
Canister Outer Diameter (mm)	38	38	38	38	38
Canister Height (mm)	120/276	120	120/276	120/276	120/276
Number of Canisters (n)	6	6	6	6	6
Straw Holding Capacity (0.5ml)	792	792	792	792	792
(Single Level) (0.25ml)	1788	1788	1788	1788	1788
Straw Holding Capacity (0.5ml)	1284	-	1284	1284	1284
(Double Level) (0.5ml)	2832	-	2832	2832	2832
Number of Canes (n)	24	-	24	24	24
Number of Vials (n)	120	-	120	120	120

Specifications:

Large Capacity

Model	YDS-30	YDS-30-80	YDS-30-90	YDS-30-125	YDS-35	YDS-35-80	YDS-35-125
Capacity (L)	31.5	31.5	31.5	31.5	35.5	35.5	35.5
Empty Weight (Kg)	12.9	31.5	31.6	14.2	13.8	14.1	15.1
Neck Diameter (mm)	50	80	90	125	50	80	125
Outer Diameter (mm)	446	446	446	446	473	473	473
Height (mm)	670	680	685	685	670	675	690
Atatic Evaporation Loss Mass (L/d)	0.11	0.18	0.18	0.28	0.11	0.19	0.29
Static Holding Time (d)	295	174	174	112	333	187	123
Canister Outer Diameter (mm)	38	63	70	97	38	63	97
Canister Height (mm)	120/276	120/276	120/276	120/276	120/276	120/276	120/276
Number of Canisters (n)	6	6	6	6	6	6	6
Straw Holding Capacity (0.5ml)	792	2244	2588	5124	792	2244	5124
(Single Level) (0.25ml)	1788	5022	6192	11952	1788	5022	11952
Straw Holding Capacity (0.5ml)	1284	3624	4920	9048	1284	3624	9048
(Double Level) (0.5ml)	2832	8460	10688	19944	2832	8460	19944
Number of Canes (n)	24	72	90	198	24	72	198
Number of Vials (n)	120	360	450	990	120	360	990

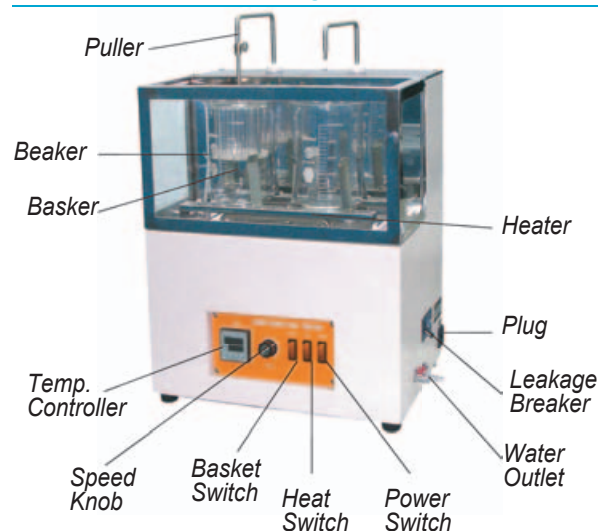
Model: DT-6, Dissolution Tester



- It is used to test the dissolution condition of chemicals under the set temperature.
- It is rotary speed is non-limitary variation & can be adjusted at any required speed.
- The digital readout provides a continuously updated accurate reading of shaft rpm.
- The temperature of water-baths can be set to a need one, in special, it can keep up the set temperature automatically.
- The circuit breaker device can prevent from leakage current.
- Thus it can provide safety when use.
- The paddle shafts are made of SUS 316.

Speed	10~250 rpm
Power	AC 110 V / 60HZ. 220 V / 50/60HZ
Electric Control	Step-Less Speed Control
Safety device	Low water / over heat Safety break for leakage of electricity
Temperature	Digital control system
Heater	900w
Constant temp. in Water tank	Water circulation type
Fuse	10a / 6a
Wweight (kg)	62

Model: DG-2B, Disintegration Tester



Features:

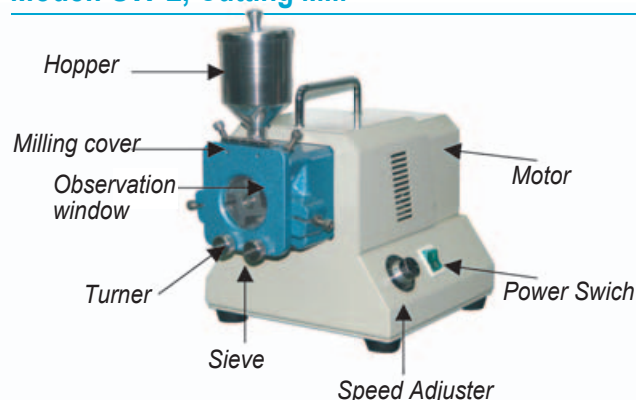
It is used to test the disintegration condition of chemicals under the set temperature. It's shaking speed is non-limitary variation. The temp. of water baths can be set to a need one, in special, it can keep up the set temperature automatically and the circuit breaker device can prevent from leakage current. Thus, it can provide safety when use. The basket are made of SUS 316. can operated by single side.

Basket	2
Description	Cumulative time counter provide
Movement of Basket	Amplitude 55m, Vertical agitation 5~40 times/min.
Driving Motor	8W
Heater	600W
Dimension (mm)	W470 x D325 x H555
Weight (kg)	22kg
Power	AC 110 / 220, 50 / 60Hz

Accessories:

Basket	Beaker	Granual Cylinder	Granual Disc
2	2	12	12

Model: SW-2, Cutting Mill



The fixed knife and revolving knife cut the materials into small pieces without reducing its water content. applicable for grain, seeds, plastic fibers, and leathers, size of the particles is controlled by the sieve under the mill pot.

- mesh: 20/40/60mesh
- capacity: 5kg/h
- inner cutting pot(cm): $\phi 5$
- motor: 220W

Speed	0 ~ 3,000 rpm changeable by step-less
Max. capacity	5 kg / hour
Safety device	Motor overheat protection device
Fuse	Fuse 5A / 110V , 3A / 220V
Size	210 x 290 x 240 mm
Power	AC110 / 220V , 50 / 60 HZ
Net weight	13 kgs

D Dry Baths

Model: DB-006E-150, Dry Bath Incubator up to 150 deg C, 3 Blocks



Features:

- Applications for incubating DNA specimens, cross matching and screens in blood bank, incubating melted agar, Enzyme assays, digestions, Residue tests for milk & also great for serology, hematology, pathology and biochemistry etc.
- Choose from various heating blocks that accommodate test tubes, cuvettes, and micro centrifuge tubes.
- Each block has a well to accommodate a removable thermometer, which monitors temperature of blocks.
- When solid block (no holes) is used, it can function as HOT PLATE.
- Activate auto-off function to automatically shut out heater at the end of timed cycle.
- Digital temperature display for actual temperature PV and setting SV.
- Timer start working when the preset temperature has been stabilized ensures an accurate incubation effect.
- When complete the heat cycling, the timer will alarm and display "END".
- Memory stores the set temperature and time of previous operation, use these set points to repeat the new operation and save time, or preset your new desired set points.
- DB-006E-150 features double wall construction with insulator by fiberglass for durability and good heat retention. Maximum temperature is designed up to 150 C capable of functioning more applications.
- Safety devices: Over temperature alarm; Heating failure alarm; Double overheating protection.

Specifications:

Overall dimension (mm)	290x290x110
Net weight (Not include blocks)	6.0Kg
Temp setting	Digital (3-digit)
Temp reading	Digital LED
Temp range	Ambient to 150°C
Temp accuracy	± 0.1°C
Uniformity (at 37°C)	± 0.2°C
Temp sensor	K-Type
Temp control	PID
Overheat alarm	Yes
Heating element	450W
Timer	Digital 99hr. 59 min
Insulation	Yes

Blocks Available:

Number	Tube Size	Opening No. /Ø
DB-0630	6mm	30/6.5mm
DB-1020	10mm	20/10.5mm
DB-1220	12 or 13mm	20/13.5mm
DB-1612	15 or 16mm	12/16.6mm
DB-1812	18mm	12/18.6mm
DB-2012	20mm	12/20.7mm
DB-2506	25mm	6/25.7mm
DB-15E-20	1.5ml Eppendorf	20
DB-053-12	0.5ml Eppendorf	20
DB-COM-3 (Combination)	25+12+6mm or your request	3+5+6 holes
DB-0000	Solid (no holes) used as HOT PLATE	
Block Size	100Wx75Dx50L (mm)	

Model: MK200-4, Dry Bath Incubator up to 120 deg C, 4 Blocks



The Dry Bath Incubator is a microprocessor-controlled product. With this technique, more stable and accurate temperature control is achieved. Replacement is convenient with optional metal modules of various specifications configured for different types of test tubes.

Features:

- LED display
- Current temperature and count down time display
- Metal blocks free of sample counter-pollution
- Easy replacement, cleaning and disinfecting of metal blocks
- Built-in over-temperature protection
- Calibrating temperature discrepancy
- Buzzer alarm when temperature control ends
- Only heating design and Custom blocks are available

Specifications:

Temp. control range: from 5°C above ambient to 120°C • Time required for temp. to increase from 40°C - 120°C: ≤25min • Temp. control discrepancy: ≤±0.5°C • Display discrepancy: ±0.1°C • Homogeneity of block temp.: ≤±0.5°C • Max. heating power: 600W • Dimen.: 38x24x11cm • Time Range: 99 h 59min

Dry Bath Blocks for MK200-4:

Type	Parameter	Capacity	Dimension(mm)
BK01	Ø6mm	49	96x96x49
BK02	Ø7mm	49	96x96x49
BK03	Ø10mm	25	96x96x49
BK04	Ø12mm	25	96x96x49
BK05	Ø13mm	25	96x96x49
BK06	Ø15mm	12	96x96x49
BK07	Ø15mm	16	96x96x49
BK08	Ø16mm	12	96x96x49
BK09	Ø16mm	16	96x96x49
BK10	Ø19mm	12	96x96x49
BK11	Ø19mm	16	96x96x49
BK12	Ø20mm	9	96x96x49
BK13	Ø26mm	9	96x96x49
BK14	Ø28mm	4	96x96x49
BK15	Ø40mm	4	96x96x49
BK16	0.5ml	49	96x96x49
BK17	1.5ml	25	96x96x49
BK18	2.0ml	25	96x96x49

Model: MK100-4P, Dry Bath Incubator

- Microprocessor controlled time and temperature
- Beep-signal & stop of after program completion
- Heating platform for standard microtest plate
- Temp. range: RT+5°C~60°C
- Uniformity over the platform: $\pm 0.5^\circ\text{C}$
- Display Accuracy: 0.1°C
- Timing range: 1min~99h59min
- Platform capacity: 4 microtest plates
- Overall dimensions: 385x395x190 mm
- Power supply: AC220V or AC120V, 50/60Hz, 250W
- Weight: 7Kg



Model: MB100-4P, Thermo Shaker

Features:

- Microprocessor controlled time, speed and temperature
- Accurately control and display time, temperature and speed
- Heating platform for standard microtest plate
- Soft start. Easy to setup and use
- Beep-signal & stop of shaking motion after program completion
- LCD display

Performance:

- Temp. range: RT+5°C~60°C
- Uniformity over the platform: $\pm 0.5^\circ\text{C}$
- Display Accuracy: 0.1°C
- Shaking speed
- 100-1200 rpm/min (increment: 1 RPM)
- Orbit: 2mm (rotation)
- Independent timer with sound signal: 0-100 hrs (increment 1 min)
- Platform capacity: 4 microtest plates
- Platform dimensions: 215x300 mm
- Dimensions: 385x395x190mm
- Weight, not more: 9.5Kg
- Power supply: AC220V or AC120V 50/60Hz 250W



Model: MX100-4P, Shaker

Features:

- Variable speed between 300 to 1,400rpm
- DC brushless motor for gentle and powerful motion
- Orbital of 3mm for efficient mixing in small sample vessels
- Continuous or timed operation
- Optional rack for 1.5ml centrifuge tube
- Simple spring holders for easy & speed of plate installation

Performance:

- Speed: 300-1400 rpm/min-Standard
300-1000 rpm/min-Deepwell
- Timer: 120min
- Orbit: 3mm
- Weight: 9kg
- Power: 220V 40W
- Dimensions: 290x320x130mm



Model: MS-100, Thermo Shaker

Designed for simultaneous heating and mixing of small samples, the MS-100 is supplied with interchangeable platforms for microtubes. Mixing and heating modes can be used both simultaneously & independently, i.e. the device can work as a shaker and as a thermostat. The main body of the Mixing Block can be used with different kinds of blocks, for different site of tubes.



Temp. Setting Range	5 to 100°C
Temp. Control Range	Room Temp. +5°C~100°C
Timing Range	1min~99h59min
Mixing Speed (rotation)	200rpm-1500rpm
Mixing Orbit	2mm
Temp. Control Accuracy	$\pm 0.3^\circ\text{C}$
Display Accuracy	$\pm 0.1^\circ\text{C}$
Heating Time (from 20°C to 100°C)	$\leq 20\text{min}$
Cooling time	-
Dimension (LxWxH) mm	300X220X170
Net Weight	7kg
Power supply	AC220V or AC120V 50/60Hz 150W

Features:

- LCD display. It easy to setup and use.
- Accurately control and display time, temperature and speed
- Over heating protection device ensures safety & reliability.
- Temperature can be calibrated to meet user's needs.
- Low noise working even under the speed of 1,500rpm
- Conforms to CE safety standard
- Custom blocks are available to satisfy experimental requirement
- Cental, reliable mixing with long-life direct current motor

Model: SR-100, Twist Shaker for Tubes

Features:

- Large capacity of tray holds a variety of sizes & shapes of containers such as tubes and vials.
- Test container can be easily loaded and unloaded without turning unit off.
- Rubber dimple mat of tray firmly but gently holds containers.
- Convenient bench-top size and attractive shape.
- Solid metal construction.
- Easy to clean.



SR-100



Speed	30rpm (at 60Hz); 25rpm (at 50Hz)
Net Weight	1.5 Kg
Gross Weight	2Kg
Maximum Load:	500gr.
Movement	3D Gyrotory movement on a central point
Switch	ON / OFF
Tray Dimension	W230 x D125 x H10 (mm)
Overall Dimen.	W230 x D125 x H145 (mm)
Power Supply	110V 60Hz (220V 50/60Hz available)

E Electrophoresis-Power Supply

Model: MINIS-150VS, Smart Minis 150V Power Supply

Features:

- Compact size
- Power capacity: 150V, 600mA, 60W
- 6 constant voltages: 25V, 50V, 75V, 100V, 125V, 150V
- No Load detection
- Shrouded plugs and sockets
- Two pairs of outlet terminator
- Timer with alarm function
- Stability
- Competitive pricing choice



Specification:

Max. Voltage: 150V • Max. Watt: 60W • Output Type: Constant Voltage • Control: Microprocessor controller • 6 Constant Voltages: 25V, 50V, 75V, 100V, 125V, 150V • Timer: 1~999mins with alarm, continuous • Safety Device: No Load detection; shrouded plugs & sockets • Operating Temp.: Ambient to 40°C • Unit Dimen.: 115x150x80mm (WxLxH) • Terminator Pairs: Two pairs; Construction Material: Frame retard ABS & aluminum rare and bottom plates • Weight: 0.6kg • Rated Voltages: 100-240V • Compact Size

Model: MP-250V/300V Power Supply

Features:

- Compact size
- Advanced power capacity: 250V, 700mA, 150W For MP-250V; 300V, 700mA, 150W For MP-300V
- Microprocessor controller
- Constant voltages or constant currents
- Four pairs of outlet terminator
- Timer with alarm function
- Advanced safety devices
- Stackability
- Wide applications for DNA, RNA and protein electrophoresis



Specification:

Output Voltage/Inc: 2-250V/IV For 250V; 2-300V/IV For 300V • Output Current/Inc: 1-700mA/1mA • Output Watt/Inc: 150W/1W • Operating Constants: Voltage or current • Control: Microprocessor controller • Terminator Pairs: 4 pairs • Timer: 1-999 mins with alarm, continuous • Safety Device: No Load detect Leakage detect Load change detect Over temperature protection Shrouded plugs and sockets Overload detect • Crossover: Yes • Operating Temperature: Ambient to 40°C • Unit Dimension: 190x290x95mm (WxLxH) For 250V; 190x275x95mm (WxLxH) For 300V • Construction: Frame retard ABS plates and aluminum • Weight: 2.5kg • Rated Voltages: 100-240V • Stackability: Yes • Compact size & lightweight

Model: MP-2000P Power Supply

Features:

- Compact size
- Advanced power capacity: 200W, 300mA, 2000V
- Microprocessor controller
- Programmable constant voltages
- Three pairs of outlet terminator
- Timer with alarm function
- No Load detection
- Leakage detection
- Shrouded plugs and sockets
- Stackability
- Wide applications for DNA, RNA and protein electrophoresis
- Better design for refrigerated condition operation



Model: MINIS-300VS, Smart Minis 300V Power Supply

Features:

- Compact size
- Power capacity: 300V 400mA, 60W
- 6 constant voltages: 50V, 100V, 150V, 200V, 250V, 300V
- Timer with alarm function
- No Load detection
- Shrouded plugs and sockets
- Two pairs of outlet terminator
- Stability
- Packages with larger Horizontal & Vertical Electrophoresis



Specification:

Max. Voltage: 300V • Max. Current: 400mA • Max. Watt: 60W • Output Type: Constant Voltage • Control: Microprocessor controller • 6 Constant Voltages: 50V, 100V, 150V, 200V, 250V, 300V • Timer: 1-999 mins with alarm, continuous • Safety Device: No Load detection • It Shrouded plugs & sockets • Operating Temp.: Ambient to 40°C • Unit Dimension: 115x150x80mm (WxLxH) • Terminator Pairs: Two pairs • Construction Material: Frame retard ABS and aluminum rare and bottom plates • Weight: 0.6kg • Rated Voltages: 100 - 240V • Compact Size • Sufficient for larger Horizontal Electrophoresis systems and Vertical Electrophoresis systems

Model: MP-500V/3AP Power Supply

Features:

- Compact size
- Advanced power capacity: 500V, 600mA, 300W For MP-500V; 3A, 300V, 300W For 3AP
- Microprocessor controller
- Advanced programmable capability
- Four pairs of outlet terminator
- LCD display
- Timer with alarm function
- Advanced safety devices
- Stackability
- Wide applications for DNA, RNA and protein electrophoresis



Specification:

Output Voltage/Inc: 5-500V/IV • Output Current/Inc: 600mA/1mA for the 500AP, 10-3000mA/10mA for 3AP • Output Watt/Inc: 300W/1W • Operating Constants: Voltage or current or Power • Control: Microprocessor controller • Program Storage: 30 programmed files • Program Multi-Step: Up to 6 steps • Terminator Pairs: 4 pairs • LCD Display: 2.6" • Timer: Constant Mode: 1 -9999 mins with alarm, continuous • Programable Mode: 1 -999 mins with alarm, continuous • Safety Device: No Load detect Leakage detect Load change detect Over voltage detect Over temperature protection Shrouded plugs and sockets Overload detect • Crossover: Yes • Operating Temperature: Ambient to 40°C • Unit Dimension: 190x275x95 mm (WxLxH) • Construction: Frame retard ABS plates and aluminum • Weight: 2.5kg • Rated Voltages: 100-240V • Stackability: Yes • Compact size & light weight

Specification:

Output Voltage /Inc: 1-2000V/IV • Output Current/Inc: 1-300mA/1mA • Output Watt /Inc: 200W/1W • Operating Constants: Voltage or Current or Power • Program Storage: 16 programmed files • Program Multi-Step: Up to 6 steps • Timer: 1-2880 mins with alarm, continuous • Display: 128x64 dot matrix display screen • Safety Device: No Load detect Leakage detect Overload detect • Operating Temperature: Ambient to 40°C • Unit Dimension: 180x280x150mm (WxLxH) • Terminator Pairs: 3 pairs • Construction: Polycarbonate • Weight: 3.0kg • Rated Voltages: 110V/ 220V selectable • Stackability: Yes • Compact size & light weight

Models: DI-010, Digimageage



MRC Digimage System is a very user friendly design for gel documentation purposes. It is a space compact instrument & having flexible options connecting with a computer for dealing with gel images just caught. Digimage System offers a competitive pricing with great value & convenience to the user. More Importantly, Digimage System is designed to comply with the CE regulation. Digimage System uses a digital camera with 8.0 mega pixel resolution. It is computer free for compact space requirements & small budget. Viewing images from the large 8" TFT color liquid crystal display is it's specific feature. It is suitable to capture image for fluorescent gels, colorimetric gels, auto radiography film, & blotting membrane and others.



Features:

- 8.0 mega pixel digital camera
- View image from a 8" TFT color monitor
- Light weight compact hood with easy access door and inner build-in light

Models: MUV21/26 Series, UV Transilluminators

The bench-top UV transilluminators offer the researcher uniform and intense sources of ultraviolet light (radiation) in a compact package. Their special design emits either one or two intensity excitation UV wavelengths for back-illumination of transparent fluorescent materials, 254nm, 312nm, 365nm and 254 & 365nm modes are available. Now there are two different filter-sized modes available, 26x21cm and 21x21cm for different user requirements.

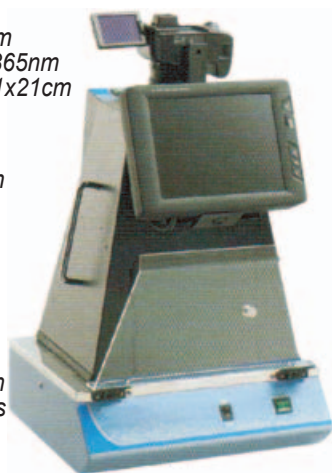
Key feature for the bench-top UV transilluminators is they can be easily view gels under long wave for extended periods of time avoiding photo nicking damage. Short wave is used to irradiate samples. In between, medium wave is suggested for general gel operating. All Bench-top Transilluminator models are compact, lightweight and economical units

Features:

- Wavelength available: 254nm or 312nm or 365nm or 254/365nm
- View Dimen.: 26x21cm or 21x21cm
- Long life time filter

Specification:

- Wavelength: 254/312/365nm
- Filter Size:
 - MUV26 series: 26x21cm
 - MUV21 series: 21x21cm
- Light Source: 8Wx6tubes
- Long life filter
- High efficiency reflector
- High/Low intensity switch
- Fast Lighting Up: new & high quality starter to let the tubes lighting up at once when switch on & no blink
- UV Resistant Plastic Cover: 330x250 mm (WxD)
- Unit Dimension: 340x295x100mm(WxDxH)
- Rated Voltages: 110V or 220V
- Weight: 7.5kg



Camera:	Canon S5IS
Effective pixels	Approx. 8.0 million
CCD	1/2.5" type CCD; Approx. 8.31 million pixels
Max field of view	29 x 22 cm
Image resolution	640 x 480 up to 3,264 x 2,448
Lens	6.0 (W) -72.0 (T) mm
F/-number	1/2.7 (W)-f/3.5 (T)
File format	Design rule for camera file system and DPOF compliant
Focus-area selection	Five-area multi AF, manual selection available
Filter	Either one 58 mm Ethidium Bromide or one SYBR Green

For detailed specification of Canon S5 IS Camera, please see P180 of Canon S5 IS Operating Manual

Hood:

Multi power source	for camera, inner light lamp, TFT screenInner white lamp x2 tubes
Safety door switch	shut down UV Transilluminator while opening the operation door
Monitor	8" TFT liquid crystal screen
Display format	960 x 234 mm
Luminance	250 cd/mm
Display mode	NTSC/PAL mode switchable
Video & audio input	Yes
Hood dimension	290x220x320mm (WxDxH)
Rated Voltages	110 or 220 Volt
Weight	4.0kg

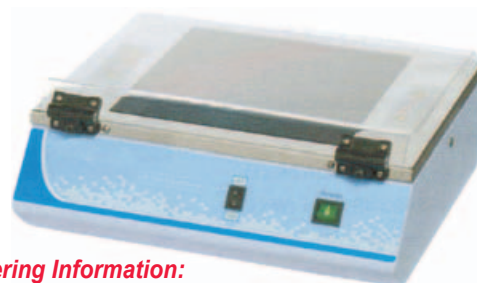
- lamps
- Computer free to capture image
- Contain safety door switch device



Ordering Information:

MUV26-254	26 x 21 cm Transilluminator for 254nm
MUV26-312	26 x 21 cm Transilluminator for 312nm
MUV26-365	26 x 21 cm Transilluminator for 365nm
MUV26-254/365	26 x 21 cm Transilluminator for 254 and 365nm

MUV-T254	8W254nmUVlamp	MUV-F26	26x21 cm filter
MUV-T312	8W312nmUVlamp	MUV-C	UV protected cover
MUV-T365	8W365nmUVlamp		



Ordering Information:

MUV21-254	21x21 cm Transilluminator for 254nm
MUV21-312	21x21 cm Transilluminator for 312nm
MUV21-365	21x21 cm Transilluminator for 365nm
MUV21-254/365	21x21 cm Transilluminator for 254 and 365nm

MUV-T254	8W254nmUVlamp	MUV-F21	21x21 cm filter
MUV-T312	8W312nmUVlamp	MUV-C	UV protected cover
MUV-T365	8W365nmUVlamp		

F Freeze Dryer

- **Automatic Programmable Control System:** From drying to defrosting, user-friendly programmable controls enable you to start runs quickly & the microprocessor controls different ramping & holding segments to meet different temp. protocols.
- **Heated Drying system:** By programmable controlling temp. by forceful circulation of the heat medium of shelf inside, it obtain a further precise distribution of temperatures.
- **Pre-freeze system:** The chamber pre-freezes sample to save money and time, eliminating the need for a separate freezer and product transfer.
- **Defrosting system:** Automatically defrosting system is available for ice condenser when defrosting is necessary.
- **Vacuum Backfilling System:** As far as the permanent preservation of the sample desiccation is concerned it protects a sample by inserting sterile nitrogen gas with back filling system for preventing contamination of the sample.
- **Safety stoppering System:** For the purpose of permanent preservation of a sample after freeze of drying, the stopper system, which seals under a vacuum state, consists an option that installs moving guides shelves delicately & that has a function to seal safely & precisely using a rotating sealing device.
- **Automatic Purge System,** It is equipped with an automated purge system to protect samples by preventing of counter-flow of vacuum pump oil.
- **Compressor delayed start function** to minimize any damage to compressor.
- **1.5 km far remote control system**



Models: FD-Series, Freeze Dryer

Model	FD5-3 FD8-3	FD5-4 FD8-4	FD5-5 FD8-5	FD5-6 FD8-6	FD5-8 FD8-8	FD5-10 FD8-10	FD5-12 FD8-12	FD5-15 FD8-15	FD5-19 FD8-19	FD5-25 FD8-25
Compressor (-58°C)	7/8HP	7/8HP	1HP	1HP	1HP	1.5HP	1.5HP	2HP	2HP	3HP
Compressor (-86°C)	2x7/8HP	2x7/8HP	2x1HP	2x1HP	2x1HP	2x1.5HP	2x1.5HP	2x2HP	2x2HP	2x3HP
Max. Ice capacity	3L	4L	5L	6L	8L	10L	12L	15L	19L	25L
ice condenser performance	2L/24h	3L/24h	3.5L/24h	4.5L/24h	5.5L/24h	8L/24h	10L/24h	12L/24h	14L/24h	20L/24h
ice condenser Ult- temp	-58°C									
ice condenser Ult- temp	-86°C									
pump suction capacity	120L	120L	120L	120L	120L	200L	200L	200L	250L	340L
controller	B T P									
pump Ult-pressure	2x10 ⁻⁴ Torr									
deforusting system	hot gas solenoid system or heater deforusting system									
gross weight (kg)	70/123	70/123	70/123	123	123	123	123	150	150	150
bench-top/ vertical	bench-top/ vertical	bench-top/ vertical	bench-top/ vertical	vertical	vertical	vertical	vertical	vertical	vertical	vertical
electrical requirement	220V, 50/60Hz single phase							380V	380V	380V

Models: PiloFD-Series, Plant Freeze Dryer

PiloFD series pilot plant freeze dryer, completely simulates the technology of industry freeze dryer, it is the best for the medium and small scale production. ARCS fully automatic control software from prefreezing to defrosting, digital signature encryption, preset shelf temperature, obtained the eutectic temperature, the triple point temperature, freeze-drying curve. Build-in computer and LCD touch screen program control, 5000 Memories, monitoring vacuum pressure, ice condenser temperature & sample temp. Documentation system, data saves per minute, continue 730 days and 5,260,000 memories, with a serial communication module, 1.5km far remote control system, easy to monitor & control.



Model	PiloFD5-511 PiloFD8-511	PiloFD5-611 PiloFD8-611	PiloFD5-811 PiloFD8-811	PiloFD5-1014 PiloFD8-1014	PiloFD5-1214 PiloFD8-1214	PiloFD5-1514 PiloFD8-1514	PiloFD5-1914 PiloFD8-1914
Max. Ice capacity	5L	6L	8L	10L	12L	15L	19L
ice condenser performance	3.5L/24H	4.5L/24H	5.5L/24H	8L/24H	10L/24H	12L/24H	14L/24H
vertical/bench-top	vertical/bench-top	vertical	vertical	vertical	vertical	vertical	vertical
power of compressor	1HP	1HP	1HP	1.5HP	1.5HP	2HP	2HP
power of compressor	2x1HP	2x1HP	2x1HP	2x1.5HP	2x1.5HP	2x2HP	2x2HP
area of stoppering shelf m ²	0.68	0.68	0.68	0.912	0.912	0.912	0.912
area of regular shelf m ²	1.14	1.14	1.14	1.368	1.368	1.368	1.368
deep of shelf	380	380	380	380	380	380	380
wide of shelf	600	600	600	600	600	600	600
gap of shelves	90	90	90	70	70	70	70
number of shelves with stoppering	3	3	3	4	4	4	4
number of shelves without stoppering	5	5	5	6	6	6	6
ult-temp. of ice condenser	-58°C or -86°C						
pump ult-preasur	2x10 ⁻⁴ Torr						
Prefreezing temp.	-30°C—55°C						
shelf temp.	-45°C—+40°C(max. 100°C)						
5ml serum bottle diameter 5mm	3400	3400	3400	4500	4500	4500	4500
number of bottles (with stoppering)	5700	5700	5700	6800	6800	6800	6800
5ml serum bottle diameter 5mm							
number of bottles (without stoppering)							

Models: RI-28/40, Large Capacity Incubators, 793 liter, 1133 liter

Models RI28 and RI40 incubators provide extra-large chamber capacities while minimizing the amount of floor space used. Both models incorporate our microprocessor controller to achieve precise temperature uniformity. A totally independent secondary temperature controller offers the added security of overtemperature protection.

The chamber floors are ruggedly reinforced to support roller apparatus or shakers.

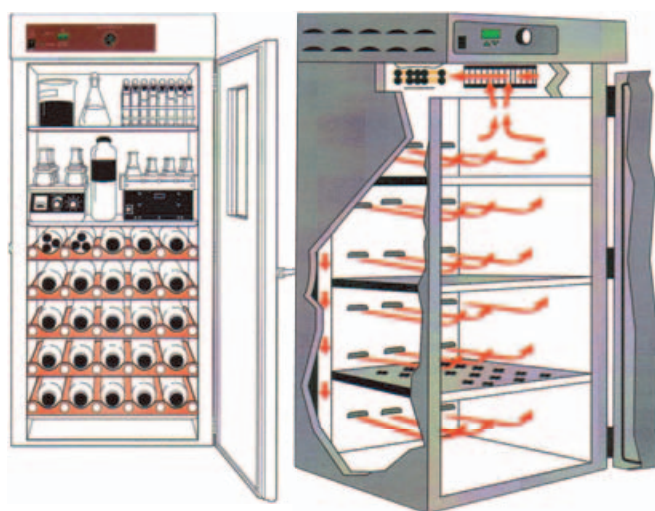
The Model RI40 also incorporates flip out ramps to facilitate the movement of equipment such as roller racks.

Both models are supplied with six (6) sturdy shelves for heavy loads.



Optimize Floor Space:

- Reach-In & Extra Large
- Horizontal Air Flow
- Four (4) Interior Electric Outlets
- Prewired Panel for Chart Recorder
- Tempered Glass Viewing Window



Specifications:

Model Number	RI28/RI28-2	RI40/RI40-2
Controls/Displays	Microprocessor/ Digital LED	Microprocessor/ Digital LED
Temperature Range	Ambient +5 to 70°C	Ambient +5 to 70°C
Temperature Uniformity	±0.5°C at 37°C	±0.5°C at 37°C
Chamber Style	Single	Single
Chamber Volume	793 Liters	1133 Liters
Exterior Dimensions in cm	91X84X19	104X86X221
Interior Dimensions in cm	79X64X158	89X66X193
Shelves/Stainless (Supplied)	6	6
(Maximum)	16	20
Adjustable on 1/2" Centers		
Interior Outlet	4	4
Tempered Safety Glass Door	Yes	Yes
Access Port	No	No
Over Temperature Safety	Independent Overtemp Protection	Independent Overtemp Protection
Electrical Requirements:		
Watts/Amps -120V	1485/8.5	1650/12.5
Watts/Amps -220V	1700/8.0	1850/8.0
Cycle/Phase	50-60/Single Phase	50-60/Single Phase

Incubators-B.O.D

Model: LI20, B.O.D. Refrigerated Incubator For 345 Bottles

These incubators meet APHA specifications for Biochemical Oxygen Demand (B.O.D.) & include a mechanical convection system to ensure even air distribution, an overload-protected refrigeration system, digital temperature set controller, safety high/low limit controls, and a digital temperature display. Units defrost automatically & the white interior makes cleaning easy. Gentle, continuous forced-air circulation ensures temp. uniformity and reproducible test conditions. In addition, units are equipped with a hermetically-sealed compressor, a circuit breaker to protect from electrical overload, and five fixed shelves. These units have a steel exterior with welded seams and corners and a double-coated, baked enamel finish.

A one amp interior outlet allows use of shakers, stirrers, roller bottles or other apparatus. Units are supplied with adjustable leveling feet and condensation drip tray.

Low Temperature Incubators are ideal for testing B.O.D. of sewage and wastewater, as well as other low and room temp. applications. Units include:

- Microprocessor Control System
- P.I.D. Temperature Control
- LED Display of Setpoint and Chamber Temperature
- High and Low Limit Thermostats
- Interior Electrical Outlet
- Fan Assisted/Forced-Air Circulation
- Hermetically Sealed Compressor



Capacity	540 liter, 19.9 cu.ft.
Interior Dimensions cm	69X59X141
Exterior Dimensions cm	86X76X196
Temperature Range	-10 to 40°C
Temperature Uniformity	±0.5°C at 20°C
Electrical Specifications	Volts: 120V/220V Hertz: 50/60Hz Watts: 1300W
Capacity of Standard B.O.D. Bottles	345
Shelving	5 Supplied

Model: LI27, B.O.D. Refrigerated Incubator For 565 Bottles

These incubators meet APHA specifications for Biochemical Oxygen Demand (B.O.D.) & include a mechanical convection system to ensure even air distribution, an overload-protected refrigeration system, digital temperature set controller, safety high/low limit controls, and a digital temperature display. Units defrost automatically & the white interior makes cleaning easy. Gentle, continuous forced-air circulation ensures temp. uniformity and reproducible test conditions. In addition, units are equipped with a hermetically-sealed compressor, a circuit breaker to protect from electrical overload, and seven shelves (adjustable in two inch increments). These units have a steel exterior with welded seams and corners and a double-coated, baked enamel finish.

A one amp interior outlet allows use of shakers, stirrers, roller bottles or other apparatus. Units are supplied with adjustable leveling feet and condensation drip tray.

Low Temperature Incubators are ideal for testing B.O.D. of sewage and wastewater, as well as other low and room temperature applications. Units include:

Capacity	750 liter, 25 cu.ft.
Interior Dimensions cm	82X55X166.5
Exterior Dimensions cm	90X90X200
Temperature Range	-10 to 40°C
Temperature Uniformity	±0.5°C at 20°C
Electrical Specifications	Volts: 120V/220V Hertz: 50/60Hz Watts: 1500W
Capacity of Standard B.O.D. Bottles	565



- Microprocessor Control System
- P.I.D. Temperature Control
- LED Display of Setpoint and Chamber Temperature
- High and Low Limit Thermostats
- Interior Electrical Outlet
- Fan Assisted/Forced-Air Circulation
- Hermetically Sealed Compressor

Incubator-Illuminated, Drosophila

Models: LI-15, Illuminated Growth Chamber, 444 liter

This illuminated growth chamber features dual-program selector dials, which allows control of two temperature conditions and an ON/OFF illumination cycle relative to the program selected. 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 and continuously circulated at a rate that ensures temperature uniformity of all test samples.

The unit is equipped with a hermetically-sealed compressor & an independent over temperature safety controller. It also includes a circuit breaker to protect from electrical overload, five fixed shelves, adjustable leveling feet, a condensation drip tray, a steel exterior with welded seams and corners, and a double-coated, baked enamel finish. In addition, one amp interior outlet allows use of shakers, stirrers, roller bottles or other apparatus.

MRC Diurnal growth chambers are designed for studies requiring day and nighttime simulation.

Units include:

- Day/Night Light and Temperature Control
- Microprocessor Control
- LED Display of Setpoint and Chamber Temperature
- High and Low Limit Temperature Protection
- Interior Electrical Outlet
- Fan Assisted/Forced-Air Circulation
- Hermetically Sealed Compressor



Capacity	444 liter, 18 cu. Ft.
Interior Dimensions in cm	69X46X140.
External Dimensions in cm	86X76X196
Internal Dimensions in cm	850 Liters
Temperature Range	10° to 40°C
Temperature Uniformity	± 0.5°C at 20°C
Electrical Specifications	Volts: 120V/220V Hertz: 50/60Hz Watts: 1350W Amps:
Capacity of Standard B.O.D. Bottles	317
Shelving	6 Supplied

Models: LIFLY-2, Superfly Drosophila Specific Low Temperature Incubator, 577 liter

Energy Saving Features...less impact on the environment, better breeding conditions and longer refrigeration compressor life.

- On and off condenser cycles prevent ice build-up.
- No costly coil replacements from pitting caused by crystallized gas contact with ice.
- Compressor cycling requires less than 25% of the energy required for standard B.O.D. incubators.

The LIFLY Superfly Incubator takes advantage of the range of temperatures acceptable in Drosophila culture.

Standard low temperature incubators are intended for Biological Oxygen Demand (B.O.D.) applications. B.O.D. incubators are designed for wastewater treatment, not Drosophila culture.

B.O.D. testing can tolerate the temperature fluxuations associated with defrost cycling to prevent freezing coils.

Fruit Flies cannot tolerate these temperature spikes.

The Superfly Drosophila specific incubator functions within the range of temperatures preferred by fruit flies. Rather than striving to maintain a distinct set point within 0.25°C, the incubator gently fluxuates between 17°C and 19°C.

220V units are available as well. Please contact MRC Manufacturing, Inc. for information about purchasing a 220V LIFLY-2 Drosophila Specific Refrigerated Incubator.



Superfly Functionality

The Superfly Drosophila Specific Incubator elements will only activate if the chamber temperature goes below the lowest acceptable level. The compressor will shut off and rest while the chamber temperature slowly rises in response to a door opening or heat from fan or optional light.

Capacity	577 liter, 20.3 cu. Ft.
Interior Dimensions in cm	67.5X59X145.
External Dimensions in cm	80X80X192.5
Temperature Range	18° to 29°C

Incubators-Humidity

Models: HC30-R, Humidity/Environmental Test Chambers, 850 liter



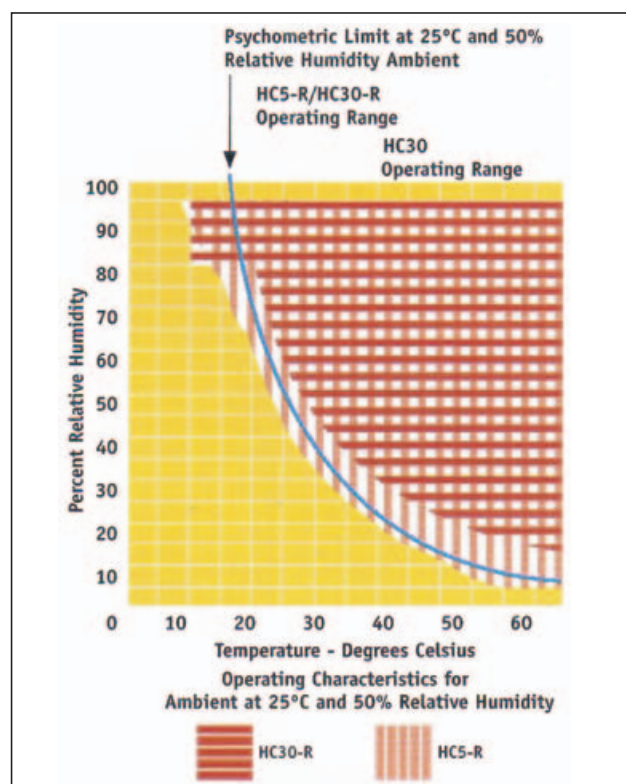
MRC Humidity Test Chambers provide a controlled environment for a wide range of industrial & biotechnical testing applications. This line is designed to duplicate natural conditions, that allows you to determine the limitations of a sample when exposed to various temperature and moisture fluctuations.

Features/Benefits:

- Stainless steel chambers are seamless for durability, corrosion resistance and quality
- Low-pressure water vapor generator system provides humidification without generating additional heat
- Microprocessor controls and digital readout display both temperature and humidity values
- Refrigerated models provide extended performance for temperature and RH ranges
- Two layers of insulation to maintain temperature & reduce heat loss

Applications:

- Shelf Life and Half-Life Testing
- Packaging
- Sterility Testing
- Mil-Specifications
- Component Burn-In
- Vapor Transmission
- Pharmacobtic



Vapor Generator for Humidity Control. MRC offers an innovative, low-pressure water vapor generator to control chamber humidification. This process compresses moisture and injects it into the chamber. Our humidity controller system is more reliable than the nebulization used by other manufacturers. This process is preferable to steam generation because steam introduces additional heat to the chamber atmosphere that can compromise temperature control. MRC's innovative vapor generator technology prevents the humidity generation components from vibrating, thus reducing maintenance and ensuring value.

Units are plumbed for standard water hookup and have a drain located in the bottom of the chamber. Operators can use a gravity feed water system or in-house water supply.

Microprocessor Controls and Digital Display for both Temperature and Humidity.

Microprocessor temperature and humidity controls with digital display provides optimal stability and allow for accurate control. Controllers have easy-to-use keypad, touch pads and a calibration feature. Setpoints have memory capabilities in the event of power outages.

Safety Features. The MRC safety controller provides independent, overtemperature protection (OTP) that operates independently from the main controller. The dual-control, failsafe function means a second system will ensure that temperature setpoint is never exceeded. By operating independently, it will take over and control the heating function if the main temperature setpoint is exceeded.

Water-Jacket Models Temperature Control. The small size Models HC5 and HC5-R feature a 16-gallon water-jacket design for optimal thermal insulation. These units are well equipped with separate fill and drain ports for quick and easy use. Uniquely designed copper strips act as a natural deterrent to algae growth and the anti-fungal door gasket is easily removed for cleaning or replacement.

Air-Jacket Models for Temperature Control. Our other floor models feature large air-jackets, that evenly disperse air within the walls to maintain excellent uniformity and ensure proper insulation. A blower is located in the top of the chamber and air ducts are on the sides.

Humidity/Env. Test Chambers Model	HC30R/HC30R-2
System Type	Humidity Test Cabinet
Controls/Display	Single Setpoint mProc.
Jacket Type	Air Jacket
Chamber Capacity (Liters)	850 Liters
Temperature Range	10° to 70°C
Temperature Uniformity	± 0.5°C at 37°C
RH Control Range	Amb. +10 to 95% at 25°C
External Dimensions in cm	109X89X216
Internal Dimensions in cm	78.7X69.8X156.2
Shelves Supplied	6 Shelves
Maximum Shelves	16 Shelves
Shipping Weight in kg	309 Kgs.
Certifications	UL, CE
Electrical Requirements	
Max. Watts at 120Vac	1680
Max. Watts at 220Vac	16500
Max. Amp draw at 120Vac	14
Max. Amp draw at 220Vac	7.5
Power Frequency/Phase	50-60 Hz/Single Phase

50 Liters CO₂ Incubator



3503

- New Anti-Corrosion Anode
- Patented Copper-Housed HEPA Filter for Superior Contamination Prevention
- Factory Pre-Set Door Thermostat
- Pre-heated CO₂ Gas Inlet for Increased Temperature Uniformity
- Front-Mounted Connections for Convenience

Model	3503
Chamber Capacity	50 Liters/1.8 cu.ft
Interior Dimensions (wxdxh)	40 x 40 x 32 cm/ 15.75 x 15.75 x 12.5 in.
Exterior Dimensions (wxdxh)	53 x 57 x 67 cm/ 21 x 22.5 x 26.5 in.
Temperature Range	8° C above ambient to 60°C
Temperature Uniformity	+/-0.2°C @37°C
Electrical Specifications	Volts: 120V/220V, 60 Watts
CO ₂ Range	0-20%
CO ₂ Sensor	Infrared (IR)
Temperature Control	Microprocessor
Jacket Type	Water Jacket
Relative Humidity Range	Up to 95%
Shelves Supplied (Max)	3(8)
Access Port	1 in. Access Port

170 Liters CO₂ Incubator



3517-2

The new look of the 3500 series includes great new features!

Our new anti-corrosion anode allows for the optional use of distilled or tap water (de-ionized water should not be used) in the large 19 gallon water jacket, fully-covered corners make cleaning a breeze and the CO₂ sample port along with all of the data logger connections have been moved to the front control panel for quick and easy access. The 3517 comes standard with an Infrared CO₂ sensor for rapid CO₂ recovery. MRC CO₂ 3500 Series Incubators come standard with the following features:

Model	3517/3517-2
Chamber Capacity	170 Liters/6.12 cu.ft
Temperature Range	Ambient +5°C to 60°C
Temperature Uniformity	±0.2°C (at 37°C)
Temperature Display Resolution	±0.1°C
CO ₂ Sensor	Infrared (IR)
CO ₂ Range	0-20%
CO ₂ Recovery Rate to 5%	<5 minutes
CO ₂ Uniformity	±0.1% @ 5%
Alarm Conditions:	
Temperature	±1°C
CO ₂	±1%
Humidity Level	95%
Exterior Dimensions (wxdxh)	66 x 65 x 102 cm/ 26.125 x 25.5 x 40
Interior Dimensions (wxdxh)	52 x 50.8 x 65.5 cm/ 20.5 x 20 x 25.8 in.
Shelves Supplied (Max)	3(16)
Net Weight	111kg / 245 lbs
Electrical Requirements	
Amps/Cycle Phase -120V	5 / 60 Hz
Amps/Cycle Phase -220V	3 / 50/60 Hz
Fitting Sizes Diameter	
Access Port	2.54 cm / 1 in.
CO ₂ Sample Port	0.95 cm / 3/8 in.
CO ₂ Inlet Port	0.95 cm / 3/8 in.
Fill Port	2.54 cm / 1 in.
Siphon Port	1.27 cm / 1/2 in.

- Coved Corners for Easy Cleaning
- New Anti-Corrosion Anode for Easy set-up & Tap Water Use
- Patented Copper-housed HEPA Filter for Superior Contamination Prevention
- Built-in CO₂ Tank Switcher
- Factory Pre-set Door Thermostat
- Pre-heated CO₂ Gas Inlet for Increased Temperature Uniformity

M Meters-Water Quality

Model: CL-2006, Chlorine Meter



Features:

- The meter measures the Free and Total chlorine (CL) in the 0.00 to 3.50ppm (mg/L).
- The measuring method is an adaptation of the USEPA Method 330.5 for waste water and Standard Method 4500-Cl G for drinking water.
- The advanced optical system based on a special narrow band LED lamp that allows most accurate and repeatable reading.

- Friendly & powerful calibration function are able to validate good performance of your meter at any time.
- 1.00ppm Free standard solution and 1.00ppm Total standard solution are included as the standard accessories.
- The unique optics structure, enables the instrument to read with high resolution: 0.01ppm (mg/L).
- Splash waterproof on the front panel.
- Jumbo LCD, easy readout

Specifications:

- Circuit: Custom one-chip of microprocessor LSI circuit.
- Display: LCD size : 41mm x 34mm.
- Range: Free & Total chlorine (CL): 0.00 to 3.50ppm (mg/L).
- Resolution: 0.01ppm (mg/L).
- Accuracy: ± 0.02 ppm (mg/L). @ 1.00 ppm (mg/L)
- Light source: LED, 525 nm.
- Light detector: Photo diode.
- Method: The measuring method is an adaptation of the USEPA Method 330.5 and Standard Method 4500-Cl G.
* The reaction between free (total) chlorine and the DPD reagent cause a pink tint in the sample.
- Response time: Less than 10 seconds.
- Sample volume: 10 mL.
- Data Hold: Freeze the display reading.
- Memory Recall: Maximum & Minimum value.
- Display Sampling Time: Approx. 1 second.
- Power off: Auto shut off saves battery life or manual off by push button.
- Calibration points: Zero chlorine. 1.00ppm (Free chlorine). 1.00ppm (Total chlorine).
- Operating Temperature: 0 to 50°C.
- Operating Humidity: Less than 85% R.H.
- Power Supply: DC 1.5V battery (UM4, AAA) x 6 PCs, or equivalent.
- Power Current: Stand by - Approx. DC 4 mA.
Testing - Approx. DC 12 mA.
- Weight: 320 g/0.70 LB. @ Battery is included.
- Dimension: 155 x 76 x 62mm.
- Accessories Included:
 - * Instruction manual.....1 PC
 - * 1.0 ppm Free Chlorine standard solution, CF-01.....1 PC
 - * 1.0 ppm Total Chlorine standard solution, CT-01.....1 PC
 - * Zero Chlorine standard solution, CL-011 PC
 - * Empty testing bottle.....2 PCs
 - * Clean cloth.....1 PC
 - * Free Chlorine DPD powder.....10 PCs
 - * Total Chlorine DPD powder.....10 PCs

Models: TU-2016, Turbidity Meter



- Designed to meet ISO 7027.
- NTU (Nephelometric TURBIDITY Unit) measuring unit.
- Wide & auto measurement range : 0 to 1,000 NTU.
- High resolution: 0.01 NTU/1 NTU.
- The unique optics structure, enables the instrument to read low value of TURBIDITY to the high level up to 1,000 NTU.
- Four operation buttons and two calibration points, easy operation.
- Jumbo LCD, easy readout.
- Microprocessor circuit assures maximum possible accuracy, provides special functions and features.

- Battery operated for field and on-site testing convenience.
- Data hold function for freezing the desired value on display.
- Records Maximum and Minimum readings with Recall.
- Heavy duty & compact housing with hard carrying case, designed for easy carry out & operation.
- Auto shut off is available to save battery life.
- Application: Test municipal water, food & beverage water, or other aqueous solution where fluid clarity is important.

Specifications for TU-2016, Turbidity Meter:

- Circuit: Custom one-chip of microprocessor LSI circuit.
- Display: LCD size : 41 mm x 34 mm
- Range: 0.00 to 50.00 NTU, 50 to 1,000 NTU
* NTU : Nephelometric Turbidity Unit
* Auto range
- Resolution: 0.01 NTU/ 1 NTU
- Accuracy: $\pm 5\%$ F.S. or ± 0.5 NTU, which ever is greater.
- Light source: LED, 850 nm.
- Detector: Photo diode
- Standard: Meet ISO 7027.
- Response time: Less than 10 seconds.
- Sample volume needed: 10 mL.
- Data Hold: Freeze the display reading.
- Memory Recall: Maximum & Minimum value.
- Display Sampling Time: Approx. 1 second.
- Power off: Auto shut off saves battery life or manual off by push button.
- Calibration points: 0 NTU, 100 NTU.
- Operating Temperature: 0 to 50.
- Operating Humidity: Less than 85% R.H.
- Power Supply: DC 1.5V battery (UM4, AAA) x 6 PCs, or equivalent.
- Power Current: Stand by Approx. DC 3.5 mA.
Testing Approx. DC 36 mA.
- Weight: 320g/0.70 LB. @ Battery is included.
- Dimension: 155 x 76 x 62 mm (6.1 x 3.0 x 2.4 inch)
- Accessories Included:
 - Testing bottle with 0 NTU standard solution.....1 PC
 - Testing bottle with 100 NTU standard solution.....1 PC
 - Empty testing bottle.....2 PCs
 - Clean cloth.....1 PC
 - Clean solution (Distill water).....1 bottle
 - Hard carrying case, CA-08.....1 PC

Model: DA-130N, Portable Density/Specific Gravity Meter**DA-130N**

Our ergonomic engineering has succeeded in offering incomparable features: lighter weight, abundant more data display and easier operations.

- Sampling volume and speed is single hand controlled. (Patent pending)
- Operative either by right or left hand, the cell can be viewed during measurement.
- Light weight allows operators to feel

tireless in the normal operations ● Viscous liquid up to ca2000 mPa.s can be sampled in ● The display shows density, temp. compensated density, specific gravity, temp. compensated specific gravity, Brix %, alcohol concentration, sulfuric acid concentration, API concentration, Baume degree, Plato & Proof degree & the like ● Graphic LCD can display temp. (C/ F), sample number, auto sensing oscillation stability, auto data saving, auto data output, data deletion, battery capacity indicator, & the like ● Life of battery is increased four times more than conventional makes, providing much longer operation time.

Specifications:

Type and model	DA-130 Portable Density/Specific Gravity Meter
Measuring method	Resonant frequency method
Measurement objects	Various kinds of liquid
Range	Density: 0.0000 to 2.0000 g/cm ³
Precision	±0.001 g/cm ³
Resolution	0.0001 g/cm ³
Temperature range	0 to 40.0°C
Storage temperature	-20 to 70°C
Display contents	Density, temperature compensated density, specific gravity, temperature compensated specific gravity, Brix %, alcohol concentration (wt%/vol%), sulfuric acid concentration, API degree, Baume degree, Plato & Proof degree and the like.
Temp. Compensation	10 kinds of coefficients per sample plus temperature to be corrected can be entered.
Auto calibration	Can store density of water at various degrees of temp. required for calibration of the measuring cell.
Sampling	By syringe type hand pump
Data storage	1, 100 samples
External output	IrDA for personal computer
Power source	Alkaline AAA dry cells (1.5V 2)
Battery life	Approx. 90 hours
Weight	Approx. 360g

Uses of DA-130N:

- Density measurement on crude oil, fuel oil, lubricants and the like
- ISO 758 for chemical products requires measurement by oscillation method for 20 C density & 20/20 C specific gravity
- Density or Brix of milk, soft drinks, fruit beverages & the like
- Alcohol degree of beer, whisky, wine and spirits
- Quality control by measuring Brix or concentration of food materials
- Density or specific gravity of oils and fats such as vegetable oils or animal oils
- Conforming to U.S. Pharmacopeia for pharmaceutical products
- Concentration control of etchant or pickling fluid for electronic components
- Concentration control on flux or plating fluid

Model: RA-130, Portable Refractometer**RA-130**

- Wide measuring range: -Brix 0~85%
-Refractive index 1.3200~1.5000
- Data storage: Up to 1100 measurements results
- Data transfer to your computer by supplied software via infrared port. Can also output via RS232C with RS converter for infrared (Option).
- Can display measurement results in Refractive Index (RI), Temperature compensated RI, Brix % and the like.
- Automatic data saving & Automatic data output can be chosen.
- Three different sucrose conversion tables Brix and isomerized sugar HFCS42, HFCS55.
- Data can be converted to user-defined concentration and the unit can be used as a concentration meter.

Specifications:

Type and model	RA-130 Portable Refractometer
Measuring method	Optical detection of critical angle with Na-D line
Measurement objects	Liquids such as water solution like fruit juices or soft drinks and organic solvents
Measuring Range	nD 1.32 ~ 1.50 Brix 0 ~ 85% HFCS42 0 ~ 76% HFCS55 0 ~ 80%
Accuracy	nD ±0.0005 Brix ±0.2% HFCS42 /55 ±0.2%
Resolution	nD 0.0001 Brix 0.1% HFCS42 /55 0.1%
Temperature range	10 ~ 40 C
Display contents	Refractive index, Temp. comp. RI, Brix, HFCS42, HFCS55 and Temperature (C/ F) Sample number, Data storage, Data output, Data deletion, Battery alarm and the like
Temp. Compensation	Up to 10 kinds of input for temperature compensation coefficients of measured samples & Compensation temperatures
Data storage	1,100 measurement results
External output	Computer or printer (either, not both) can be connected -IrDA connection is standard supplied -RS232C connection requires optional RS converter for infrared
Weight	Approx. 200g
Power source	DC 3V (2 x 1.5V alkaline AAA dry cells)
Battery life	Approx. 90 hours
Sampling Method	Two ways selective – Dipping or Dripping method available

Uses of RA-130:

- Measurement of sucrose concentration of fruit juices
- Measurement of sucrose concentration of jam and honey
- Brix measurement on beverages
- Brix measurement on liquid seasonings
- Concentration control on pharmaceutical and medical liquid samples

M Meters

Model: NDJ-8S, Digital Viscometer



NDJ-8S Digital Rotary Viscometer is a type of intelligent instrument for testing liquid viscometer. It can complete testing work under the computer's procedures & exports testing results by display. It use MCS-51 series computer to control the rotate speed & all the testing procedure. This not only make it come ture that adjust rotate speed continuously but also increase it's precision. It is widely applied in the field of pertri chemistry, medicine, food, light industry, textile industry, scientific reseatch, etc.

Specifications:

Range of Measurement of Viscosity: 10-2,000,000mpa.s(cP) ● Rotors to be used to measure: four rotors of NO.1-4 ● Rotate speed: 0.3, 0.6, 1.5, 3, 6, 12, 30, 60rpm ● Meterage error: $\pm 5\%$ (Newtonian fluids) ● Electrical power: 220V, 50Hz ● Weight: 12.0Kg ● Dimen.: 340×420×470mm ● Others: Digital display directly (rotate speed, the type of rotors, results); with RS-232 interface.

Model: 86505, pH/mV/Temp/Cond/TDS/Salt Meter

Programmable ph/orp(mv)/ conductivity /tds /salinity w/temperature & real time clock stamped
Powered by adaptor for continuously using

Super large Lcd multi-display
Collect data via rs232 by unking with a pc

Automatic ph buffer recognition for calibration up to 5 points

Hold function freezes the current readings
Max/ min review the memorized data.

Reliable probes w/temp. compensation convenient to view calibration information of probes

Ready indicator shows on Lcd is selectable stores up to 99 memories stamped w/real time automatic or manual temp. compensation able to read ph slope(%) /offset(mv) displays standard packing: manual, meter, RS232 software & serial cable, ph/cond electrodes & electrode arm, paper box & adaptor optional & replacement accessories: cond. electrode: vz830paz-graphite or vz831paz-platinum ph electrode: vz86p3az-atc, vz86p2az.w/o atc orp electrode: vz85qpaz-platinum pin type vz86p5az-platinum band type related products: 86555 (with printer).

Specifications:

Power: Adaptor 9VDC (Recommend Linear AC adaptor)

Operating Temperature: 5~40°C (41~104°F)

Operating/storage RH: Up to 95% w/o condensation

Storage Temperature: -20~60°C (-4~140°F)

Dimension: 217X168X58mm (LXWXH)

Weight: 137g App.(meter)



Model: HTR-120/HTR-220, Analytical Balance



Capacity for HTR-120: 120g, Capacity for HTR-220: 220g ● Readability: 0.1mg ● Repeatability: 0.0001g ● Non-Linearity: $\pm 0.0003g$ ● Pan size: $\phi 80mm$ ● Dimen.: 290x200x306mm ● Weighing units: mg, g, ct, oz, lb, ozt, dwt, GN ● Power Source: AC120/230V DC9V ● Out-Put: RS-232C & peripheral device output ● Measuring System: Tuning-fork frequency sensing ● Tare: Full weighing range ● Calibration: By built in weight ● Display: LCD with backlit ● Modes: weighing, counting, percentage, unit converting, density ● Weight: Approx. 2.9kg

Features:

- **Single-touch Response Setting:** You can choose 3 steps response settings for different environmental conditions.
- **Full automatic calibration by built-in weight:** The balance can automatically calibrate itself by time & temp.-controlled system to maintain the balance in good condition.
- **Automatic Repeatability Measurement(ARM):** In ARM function, you can easily check the condition of the balance by calculating the standard deviation of repeatability.
- **Bright&Large display screen with back-light**
- **Anti-electrostatic plastic windshield:** Transparent windshield composed of permanently anti-electrostatic plastic
- **Density measurement mode:** Density of solids and/or liquids can be measured with optional density measurement kit.

Model: YK-2005WA, DO, CD/TDS Meter



One meter for multi purpose operation:
PH/ORP, DO, CD/ TDS Meter ● pH: 0 to 14.00pH, ORP: $\pm 1999mV$ ● Conductivity: 200 $\mu S/2mS/20mS/200mS$ ● Dissolved oxygen : 0 to 20.0 mg/L ● ATC (automatic temp. compensation) ● Real time data logger (record year, month, date, hour, minute, second), 16,000 data logger

- Max., Min., Data hold ● RS-232 computer interface ● Optional electrode: pH, ORP, CD/TDS, DO, ATC probe ● Jumbo LCD display ● DC 1.5V (UM-3, AA) x 4 PCs or DC 9V adapter in ● Size: 203x76x38mm.

Specifications:

Circuit: Custom one-chip of microprocessor LSI cicurit ● Display: LCD size: 58mm x 34mm ● Measurement: PH/ORP, Conductivity/TDS(Total Dissolved Solids), Dissolved Oxygen ● Sampling Time of Data Logger: Manual - Push the data logger Button once will save data one time. @Set the sampling time to 0 second. Auto - 1 sec to 8 hour 59 min. 59 sec ● Data Hold: Freeze the display reading ● Memory Recall: Max. & Min. value ● Sampling Time of display: Approx. 1 second ● Data Output: RS 232 PC serial interface.

Model: UT-2100C, Microplate Reader



Features:

Bichromatic optic system with 4 wavelengths • 8-channel optic fibre system, get reading result in just 5 seconds • Large LCD display, Win CE compatible operating system • Touch-screen or external mouse • Large memory to store 500 results • Shaking plate feature • Performing 12 different tests just in one plate • Multi-forms in result output including patient comprehensive report • Built-in modem support long-distance maintenance and software upgrade(optional)

Specifications:

Vessel: standard 96-well microtiter plates, or strip trays • Linear Measurement Range: 0.000-3.200 Abs • Calculation Modes: single point calibration, uptake mode, point-to-point curve fit, polynomial regression, linear regression; (log and linear), cutoff absorbance, multipoint absorbance • Wavelengths: standard 405, 450, 490 & 630nm • Accuracy: $\pm 1\%$ • Light Source: tungsten lamp • Mixer: variable time and speed • Display: 320x240 LCD • Input: touch-screen or external mouse • Printer: external printer • Memory: 500 tests & 10000 results • Interface: RS-232 & parallel port • Processor: RISC processor • Power Requirements: 110V-260VAC, 50-60HZ • Dimen.: 460(L)x330(W)x190mm(H) • Weights: 12kg • Certification: ISO 9001, CE

Model: UT-2600C, Auto Microplate Washer



Features:

Flat, U or V-bottom plates & strips washing • Large LCD display, Win CE compatible operating system • Large memory to store up to 48 user programmed wash protocols • Automatic monitoring of vacuum & pressure, automatic rinse cycle • Low residual volume • 12-way manifold included & 8-way optional • Emergency stop available • Liquid warning.

Specifications:

Residual Volume: <3 μ l (standard); <3 μ l (double probes) • Dispense accuracy: <3% cv at 300 μ l • Veracity: $\pm 2\%$ at 300 μ l • Microprocessor: RISC processor • Memory: 48 user entered wash protocols, 16 factory programmed wash modes • Display: 90x53 LCD • Liquid control: 50 μ l-3ml at 8-probe head; 50 μ l-12ml at 12-probe head • Bottles: Wash, Waste & rinse 2L, Plastic with volume sensor probes • Dimensions: Approx 405x343x175mm • Weight: Approx 13kg • Power requirements: 115V-250 VAC, 50-60HZ • Certification: ISO 9001, CE

Models: DBC-8E, Blood Counter



Specifications:

Leucocytes 8 units • Totalizer Yes • Control Microprocessor • Display LED 0-999 • Alarm at 100 Buzzer • % Display Yes • Clear Yes • Net weight 2.0 kg • Functions Clear, Lock Decrease, %

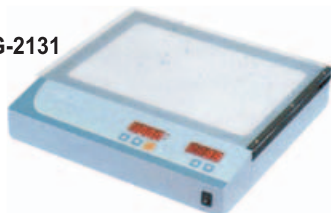
Features:

- 8 units lab-count with totalizer. For simplifying differential blood cell counts.
- The 8 keys represent the normal Schilling Groups of Leucocytes. The above keys are the name and picture of particular cell.
- Each stroke registers both in the unit correspond-ing to its pressed key & in the window.
- When a total of every 100 cells are counted, a bell rings.
- DBC-8E features the percentage of each type of cell to be read from the window above each key. Manually count and display from 0 – 999.
- Counter clockwise rotate handle, it will clear figures.

Models: MG-2131/MG-3545, Midi Gel Dryer



MG-2131



MG-3545



Midi Gel Dryer contains optimal sealing of silicon rubber with mask.

The microprocessor control temperature (from ambient +5°C to 90°C with timer from 0 to 999 mins), the gels are heated from base plate & the vacuum remove the moisture from below to dry the gel homogeneously. When applying the vacuum a groove that frames the drying surface provides optimal tight seal during the drying.

The drying area for MG-21 31 is 21x31cm & MG-3545 is 35x45cm.

Features:

- Drying Area: 210x310mm (LxW); 350x450mm (LxW)
- Microprocessor for temperature control
- Timer with alarm
- 2 digital LED display

Specification:

Display: Two of 4 digital LED • Controller: Digital Microprocessor Controller • Temp. Increment: 0.1°C • Temp. Calculation: Yes • Temp. Uniformity: $\pm 0.2^\circ\text{C}$ • Tinner: 0-999 mins • Operating Temperature: Ambient to 90°C • Drying Area Dimen.: MG-2131 - 210x310mm(WxL); MG-3545 - 350x450mm (WxL) • Weight: 9.0kg for MG-2131 15.0kg for MG-3545

M Microscopes

Model: XJP-6A, Metallurgical



Inverted Metallurgical Microscope is suitable to observe the object. It is achromatic objectives & wide-field eyepieces.

It provides clear & high-contrast picture, & with polarizer device, it is the ideal instrument in research work in metallography, mineralogy, precision engineering, electronics etc. it's suitable for scientific research, teaching demonstration, in the colleges & factory.

Note: in this table, "■" denotes a standard attachment, "○" denotes an optional accessory.

Design change: To keep pace with technological advances, we have reserved the right to make design modifications & changes without notice.

Package dimension: 665mm x 310mm

Net weight: 14kg

Gross weight: 19kg

Order No.	Item	Standard Outfits	
		XJP-6	XJP-6A
	Main Body	■	■
SO9	Mechanical stage with a stroke of 75 by 50 & size of 180 by 155	■	■
EP10	Plan eyepiece 10X-18	■ ■	■ ■
EP12.5	Plan eyepiece 12X-14	■ ■	■ ■
EH5	Huygenian ocular 5X-20	○ ○	○ ○
EW10	Plan eyepiece 10X-20	○ ○	○ ○
Epr10b	Plan reticle eyepiece 10X-14	■	■
B-OAr4	Achromat objective 4/0.10	■	
M-OA10	Achromat objective 10/0.25	■	
M-OSPr40	S-plan achromat objective 40/0.65	■	
M-OAor100	Achromat objective 100/1.25oil	■	
B-OPr2.5	Plan achromat objective 2.5/0.07	○	○
B-OPr4	Plan achromat objective 4/0.10		○
M-OPr10	Plan achromat objective 10/0.25		■
M-OPr20	Plan achromat objective 20/0.35	○	■
M-OPr40a	Plan achromat objective 40/0.65		■
M-OSPor100	S-plan achromat objective 100/1.25 oil		■
9J-6	Stage plate(1)	■	■
9J-7	Stage plate(2)	■	■
9J-8	Stage plate(3)	■	■
9J-9	Stage plate(4)	○	○
9J-11	Stage plate holder	■	■
TBR03	Rotating binocular head(45oC)	■	■
LH01	Lamp housing	■	■
	Halogen lamp 6V30W	■ ■	■ ■
PO02	Polarizer	■	■
PA01	Analyzer	■	■
CL02	Specimen clamps	■	■
9J.7	Photo adaptor	○	○
EPHp5	Photo eyepiece S5X	○	○
EPHp6.3	Photo eyepiece S6.3X	○	○
EPHp0.65	Video eyepiece 0.65X	○	○
	Metallurgical microphotography equipments	○	○
	35mm DF camera with shutter release	○	○
SC03	Specimen holder	○	○
	Stage micrometer (division 0.01mm)	○	○

Model: XJL-101A, Wafer inspection Microscopes



XJL-101 series the reflected light microscope is suitable to observe the microscopical surfaces of non-transparent object. It is equipped with large move range stage, vertical illumination, plan achromatic objectives and wide-field eyepieces. It provides clear and high-contrast picture, & with polarizer device, it is the ideal instrument in research work in metallography, mineralogy, precision engineering, electronics etc. it's suitable for scientific research, teaching demonstration, in the colleges & factory.

Model				XJL-101	XJL-101A
Eyepieces	Wide Field	WF10X(Ø18mm)		■	■
		WF16X(Ø11mm)		○	○
	Plan Dividing	10X(0.10mm/div)		○	○
Objectives	Plan achromatic (No cover glass)	Magnification/N.A	Work distance		
		PL5X/0.12	18.3	■	■
		PL10X/0.25	8.9	■	■
		PL25X/0.40	8.7	■	■
		PL40X/0.60	3.7	■	■
		PL50X/0.70	2.02	○	○
	PL80X/0.80	0.96	■	■	
Eyepieces Tube	Trinocular	Compensation (inclination of 30°) Including analyzer		■	■
Stage	Size: 250x250mm can be move quickly. Move Range: 153x153mm			■	
	Size: 274x274mm can be move quickly. Move Range: 203x203mm				■
Nosepiece	Backward inner locating on ball bearing	Quintuple		■	■
CCD Camera Accessories	0.4xCCD Camera adapter			○	○
	CCD Camera adapter			○	○
	0.5xCCD Camera adapter with dividing			○	○
	CCD Camera			○	○
Illumination unit	Vertical illuminator 6V 20W halogen lamp. adjustable brightness, with polarizer			■	■
Dig. Camera Adapter	CCD camera and accessories			○	○

Model: DMW, Precision Zoom Stereo Digital Microscope



Microscope Specification:

Head	Stereo Microscope Trinocular Head 45° inclined with 3rd tube as built in Digital Camera
Eyepieces	Widefield WF10X/20mm with diopter control on both eyetubes
Magnification	Stereo Zoom with 1:4 zoom ratio
Stand	Pole-Type Stand with Large Working Surface (FBGG) Pole-type Compact Stand (N2GG)
Focusing	Ergonomic & Large Focusing Controls
Illumination	incident 12V/15W with stepless Intensity control. Transmitted 12V/10W with stepless Intensity control
Microscope Power Supply	110V-240V Variable Voltage

Digital Specifications:

Imaging Device	Analog/Digital 1/3" CCD	Data Connections	USB; RCA; S-Video
Effective Pixels	712x582 (PAL); 768x494 (NTSC)	Camera Power Supply	12V external power supply
Max. Still Image Resolution	640x480	Minimum System Requirements	Pentium II, 1 GB unused hard disk space, 128MB RAM, 16MB Display Memory, Windows 98SE, ME, 2000 or XP
Framed Resolution	480 TV Lines	Included Software	Motic images Plus 2.0 Multi Language
Max. Frame Rate	10tps @ 640x480; 30fps @ 320x240	Calibration Slide	Motic Certified printed calibration slide
Max. Data Transfer	7.5MB / Second through USB 1.0/1.1 connection		



Model: BA200, Transmitted Light Teaching & Laboratory Microscope

The BA200 provides high resolution & excellent optical performance for all clinics, institutes and universities.

The T-shaped base & pyramid-designed frame provide superb stability & mechanical design to achieve ergonomic & fatigue-free operation. This microscope has maximum performance on a minimum footprint saving valuable desk space. Stage, focusing & illumination controls can be reached while resting your hands on the table. Carrying of the microscope is made easy by a handle within the stage.

Siedentopf Observation Tube:

The 30° inclined tubes are ideal for both comfort and posture management. The focus is retained even when the interpupillary distance is varied. Trinocular tube with light distribution = 100%, Binocular / photo = 0 / 100.

Rectangular Mechanical Stage:

The 140x135mm stage incorporates a ball bearing mechanism with a triangular steel rail which allows smooth cross travel motion of 76x50mm & vernier scale readability to 0.1mm.

Fine/Coarse Coaxial Focusing:

Coaxial coarse and fine focusing mechanism is manufactured using stable & a reliable triangular rail system for durable operation of the microscope. Tension adjustable. Focusing range 25mm with minimum increment 2mm. A flat fine focus wheel (or knob) with finger grip permits sensible and fast focusing.



Model: DMBA200, CCIS Digital Teaching & Laboratory Microscope

- Combining the power of the BA200's CCIS Infinity Optical System with a built-in 3.0 Megapixel camera, the DMBA200 is a versatile tool both in the classroom as well as the laboratory environment
- Excellent ergonomic design features make this microscope exceptionally comfortable to use
- Simply connect the microscope to your computer using the supplied Plug & Play USB2.0 cable
- View real-time images on your computer screen at a maximum resolution of 3 Megapixel live imaging
- Motic Images Plus 2.0 application software is included for Windows XP, Vista as well as Macintosh OSX

Digital Specifications:

Imaging Device	3.0 Megapixels live imaging chip	Camera Power Supply	5V Self-power through USB connection
Effective Pixels	2048x1536	Minimum System Requirements	Intel Centrino, 1GB unused hard disk space, 256MB RAM, 32MB Display Memory, Windows XP or higher or Macintosh OSX
Max. Still Image Resolution	2048x1536	Included Software	Motic images Plus 2.0
Scanning System	Progressive Scan	Calibrate Slide	Motic Certified printed calibration slide
Max. Data Transfer	480MB / Second through USB2 connection		
Minimum Illumination	3 Lux		

M Microscope-Comparator



Model: RPP-350 Series, With Motorized Focusing

Sophisticated Instrument with Data Processor or Software for precise measurements

Standard Features:

Compact light weight Table Top with easy operations • 360mm dia. screen with 90° cross line & chart holders • Projection Light Source with 24V/1 SOW Halogen Lamp • Double Oblique Light Source for Surface Illumination • Two adjustable dichroic reflector lamps 12V/100W each • Motorised Focusing with 60mm focusing range • High Quality objective lenses. Optical distortion below 0.15% • Standard magnifications : 10x, Optional : 20x, 50x & 100x • High Quality European made objective lenses. Optical distortion below 0.1% • Optional Work Tables for Micrometer Heads & for linear scales with Digital Readout • Cooling by built-in noiseless & vibration free fan • Available in 110V & 220V through low voltage transformers • Supplied complete with operating instruction manual • Optional Cabinet base metal stand.

Projection Capacity:

	Contour Illumination				Surface Illumination			
Magnification	10x	20x	50x	100x	10x	20x	50x	100x
View Field Diam. (mm)	36	18	7.2	3.6	36	18	7.2	3.6
Working Distance (mm)	115	95	46	35	115	95	46	35

Common Specifications:

Models		RPP-350	RPP-3000	RPP-250
Projected image			Inverted	
Protractor Screen	Effective Diameter	360mm	300mm	250mm
	Screen material	Fine ground glass		
	Reference line	90° Cross Hair Line		
	Angle display	LED with resolution 1' or 0.01°	Vernier with resolution 6 min. LED with resolution 1' or 0.01°	Vernier with resolution 6 min.
Projection Lens		10X		
Magnification Accuracy	Contour illumination	±0.10% or less	±0.11% or less	±0.15% or less
	Surface Illumination	±0.12% or less	±0.15% or less	±0.16% or less
Contour Illumination	Light source	24V/1 SOW Halogen		
	Optical System	Telecentric		
	Functions	Brightness Control, Fan cooling		
Surface Illumination	Light source	12V/100W Halogen		
	Optical System	Double Light Source with dichoric halogen lamp with faceted surface for bright illumination		
Focussing		Motorized	Floating	Rack & Pinion
Power Supply		110/240VAC, 50/60Hz		
Net Weight		150Kgs.	75Kgs.to95Kgs.	40Kgs.
Standard Accessories		10x Projection Lens, Halogen Bulb, Vinyl Cover, Fuse, Cleaning Cloth and Operating Manual		

Model No. & Specifications:

Models	RPP-350	RPP-350DM	RPP-350DR
X-Y Range	75x75mm	75x75mm	200x100mm
Effective Table Area	125x125mm	125x125mm	275x180mm
Measuring Unit	Micrometer Heads	Digimatic Micrometer Heads	Built-in Linear Scales
Resolution	0.001mm	0.0001mm	0.0001mm/0.00005"
X-Y Counter	No	No	Yes
Angle Counter	Optional	Optional	N
Optical Edge Detector	No	Yes	No
Rotary Measuring Stage	Yes	Yes	Optional
Table Size	150x150mm	150x150mm	310x250mm
Maximum Workpiece Height	116mm	116mm	110mm
RPP Software	No	No	No
Dimensions/Weight	50x84x104cms./150Kgs.		

Models	RPP-350DRA	RPP-350DRS	RPP-350DP
X-Y Range	200x100mm	200x100mm	200x100mm
Effective Table Area	275x180mm	275x180mm	275x180mm
Measuring Unit	Built-in Linear Scales	Built-in Linear Scales	Built-in Linear Scales
Resolution	0.0001mm/0.00005"	0.0001mm/0.00005"	0.0001mm/0.00005"
X-Y Counter	Yes	Yes	Yes
Angle Counter	Yes	Yes	Yes
Optical Edge Detector	No	No	Yes
Rotary Measuring Stage	Optional	Optional	Optional
Table Size	310x250mm	310x250mm	310x250mm
Maximum Workpiece Height	110mm	110mm	110mm
RPP Software	No	Yes	No
Dimensions/Weight			

Models: YCO-10, IN-010, Small Oven 250 deg C, Incubator, 16 liter, 36 liter

• **Microprocessor Controlled System** • **State-Of-The Art Design** • **Excellent Uniformity** • **Forced Air Convection**

Intended use: YCO-010 : General purposes for applications in variety of baking, drying, conditioning, preheating, curing for dry content analysis, chemical resistance studies, glassware drying, dry sterilizer etc. IN-010: For microbiological studies for tissue & viruses incubation.

Features:

All equipment features a double-walled construction for durability and good heat retention • The fiberglass insulation & silicon door gasket prevent heat loss & maximize energized efficiency • Adjustable fresh air inlet port at bottom and top provides control of the amount of convective air. All equipment is accommodated with stainless steel wire-rod shelves with adjustable height • Incubator features a glass viewfinder easy for monitoring lab sample without disturbing chamber environment • Stainless steel interior chamber & heavy gauge steel exterior body with baked enamel finish. PID (proportional/integral) temperature control with PT-100 sensor ensures accurate temperature regulation • Timer both sterilizer & incubator starts to work only when the set temperature has stabilized • Forced convection mounted with fan stirrer ensures the best effect of temperature uniformity.

Specifications: Microprocessor Controlled System (Forced-Air Convection by Fan)

Model	Oven YCO-010/Wattage	Incubator IN-010/Wattage
Chamber 16L	250x250x250mm/750W	250x250x250mm/350W
Chamber 36L	330x330x330mm/750W	330x330x330mm/350W
Temperature range	Ambient + 5°C - 250°C	Ambient + 5°C - 75°C
Overheating protection	Alarm & shutoff	Alarm & shutoff
Resolution	1.0°C	0.1 °C
Stability	±0.1°C at 180°C	±0.1°C at 37°C
Accuracy	±0.5°C at 180°C	±0.2°C at 37°C
Uniformity	±3.0°C at 180°C	±2.0°C at 37°C
Sensor	" K " type	PT-100
Timer	Digital, 9 hrs 59 min.	Digital, 99 hrs 59 min.+HOLD
Standard accessories	2 stainless steel shelves	2 stainless steel shelves
Over temperature protection	Alarm & shutout automatically 10°C to the set point	Alarm & shutout automatically 4°C to the set point
Indicators	SV, PV, Power, Heating, Alarm Operation, Timer	SV, PV, Power, Heating, Alarm Operation, Timer
Safety devices	Various	Various
Quality standard	ISO9001 +1 3485, CE marking GMP, PDA	ISO9001 +13485, CE marking, GMP, PDA



YCO-010, OVEN



IN-010, INCUBATOR

Models: ZRD-A5030/5055, 30 liter, 50 liter Ovens, 200 deg C

Features:

Sound heat insulation design & the transparent glass door meet European security standard • Automatic poweron and poweroff, timing operation, clock indicating, power-off recovery, parameter recalling and encryption, temperature indicating & correcting, Optional: RS-232 interface & built-in microprinter • Monitoring timer, independent exceeding guard, over temperature protector (adjustable), and independent seepage & trip protector. • Self-diagnosed techniques, such as power cut alarm, sensor failure alarm, & upper and lower temperature limit exceeding alarm. • Highly responsive thermal sensor & environmental scanning microprocessor chip. • Three-dimensional heating technology ensures the solid temperature uniformity in the working chamber. • Sound airway structure & gentle airflow circulation design. • Unique design of chamber guarantees the cleanliness of the sample. • Mirror stainless steel chamber, electro polished stainless steel shelves & toughened glass internal door. • The luxurious and elegant profile with aesthetic designing.



ZRD-5030

ZRD	Control Mode	Blow Mode	Temp. Range(°C)	Temp. Adjusting Precision(°C)	Temp. Fluctuations(°C)	Temp. Uniformity (°C)
A5030 A5055	Fuzzy Logic Control Technology	Back Horizontal Airflow	Ambient +5~200	≤±0.2 (180°C)	≤±0.1	≤±2.0 (200°C)

ZRD	Capacity(L)	Net Weight (kg)	Interior Dimension(mm)	Exterior Dimension(mm)	Power (W)	Voltage
A5030	30	40	300x300x340	490x430x720	600	AC 220V 50/60Hz
A5055	55	50	330x360x450	520x490x830	800	

Option: Individualized 10 segments, 18-step preset programs achieve temp. preset timing programs or reciprocating, stepped, ladderlike temperature running.

Ovens-300 deg C

Models: PF30/60/120/200, 28 liter, 66 liter, 128 liter, 230 liter, 300 deg C Ovens

Outstanding Features:

• Stylish and robust

The outer cases are fabricated from corrosion resistant zinc coated mild steel & finished in two tone hard wearing stoved epoxy/polyester coating.

The inner case is constructed from polished stainless steel. All units are provided with non-tilt bright nickel wire plated shelves with multi-position settings for convenient loading and unloading.

• Adjustable air ventilation

The chamber ventilation and exhaust vent are easily adjustable from the front control panel, on all bench top models.

• Digital temperature control

The control module is able to house many variations of digital instrumentation with simultaneous display of measured and set temperature. Microprocessor based PID controllers are fitted as standard.

Economy and efficiency

Insulation around the oven chamber utilises totally encased fibre material. This material has a very low

- thermal mass and thermal conductivity, ensuring very efficient insulation.

This also ensures reduced holding power, making the units economical to operate once set temperature has been reached.

Door action

A flush fitting door latch with a concealed mechanism is both simple to use & provides a handle when unlatched.

- The lever action ensures gentle closure. The door seal design includes a newly formulated silicone compound, providing longer life & durability at maximum temp. The design also allows convenient replacement if necessary.

Control panel

The side mounted control panel avoids damage from

- accidental spillage.

Safety standards

All units meet the relevant European health and

- safety at work legislation & the performance criteria of BS 2648 and DIN 50-011. They are manufactured to comply with BS EN 61010: safety standard & also the low voltage and EMC European Directives.

Options

- Range of over temp. protection systems in accordance with DIN12-880 Part 2.
- Stoving & curing option available for processes involving liberation of flammable vapours.
- Timers: Process timers -manual or automatic. Mechanical or electronic time switches
- Top access port for independent probe
- Lockable door latch
- Exhaust fan *
- Variable speed fan *
- Inert gas connection *
- Flow meter & needle valve
- Viewing window in door *
- Interior light
- Air inlet filter
- Cable entry port *
- Door switch
- Stands & trolleys
- Chart recorders

* These options may affect Chamber Uniformity

Bench top ovens:

This modern range of ovens provides a combination of excellent performance and reliability.

Increased power and low thermal mass encased fibre insulation ensure both fast heat up times & reduced recovery times. Reduced holding power once at set temperature, together with the insulation, makes the range economical & outer case temperatures have been significantly reduced. Both gravity & forced air circulation models are available with a wide choice of control options allowing the most critical performance criteria to be met. Where processes involve the liberation of flammable vapours, a stoving and curing option is available. Also, where processes involve large amounts of water, a moisture extraction option is available.



Model	PF30	PF60	PF120	PF200
Max. Temp (°C)	300	300	300	300
Chamber Dimensions (mm)	(H) 300 (W) 292 (D) 320	400 392 420	500 492 520	750 592 520
External Dimensions (mm)	(H) 470 (W) 665 (D) 470	570 765 570	670 865 670	920 965 670
Chamber Capacity (Litres)	28	66	128	230
Weight (kg)	30	45	60	75
Shelves				
number supplied	2	2	2	2
max. possible	3	5	9	15
max. dist load/shelf kg	10	10	10	10
max. load kg	20	30	40	50
Performance				
Power Rating at 240V (watts)	1000	1500	2000	2700
Holding Power* at Max. Temp. (watts)	350	600	800	1250
Temp. Uniformity* (At Max. temp. as a%)	±1.0	±1.0	±1.0	±1.0
Temp. Stability on/off control (°C)	±1.0	±1.0	±1.0	±1.0
Temp. Stability PID control (°C)	±0.2	±0.2	±0.2	±0.2
Heat Up Times* (mins)	100°C 4.5 200°C 12 300°C 25	4.5 12 25	4.5 12 25	5.5 14 30
Recovery Times* (mins)	100°C 1 200°C 2.5 Door Open 60secs 4	1 2.5 4	1 2.5 4	1.5 3 5
Air Exchanges vol (l/h) @ 100°C	1400	1400	1400	1400
Air Exchanges	50	21	11	6

Note: A uniformity of ±1%=±1°C at 100°C

*With vents closed.

Model: LHT30/60/120, High Temperature Ovens up to 600°C, 30 liter, 60 liter, 120 liter



LHT-60

MRC high temperature range of ovens operating at temp. up to 600°C is offered in three sizes. All models are capable of continuous operation at maximum temperature. The outer cases are fabricated from corrosion resistant zinc coated mild steel & finished in two tone hard wearing stoved epoxy/polyester coating. The inner chamber is constructed from polished stainless steel which provides resistance to chemical attack & allows easy cleaning after use. All units are provided with stainless steel shelves with multi-position settings for convenient loading & unloading.

Maintenance free heating elements and fan motor are fitted. Low thermal mass insulation materials are used throughout in order to achieve rapid heating and to allow efficient energy utilisation.

The heavy duty fan ensures optimum temperature uniformity throughout the work chamber. Double skin construction provides a cool safe outer case.

Digital temperature control

The control module is able to house many variations of digital instrumentation with simultaneous display of measured and set temperature. Microprocessor based PID controllers are fitted as standard.

Model	400°C 500°C 600°C	LHT 4/30 LHT 5/30 LHT 6/30	LHT 4/60 LHT 5/60 LHT 6/60	LHT 4/120 LHT 5/120 LHT 6/120
Chamber (H)		300	400	650
Dimensions (W)		300	400	480
(mm) (D)		305	405	405
External (H)		570	670	920
Dimensions (W)		830	930	1030
(mm) (D)		570	670	670
Usable Volume(liters)		30	60	120
Heat up time (mins)	400°C 500°C 600°C	50 75 120	50 75 120	50 75 120
Recovery time (mins)	400°C 500°C 600°C	10 16 20	10 16 20	10 16 20
Temp. stability				
On/off control		±1.5°C	±1.5°C	±1.5°C
PID control		±0.5°C	±0.5°C	±0.5°C
Temp. uniformity (at 600°C)		±5°C	±5°C	±5°C
Power (Watts)	400°C 500°C 600°C	1000 2000 2000	1500 2250 2250	2250 3000 3000
No of shelves supplied		2	2	2
Weight (kg)		73	99	179

Model: HF2-2, CleanRoom Oven, 124 liter, 300 deg C



Model HF2-2 High Performance Clean Room Oven, The MRC clean air ovens incorporate all the special features needed for high temp. cleanroom work: a seam welded, Type 304 stainless steel interior, including two stainless steel shelves, rapid heat recovery, & two separate LED digital displays for time & temperature that show setpoint or up-to-the-second process information. The Watlow* PID (Proportional Integral Differential) controller provides 24-step ramp & soak, 0.1°C control, and multiple levels of operator access. A sealed membrane touch-pad control panel protects the controllers. Adjustable 3 air intake and exhaust ducts are easily removed for cleaning, & allow use of either room or recirculated air. A nitrogen inlet port for purging is standard to prevent contamination. With 3.5 inches of high-temperature, wrap-around insulation & a high-temperature silicone rubber door seal. Punched stainless steel shelves adjustable on 0.5 inch centers.



HF2-2

System Type	Inert Atmosphere Cleanroom Mechanical Convection
Controls/Display	24-Step Programmable
Chamber Capacity	124.6 Liters
Temperature Range	Amb. +15 to 300°C
Temperature Uniformity	±1.0°C at 110°C
High Limit Control	Yes
Heat-up time to 180°C	20 minutes
Recovery time to 110°C	4 minutes
Timer	Yes

External Dimensions	89x73.7x96.5cm
Internal Dimensions	43.2x51x51cm
Shelves Supplied	2 Shelves
Maximum Shelves	8 Shelves
Shipping Weight in Kg	109
Certifications	UL, CE
Element Watage	2200
Electrical Requirements	Max. Amp draw at 120Vac: N/A Max. Amp draw at 220Vac: 12 Power Frequency/Phase: 50-60 Hz/Single Phase

Ovens-Solvent Evaporating

Models: PF Stoving & Curing, Solvent Evaporating Ovens, 300 deg C

Most vapour explosions in ovens occur when materials that can absorb large quantities of solvent are being processed; typical examples being coils & similar electrical equipment, fibreboard and textiles. Every flammable solvent has a lower and upper flammable limit, and unless the concentration of the solvent vapour is within this range it will not explode. The range widens, for most solvents, with increasing temperature.

Precautions must be taken to ensure that no substantial volume of vapour/air mixture within the range of flammability can occur in the oven. It is not sufficient to permit an explosive mixture to form and attempt to obtain safety by preventing foreseeable means of ignition. The precautions must be directed towards keeping the concentration of solvent vapour down and this is achieved by permitting only the minimum quantity of solvent to enter the oven and by ventilating the oven continuously in use, to dilute the solvent vapours emitted to one quarter of the lower flammable limit.

The "flash-point" of a substance is the temperature at which it evolves sufficient vapour to form an ignitable mixture with air when tested under standard conditions. Thus, if the flash point of a liquid is below the temperature of the work room it will give off vapour until (and beyond) the point where the whole room is full of a flammable mixture, or until all the liquid has evaporated. If the flash point is higher than room temperature, then the liquid will never give off enough vapour to form a flammable mixture in the room.

Low flash point solvents are thus intrinsically dangerous. However, the choice of a solvent with a high flash point will usually make no difference to the safety of the oven used to evaporate it, since the oven almost inevitably has a working temperature higher than the flash point. It is still most desirable to choose solvents with the highest possible flash points to reduce danger at the dipping, spraying and other processes prior to the oven.

Pre-Treatment

The first step should be to limit as far as possible the amount of solvent entering the oven at each loading. Particular care is needed with articles which have been dipped in paint or varnish to give a thicker coating than is usually obtained by spraying. As much drying as possible should be carried out before the articles are added into the oven. Where the process permits, it is a good practice, both for safety and economy of heat, to allow the load to remain for a short time in a semi-enclosure provided with mechanical exhaust ventilation, so that air at room temperature can remove some of the solvent. This arrangement also has the advantage that dripping in this oven is reduced, whereby the accumulation of paint and varnish residues in the oven became less of a problem.

Ventilation

Reliance on natural convection currents up the chimney is not normally an acceptable method of introducing sufficient fresh air into the oven to prevent a solvent/air explosion mixture forming. The oven should be fitted with mechanical exhaust ventilation. It is important that the exhaust draught should be applied at points in the oven where the rate of evaporation is a maximum, and that there are no dead spots in the oven space where there is little air movement, with little dilution of the flammable vapours as a result. In order to improve the temperature distribution and to obtain an even flow of air throughout the oven it is normal to have some form of air recirculation.

A proportion of the vapour and fume laden air should be extracted through a flue fitted with its own separate exhaust fan. Reliance on spillage of sufficient vapour and fume laden air through a rotund draught flue from the recirculation system tends to be unsatisfactory. An interlock between the heat source and the exhaust ventilation is the normal method of ensuring that sufficient air is introduced into the oven for safety.

Explosion Relief & Door Fastening

Although an oven may be provided with comprehensive precautions, explosions can still occur due to failure of components, inadequate servicing, or deliberate scotching of safety devices. The probability of fatal or serious injury to workpeople, or serious damage to the oven, can be reduced substantially if suitable explosion relief is provided, coupled with adequate securing of the

doors of the oven to prevent their becoming missiles in the event of an explosion.

It is recommended that explosion relief panels are fitted to all solvent evaporating ovens irrespective of chamber volume. These notes cover the bare essentials of the requirements for solvent evaporating ovens used in stoving and curing processes.

28 liter, 66 liter, 128 liter, 230 liter, 300 deg C Oven



Model	PF30-SC	PF60-SC	PF120-SC	PF200-SC
Max. Temp (°C)	300	300	300	300
Chamber Dimensions (mm)	(H) 300 (W) 292 (D) 320	400 392 420	500 492 520	750 592 520
External Dimensions (mm)	(H) 470 (W) 665 (D) 470	570 765 570	670 865 670	920 965 670
Chamber Capacity (Litres)	28	66	128	230
Weight (kg)	30	45	60	75
Shelves				
number supplied	2	2	2	2
max. possible	3	5	9	15
max. dist load/shelf kg	10	10	10	10
max. load kg	20	30	40	50
Performance				
Power Rating at 240V (watts)	1000	1500	2000	2700
Holding Power* at Max. Temp. (watts)	350	600	800	1250
Temp. Stability on/off control (°C)	±1.0	±1.0	±1.0	±1.0
Temp. Stability PID control (°C)	±0.2	±0.2	±0.2	±0.2
Heat Up Times* (mins)	100°C 4.5 200°C 12 240V 25	4.5 12 25	4.5 12 25	5.5 14 30
Recovery Times* (mins)	100°C 1 200°C 2.5 240V 4	1 2.5 4	1 2.5 4	1.5 3 5
Air Exchanges vol (l/h) @ 100°C	10,000	10,000	10,000	10,000
Air Exchanges Exchanges/Hour	360	153	79	44

Models: ZKD-A4025, ZKD-A5055, ZKD-A6090, Digital Drying Vacuum Ovens

The Vacuum Drying Oven well combines vacuum condition with drying heating technique, significantly reduces boiling point & vapor tension, in order to provide the experiments a dustless, nonvortex, gentle working room. Therefore, it will be convenient to collect, discharge & reuse the vapor. Moreover, because the whole procedure of experiment, like storage, heating, drying, all processes in the vacuum or inert gas chamber, the specimen won't be oxygenated readily.

Automatic poweron and poweroff, timing operation, clock indicating, power-off recovery, parameter recalling & encryption, temperature indicating and correcting. Monitoring timer, independent exceeding guard, & independent protector for electric leakage & over current.

Option: Individualized 10 segments, 18-step preset programs achieve temperature preset timing programs or reciprocating, stepped, ladderlike temperature running.

- Self-diagnosed techniques, such as power cut alarm, sensor failure alarm, and upper and lower temperature limit exceeding alarm.
- Highly responsive thermal sensor and environmental scanning microprocessor chip.
- Vacuum electromagnetic valve makes it easy to switch the vacuum pump.
- Built-in large-scale plate heating design ensures the fine uniformity of temperature in the chamber.
- LED clearly indicates the set parameters and real parameters.
- Mirror stainless steel chamber, electro polished stainless steel shelves and toughened glass observe window indoor.
- The luxurious and elegant profile with aesthetic designing.



ZKD-A4025



ZKD-A5055



ZKD-A6090

Control Mode	Adjusting Mode	Range of Vacuum Degree
Fuzzy logic Control Technology	Fixed value mode and stepping mode for options	133(1 Torr)

Specification:

Temp. Range	Temp. Adjusting Precision	Hent up time Top Temp.
40-180°C for 4025 40-200°C for 5055 40-250°C for 6090	≤±1.5(180°C)	70 min 70 min 80 min

Model	Capacity	Number of Shelves	Net Weight	Interior Dimension	Exterior Dimension	Power	Voltage
ZKD-A4025	25L	1 Piece	50kg	300x300x275mm	550x420x685mm	300W	AC 220V 50/60Hz
ZKD-A5055	55L	2 Pieces	75kg	350x350x450mm	600x470x860mm	800W	
ZKD-A6090	90L	2 Pieces	120kg	400x450x500mm	650x570x1310mm	1200W	

P Pipetors, Dispenser



Model: BTD, Bottle Top Dispenser

Product Specifications:

Piston	Polypropylene
Cylinder	Glass
Housing	Polypropylene
Volume adjustment	Locking rocker switch
Valve assembly	Glass Ball & Seat
Discharge Assembly	Teflon
Delivery tube	Polypropylene
Calibration	Individually calibrated and certified
Accuracy & Reproducibility	In accordance with ISO 8655 standards
Compatibility	Excellent- Suitable for most reagents except HF
Bottle Thread Size	30mm
Additional Adaptors	25mm, 36mm, 45mm

Specifications & Ordering Information. Bottle Top Dispenser:

Model No.	Vol. Range	Increment	Accuracy		CV	
			±%	±%ml	±%	±%ml
BTD-1	0.25-2.5ml	0.05ml	0.6	0.012	0.2	0.004
BTD-2	0.5-5ml	0.1ml	0.6	0.030	0.2	0.010
BTD-3	1-10ml	0.2ml	0.6	0.060	0.2	0.020

Features:

Three models with adjustable volumes: (a) 0.5-2.5 ml (b) 1.0-5.0 ml (c) 2.0-10.0ml
 ● Easy to use, simple construction & a good chemical compatibility ● Smooth, effortless plunger movement ● Each instrument comes with four adaptors to fit in most of the laboratory reagent bottles. Standard threads: 30mm Adaptors : 25mm, 36mm and 45mm ● Safety discharge system reduces the risk of accidental dispensing ● Nozzle cap prevents any unwanted drop on the work space ● Instrument is fully autoclavable at 121°C, 15psi. No Need for dis-assembling the instrument for autoclaving ● Easy to dis-assemble for cleaning & servicing In-lab, user re-calibration is possible in compliance with GLO/ISO Norms.



Model: ME-Series, Electronic Micropipettes

Features:

Based on Stepper Motor Technology ● User friendly software ● Recharging during operation ● Optimized ergonomics & working comfort ● Built-in tip ejector ● 6 models cover the complete Pipetting range from 0.2 µl to 10000 µl ● Mode: Stepper mode, Dilution mode, Standard mode, Calibration mode ● Variable Working Speed can be selected on a scale of 1-5: Easy volume selection from 'UP' & 'DOWN' keys ● Large Fire Button: Single 'FIRE BUTTON' for filling and dispensing ● Large Liquid Crystal Display: Two line Alphanumeric LCD ● Calibration: User friendly calibration mode facilitates easy calibration by the user.

Specifications:

Model.	Vol. Range	Increments	Tip Style
ME-10	0.2-10 µl	0.05 µl	10 µl
ME-120	5-120µl	0.5µl	200 µl
ME-300	20-300µl	1.0µl	300 µl
ME-1000	50-1000µl	5.0µl	1000 µl
ME-5000	100-5000µl	10.0µl	5000 µl
ME-10000	500-10000µl	50.0µl	10000 µl

Model: FV-Series, Single Channel Micropipettes

Features:

- Fixed volume pipettes are available in all capacities from 0.5µl to 10000µl (10ml).
- Call our customer service for any custom-made Fixed Volume Micropipette.
- Low cost and very high accuracy.
- Ideal for Clinical diagnostics, Routine tests, Control analysis etc.

Specifications:

Model	Vol.	Accuracy		Precision	
		±%	±µl	±%	±µl
FV-1	1	2.5	0.025	1.8	0.018
FV-2	2	2.5	0.04	1.2	0.024
FV-5	5	1.5	0.075	0.8	0.04
FV-10	10	1.0	0.1	0.5	0.05
FV-20	20	0.5	0.1	0.3	0.06
FV-25	25	0.5	0.125	0.3	0.075
FV-50	50	0.3	0.15	0.3	0.15
FV-100	100	0.3	0.3	0.2	0.2
FV-200	200	0.3	0.6	0.2	0.4
FV-250	250	0.3	0.75	0.2	0.5
FV-500	500	0.3	1.5	0.2	1.0
FV-1000	1000	0.3	3.0	0.2	2.0
FV-2000	2000	0.3	6.0	0.2	4.0
FV-5000	5000	0.3	15.0	0.2	10.0
FV-10000	10000	0.3	30.0	0.2	20.0



Models: WCS-Series, Adjustable Volume Micropipettes

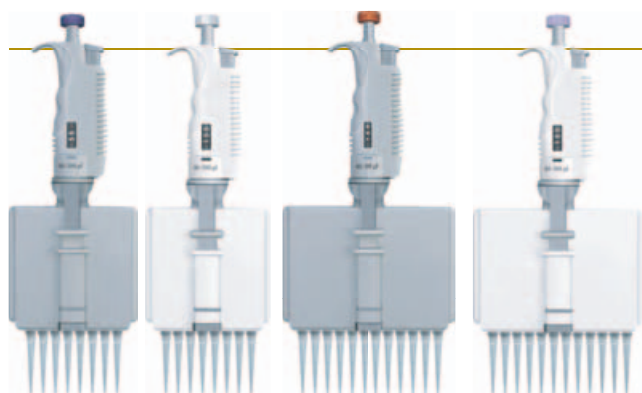


Specifications:

Model No.	Vol. Range	Increment	Vol.	Accuracy		Precision	
				±%	±%ml	±%	±%ml
WCS-10	0.5-10µl	0.1ml	0.5ml	5.0	0.025	2.8	0.014
			5.0ml	1.5	0.075	0.8	0.004
			10.0ml	1.0	0.1	0.4	0.004
WCS-20	2-20µl	0.1ml	2.0ml	5.0	0.1	1.5	0.03
			10.0ml	1.0	0.1	0.6	0.06
			20.0ml	1.0	0.2	0.3	0.06
WCS-50	5-50µl	1.0ml	5.0ml	2.5	0.125	1.5	0.075
			25.0ml	0.7	0.175	0.3	0.075
			50.0ml	0.7	0.35	0.3	0.15
WCS-100	20-100µl	1.0ml	20.0ml	2.5	0.25	0.7	0.07
			50.0ml	0.8	0.4	0.15	0.15
			100.0ml	0.8	0.8	0.15	0.15
WCS-200	40-200µl	1.0ml	40.0ml	2.5	0.5	0.7	0.014
			100.0ml	1.0	1.0	0.3	0.3
			200.0ml	0.6	1.2	0.2	0.2
WCS-1000	200-0µl	10.0ml	200ml	1.6	1.6	0.3	0.3
			500ml	0.6	3.0	0.2	1.0
			1000ml	0.5	5.0	0.2	2.0
WCS-5000	1-5ml	100.0ml	1000ml	1.5	7.5	0.3	1.5
			2500ml	0.6	15.0	0.2	5.0
			5000ml	0.6	30.0	0.2	10.0
WCS-10000	2-10ml	100.0ml	2000ml	1.5	15.0	0.3	3.0
			5000ml	0.6	30.0	0.2	15.0
			10000ml	0.6	60.0	0.2	30.0

Features:

Eight volume ranges from 0.5 µl to 10000µl let you select the right pipette for your application ● Easy volume setting by simply turning the plunger. Does not snag gloves. ● Click stop digital system-click sound at each increment during volume setting ensures no unwanted volume alterations during pipetting ● Separate, streamlined tip ejector designed for access to narrow necked containers & tubes ● Easy to calibrate & service ● Autoclavable tip cone & lower section assembly ● Ergonomy, light weight and soft plunger movement provides added comforts & minimizes hand fatigue ● Two step plunger operation allows "reverse pipetting technique" during pipetting from the same tip ● While dealing with detergent solutions. This also facilitates last drop dispensing ● High accuracy and precision guaranteed. Specifications conform to ISO 8655 Standards.



Models: MC/MCA-Series, Multichannel Micropipettes

Specifications for MC & MCA-Series:

Model MC/MCA	Vol. Range	Increments	Test Vol.	Inaccuracy	Imprecision
8/12-10	0.5-10	0.1µl	1µl	4.00%	4.00%
			5µl	2.50%	2.50%
			10µl	1.50%	1.50%
8/12-20	2-20	0.1µl	2µl	4.00%	4.00%
			10µl	1.50%	1.50%
			20µl	1.50%	1.00%
8/12-50	5-50	1µl	5µl	3.00%	2.00%
			25µl	1.50%	1.00%
			50µl	0.50%	0.50%
8/12-100	10-100	1µl	10µl	1.50%	1.50%
			50µl	1.00%	0.50%
			100µl	1.00%	0.50%
8/12-300	40-300	1µl	40µl	1.50%	0.80%
			150µl	1.00%	0.50%
			300µl	0.70%	0.25%

Features:

● High accuracy and precision for 96-well microtitre plates. ● Extended volume range upto 300µl. ● Comfortable, light weight and soft plunger movement. ● Separate tip ejector allows easy tip ejection. ● Recommended for ELISA, Molecule screening, Kinetic studies, DNA amplifications etc.



Models: MPF-Series, E-Fill

Electronic Pipette Filling Device: Easy, Efficient, Electronic, Economical

Features:

- Two LEDs to show charging status and low battery.
- Continuous adjustment of pump speed during operations.
- An universal Silicon collet is provided to accept all standard pipettes up to 100ml.
- Internal knurling on the collet holds the pipette firmly.
- Comfortable grip.
- Line membrane filter of 0.2 micron prevents Aerosol contamination & liquid from entering the equipment by accident.
- Ni-MH 3.6 rechargeable battery allows eight hours of continuous working.

P Peristaltic Pumps

Model: BT1001L, Flow Rate Peristaltic Pump, 0.05 to 500 mL/min

The max. output torque of BT1001L drive is 2 Nm. Multi pump heads are available. The pump provides flow rates from 0.05 to 500 mL/min. 128x64 graphic LCD displays running menus and parameter setting menus. The flow rate & the speed (rpm) can be displayed in the same screen. The display interface is friendly. It has flow rate calibration function to make the flow rate more accurate. It has many control modes.

The external control can be realized through standard external interface or RS485 communication interface.



Functions and Features

- Display can switch between flow rates and rpm
- Calibration capability for more accurate flow rate
- Graphic LCD together with rotary coded switch makes it friendly and easy to use
- Higher torque to accept more pump heads and more channels
- RS485 communication interface available. Offering communication protocol to customer and customizing software according to customer's requirements.

Specifications:

Speed: 1.0 to 100.0 rpm, reversible Speed precision: 0.1 rpm
 Speed control: Rotary coded switch coupled with membrane keypad
 Display: 128 x 64 graphic LCD displays current running status
 Analog interface: Start/stop and cw/ccw control, 0 to 5 V, 0 to 10 V, and 4 to 20 mA speed control
 Communication interface: RS485
 Power supply: AC 220V \pm 10% 50/60 Hz (standard)
 AC 110V \pm 10% 50/60 Hz (optional)
 Power consumption: <50W
 Operating condition: Temp. 0 to 40°C Relative humidity < 80%
 Dimensions (L x W x H): 202 x 160 x 239 (mm)
 Drive weight: 5.34 kg IP rating: IP 31

Model: LEAD1, Basic Peristaltic Pump, 0.001 to 300 mL/min

Acceptable pump heads for Lead1 are 24, 28, 48 and max. 4 channels are available. The pump provides flow rates from 0.001 to 300 mL/min for one channel. The motor of the drive is step motor. It adopts microprocessor controlled stepper motor and microstepping electrical circuit to make the running smoother and noise smaller. There are start/stop, speed control and direction membrane keypads on the front panel.



Functions and Features

- Accept three special pump heads: 28, 48 and 24
- Planetary gearbox is adopted in its pump heads. This changes the traditional driving methods of tubing pumps, decreases abrasion, prolongs tubing life and improves accuracy.
- 28 & 48 pump heads are equipped with comb-shaped tube-holder. Suitable for small flow rates and multi-channel fluid transfer.
- 24 pump head is equipped with V-shaped tube-holder and accept bigger size tubing.
- Equipped with overflow device to prevent overflow fluids from damaging the inner parts.
- Prime key for fast filling and emptying

Specifications:

Speed: 0 to 100 rpm, reversible Speed precision: 0.1 rpm
 Speed control: Membrane keypad
 Display: LCD displays current running status
 Analog interface: Start/stop and cw/ccw control and speed control (0 - 5V, 0 - 10 V, 4 to 20mA)
 Power supply: AC 220 V \pm 10% 50/60 Hz (standard)
 AC 110 V \pm 10% 50/60 Hz (optional)
 Power consumption: < 30 W
 Operating condition: Temp. 0 to 40°C Relative humidity < 80%
 Dimensions: 176x150x278(mm) IP rating: IP 31

Model: BT3001F, Dispensing Peristaltic Pump, 0.07 to 1140 mL/min

The applicable pump treats for BT3001F are YZ1515x YZ2515x YZ1115 YZ1125

The pump delivers Flow rates from 0.07 to 1140 mL/min 128 x 64 graphic LCD displays running menus and parameter Setting menus The display interfaces are friendly. It has many control modes. The external control can be realized through standard external control interface or 485 communication interface



Functions and Features

- Applicable pump heads YZ1515x YZ2515x, YZ1115, YZ1125
- Set pause time to realize dispensing and filling automatically
- Display can switch between flow rates and rpm
- Calibrate setting flow rates to acquire more accurate flow rates
- RS485 communication interface available. Offering communication protocol to customer and customizing software according to customer's requirements.

Specifications:

Speed: 1.0 to 300.0 rpm, reversible Speed precision: 1 rpm
 Speed control: Rotary coded switch coupled with membrane keypad
 Display: 128 x 64 graphic LCD displays flow rate speed or dispensing
 Copy number 1 to 999
 Dispense volume 0.1 ml to 99.9L
 Pause time 1 to 999s
 Back suction angle 0 to 360 18° increments
 Analog Interface Start-stop and cw/ccw control, 0 to 5 V, 0 to 10 V, and 4 to 20 mA speed control
 Communication interface: RS485
 Power supply: AC 220V \pm 10% 50/60 Hz (standard)
 AC 110V \pm 10% 50/60 Hz (optional)
 Power consumption: <50W
 Operating condition: Temp. 0 to 40°C Relative humidity < 80%
 Dimensions (L x W x H): 202 x 160 x 239 (mm)
 Drive weight: 4.3 kg IP rating: IP 31

Model: LEAD2, Flow Rate Peristaltic Pump, 0.01 to 350 mL/min

The applicable pump heads for Lead2 are Lead1 5-48, Lead1 5-88, Lead1 5-24, Lead15-44 and max. 8 channels are available. The pump delivers flow rates from 0.01 to 350 mL/min. It has flow rates display and flow rates calibration functions. It also has functions of speed adjustment, start/stop, cw/ccw, prime (rinsing), tubing selection, 485 communication, analog control, etc.



Functions and Features

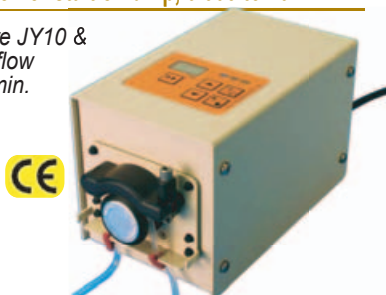
- Accept 4 special pump heads.
- Planetary gearbox is adopted in its pump heads. This changes the traditional driving methods of tubing pumps, decreases abrasion, prolongs tubing life and improves accuracy.
- Display can switch between flow rates and speed.
- Calibration function for more accurate flow rates
- Computer control available through RS485 communication
- Prime key for fast filling and emptying

Specifications:

Speed: 1.0 to 100.0 rpm, reversible Speed precision: 0.1 rpm
 Speed control: Rotary coded switch coupled with membrane keypad
 Display: 128x32 graphic LCD displays current running status
 Analog interface: Start/stop and cw/ccw control, 0 to 5V, 0 to 10V, and 4 to 20mA speed Control
 Communication: RS485
 Power supply: AC 220V \pm 10% 50/60 Hz (standard)
 AC 110 V \pm 10% 50/60 Hz (optional)
 Power consumption: < 30 W
 Operating condition: Temp. 0 to 40°C Relative humidity < 80%
 Dimensions (LxWxH): 190x162x275(mm)
 Drive weight: 3.5 kg IP rating: IP 31

Model: BT501J, Basic Peristaltic Pump, 0.005 to 10mL/min

Acceptable pump heads are JY10 & D61x. The pump provides flow rates from 0.005 to 10mL/min. It can realize speed adjusting and direction changing and has functions of prime and external start/stop. It features compact size & easy to operate.



Functions and Features

- Applicable pump heads: JY10 and DGtx (10 rollers)
- Prime key for fast filling and emptying
- Speed, start/ stop and direction can be controlled through membrane keypad or through external Control interface
- Memory function, storing the running parameters automatically
- Compact size, light weight and low power consumption
- Membrane keypad, easy to operate
- Good performance and low price
- At normal lab conditions

Specifications:

Speed: 0.1 to 50.0 rpm, reversible
 Speed precision: 0.1 rpm
 Speed control: Membrane keypad
 Display: 3-digit LED displays current rpm
 Analog interface: Start/stop and cw/ccw control
 Power supply: AC 220V $\pm 10\%$ 50/60 Hz (standard)
 AC 110V $\pm 10\%$ 50/60 Hz (optional)
 Power consumption: < 10 W
 Operating condition: Temperature 0 to 40°C,
 Relative humidity < 80%
 Dimensions (LxWxH): 176x110x115 (mm)
 Drive weight: 2.2 kg IP rating: IP 31

Pump Head	Flow Rates (mL/min)	Tubing	Weight (Kg)
JY10	0.05-10	0.5x0.8 1x1	2.4
DG1x (10 Rollers)	0.005-10	2x1 2.4x0.8	

Model: BT3002J, Basic Peristaltic Pump, 0.07 to 1140mL/min

Acceptable pump heads for BT3002J are YZ1515x, YZ2515x, YZ1115, YZ1125, BZ25. The pump delivers flow rates from 0.07 to 1140 mL/min. The speed can be adjusted manually or automatically through external control interface. Store the running parameter automatically. Easy to operate.



Functions and Features

- Applicable pump heads: YZ1515x, YZ2515x, YZ1115, YZ1125, BZ25 Prime button for fast filling and emptying
- Adjust speed manually or automatically through analog interface.
- Memory function, storing the running parameters automatically Equipped with Longer Dispensing Controller for filling function
- At normal lab conditions

Specifications:

Speed: 0.1 to 50.0 rpm, reversible
 Speed precision: 0.1 rpm
 Speed control: Membrane keypad
 Display: 3-digit LED displays current rpm
 Analog interface: Start/stop and cw/ccw control
 Power supply: AC 220V $\pm 10\%$ 50/60 Hz (standard)
 AC 110V $\pm 10\%$ 50/60 Hz (optional)
 Power consumption: < 10 W
 Operating condition: Temperature 0 to 40°C,
 Relative humidity < 80%
 Dimensions (LxWxH): 176x110x115 (mm)
 Drive weight: 2.2 kg IP rating: IP 31

Model: BT1001J, Basic Peristaltic Pump, 0.05 to 290mL/min

Acceptable pump heads for BT1001J are YZ1515x, YZ2515x, YZ1515w, DG1x & D62x. The pump provides flow rates from 0.05 to 290 mL/min (single channel). The speed can be adjusted manually or automatically through external control interface. Store the running parameters automatically. Easy to operate.



Functions and Features

- Applicable pump heads: YZ1515x, YZ2515x, YZ1115, YZ1125, OG1x, DG2x
- Prime key for fast filling and emptying
- Adjust speed manually or automatically through analog interface.
- Memory function, storing the running parameters automatically
- Membrane keypad, easy to operate
- Good performance and low price
- At normal lab conditions

Specifications:

Speed: 0.1 to 100 rpm, reversible Speed precision: 0.1 rpm
 Speed control: Membrane keypad
 Display: 3-digit LED displays current rpm
 Analog interface: Start/stop and cw/ccw control
 0-5 V, 0-10 V, and 4-20 mA speed control
 Power supply: AC 220V $\pm 10\%$ 50/60 Hz (standard)
 AC 110V $\pm 10\%$ 50/60 Hz (optional)
 Power consumption: < 22 W
 Operating condition: Temp. 0 to 40°C, Relative humidity < 80%
 Dimensions (LxWxH): 212x112x142 (mm)
 Drive weight: 2.8 kg IP rating: IP 31

Pump Head	Tubing	Flow Rates (mL/min)	Weight (Kg)
YZ1515x, YZ1115	1/3", 1/4", 1/2", 3/4", 1", 1 1/2"	0.07-290	3.5
YZ2515x	1/2"	1.7-170	3.5
YZ1125	1/2"	1.7-170	3.5
DG1x (6 Rollers)	0.5x0.8 1x1	0.06-30	3.0
DG1x (10 Rollers)		0.05-20	3.0
DG2x (6 Rollers)	2x1 2.4x0.8	0.06-30 (Per Channel)	3.1
DG2x (10 Rollers)		0.05-20 (Per Channel)	3.1

Model: BT00300T, Basic Peristaltic Pump, 0.005 to 1140mL/min

Acceptable pump heads for BT00300T are YZ1515x, YZ2515x, YZ1115, YZ1125, DG4x. The pump delivers flow rates from 0.005 to 1140 mL/min. The speed can be adjusted manually or automatically through external control interface. It can be equipped with FK-1C dispenser for filling function. Store the running parameter automatically. Easy to operate.



Functions and Features

- Applicable pump heads: YZ1515x, YZ2515x, YZ1115, YZ1125, DG4x
- High torque and low power consumption Timing Function, realizing simple auto-dispensing and filling
- Half-current locking function Memory function, storing the running parameters automatically
- At normal lab conditions

Specifications:

Speed: 0.1 to 100 rpm, reversible Speed precision: 0.1 rpm
 Speed control: Membrane keypad
 Display: 3-digit LED displays current rpm
 Analog interface: Start/stop and cw/ccw control
 0-5 V, 0-10 V, and 4-20 mA speed control
 Power supply: AC 220V $\pm 10\%$ 50/60 Hz (standard)
 AC 110V $\pm 10\%$ 50/60 Hz (optional)
 Power consumption: < 22 W
 Operating condition: Temp. 0 to 40°C, Relative humidity < 80%
 Dimensions (LxWxH): 212x112x142 (mm)
 Drive weight: 2.8 kg IP rating: IP 31

P Peristaltic Pumps & Vacuum Pumps

Model: ZT6001J, Basic Peristaltic Pump, 4.2 to 6000 mL/min

Applicable pump heads for ZT6001J are YZ1515x, YZ2515x, YZ1115, YZ1125, & KZ25. The pump delivers flow rates from 4.2 to 6000 mL/min. The speed can be adjusted manually or automatically through external control interface. Driven by DC motor the ZT60-600a runs steady and has higher torque. It can drive double pump heads (YZ1515x/YZ2515x). ZT6001J is ideal for industrial application and easy to operate.

Specifications:

Speed: 60 to 600 rpm, reversible
Speed control: 10-turn potentiometer
Display: 3 - digit LED displays current rpm
Analog interface: N/A(Standard Configuration)
Power supply: AC 220V \pm 10% 50/60Hz
Power consumption: < 80W
Operating condition: Temp. 0 to 40°C Relative humidity <80%
Dimensions (LxWxH): 280x200x180(mm)
Drive weight: 6.5 kg IP rating-IP 31

Functions and Features

- Applicable pump heads: YZ1515x, YZ2515x, YZ1115 YZ1125, & KZ25
- Stack two pump heads & connect the two outlets together with a Y-connector, then flow rates doubled, pulsation reduced enormously (as shown in the graph below) and fluid transfer smoother.
- DC motor, stepless speed control has stronger drive
- Smooth flow and high torque
- Prime button for fast filling and emptying
- Suitable for higher pressure fluid transfer



Model: RK-410/610, Oil Free Vacuum Pumps



RK-410



RK-610



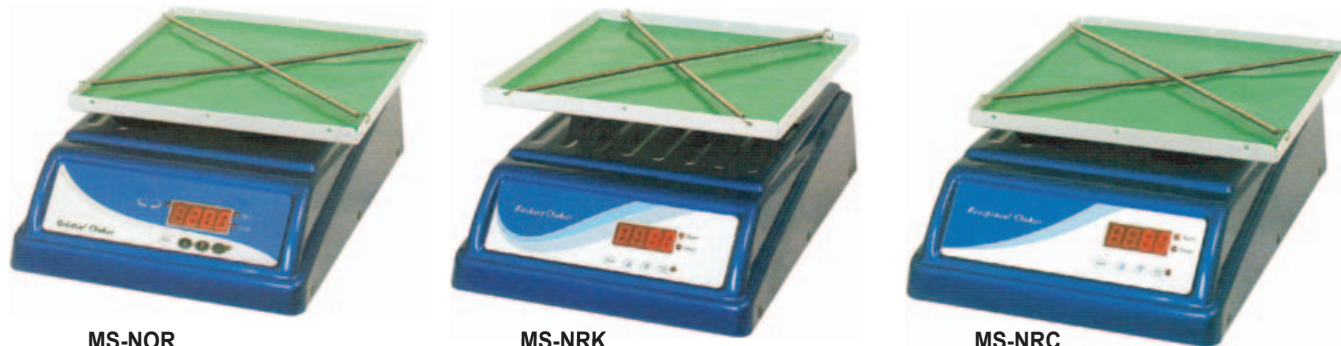
Specification:

Power	RK-410		RK-610	
	110-120V/60Hz	220-240V/50Hz	110-120V/60Hz	220-240V/50Hz
Max. power consumption (W)	100	80	210	190
Max. current (A)	1.0	0.4	1.9	1
Max. vacuum	-750mmHg=99.99kPa=10torr		-750mmHg=99.99kPa=10torr	
Vacuum	0mmHg	22l/min=0.78CFM	19l/min=0.67CFM	35l/min=1.24CFM
	100mmHg	21l/min=0.74CFM	18l/min=0.64CFM	33l/min=1.17CFM
	200mmHg	18l/min=0.64CFM	16l/min=0.57CFM	29l/min=1.02CFM
	300mmHg	16l/min=0.57CFM	14l/min=0.49CFM	27l/min=0.95CFM
	400mmHg	14l/min=0.49CFM	11l/min=0.39CFM	23l/min=0.81CFM
	500mmHg	11l/min=0.39CFM	9l/min=0.32CFM	17l/min=0.6CFM
	600mmHg	8l/min=0.28CFM	6l/min=0.21CFM	14l/min=0.49CFM
Motor Rotation	1750RPM	1450RPM	1700RPM	1450RPM
Capacitor	10uf/250V	3uf/450V	16uf/250V	5uf/400V
Horse power	1/6HP		1/4HP	
Pole	4P		4P	
Net wet	5.2kg		7.6kg	
Gross Weight	6.2kg		8.6kg	
Port thread	5/16"		5/16"	
Noise Level	52dB		52dB	

Models:MS Series, Shakers



MRC introduces an upgraded generation of MS shaker, including orbital shaker, rocking shaker and reciprocal shaker. The generation of MS shaker is designed to have a better performance, such as longer durability, smooth shaking moves, higher loading capability, digital control and almost maintenance-free design. Existing waver shaker and complementary Hybridization Water Bath are user friendly, compact, unique moving features are advantageous competitiveness.



MS-NOR

MS-NRK

MS-NRC

MS-NRK, Rocking Shaker

Product Description

This new generation of rocking shaker successfully achieves the majority of experimental needs. Digital control mechanism, new well-designed engineering mechanism ensures its outstanding performance. Another remarkable feature is its high loading capability, up to 15kg. Like other MRC shaker, it has a more stylish & product family outlook housing, one or two platform choices, & longer durability. With those design concerns, its smooth shaking move plus superior carry capability makes mixing function efficiently in different experiments in the laboratory.

Features:

One or Dual platform • 15kg carry capability • Microprocessor control • Timer • 26 x 26cm platform

Specification:

- Motion: Rocking
- Max. Tilt Angle: 12°
- Speed / Inc: 0~50rpm / 1 rpm
- Timer: 1~9999mins, continuous 1 min increment
- Motor: DC Brushless type
- Operating Temperature: Ambient to 40°C
- Carry Capability: 15kg
- Platform Dimension: 260 x 260mm (WxL)
- Additional Platform: Yes
- Platform Material: Painted aluminum or 304 Stainless steel (an option)
- Unit Dimension: 260x310x130mm (WxLxH)
- Construction: Frame retard PC & painted iron metal rare & bottom plates
- Weight: approx. 7,0kg
- Rated Voltages : 110V / 220V selectable

MS-NOR, Orbital Shaker

Product Description

MRC orbital shaker is reintroduced to the market in 2008. With all the existing outstanding features, now it has a more stylish outlook housing, Digital control, high loading capability, one or two platform choices are all MRC orbital shaker's feature. More attractively, it can be operated in clockwise and/or anti clockwise orbit to increase the mixing efficiency. Due to this specific feature, it is a great helpful instruments for many of different experiments in the laboratory. Of course, it can perform just like other ordinary orbital shaker. Although orbital shaker is equipped with many of advanced feature, competitive pricing is one more of its feature.

Features:

Continuous one-way orbital shaking or clockwise & anti clockwise orbital shaking • One or Dual platform • 10kg carry capability • Microprocessor control • Timer • 26x26cm platform

MS-NRC, Reciprocal Shaker

Product Description

This new generation of reciprocal shaker successfully achieves the majority of experimental needs. Digital control mechanism, new well-designed engineering mechanism ensures its outstanding performance. Another remarkable feature is its high loading capability, up to 15kg. Like other MRC shaker, it has a more stylish & product family outlook housing, one or two platform choices, and longer durability. With those design concerns, its smooth shaking move plus superior carry capability makes mixing function efficiently in different experiments in the laboratory.

Features:

One or Dual platform • 15kg carry capability • Microprocessor control • Timer • 26 x 26cm platform

Specification:

- Motion: Reciprocal
- Max. Stroke Length: 20mm
- Speed / Inc: 0~50rpm / 1 rpm
- Timer: 1 ~9999mins, continuous 1 min increment
- Motor: DC Brushless type
- Operating Temperature: Ambient to 40 °C
- Carry Capability: 15kg
- Platform Dimension: 260 x 260mm (WxL)
- Additional Platform: Yes
- Platform Material: Painted aluminum or 304 Stainless steel (an option)
- Unit Dimension: 260x310x130mm (Wx Lx H)
- Construction: Frame retard PC and painted iron metal rare and bottom plates
- Weight: approx, 7,0kg
- Rated Voltages : 110V / 220V selectable

Specification:

Motion: Orbital • Multi-Orbit: - Continuous orbital moving in one direction or Clockwise &/or Anti-clockwise two direction • Clockwise &/or Anti-clockwise: 0.1-10 circle; 0.1 circular increment • Max, Stroke Length: 20mm • Speed / Inc: 0~200rpm / 1 rpm • Timer: 1-9999 mins with alarm, continuous 1 min increment • Motor: Stepping motor • Operating Temp.: Ambient to 40°C • Carry Capability: 10kg • Platform Dimen.: 260x260 mm (WxL) • Additional Platform: Yes • Platform Material: Painted aluminum or 304 Stainless steel (an option) • Unit Dimen.: 260x310x130mm (Wx Lx H) • Construction: Frame retard PC & painted iron metal rare & bottom plates • Weight; approx. 7.0kg • Rated Voltages; 110 / 220V selectable

U Ultrasonic Homogenizer

Models: 150V/T, 300V/T, Ultrasonic 3000, 300MP, Ultrasonic Homogenizers



Specifications:

- Power Output for 150V/T: 0-150 WATTS
- Power Output for 300V/T: 0-300 WATTS
- Power Output for Ultrasonic 3000: 0-300 WATTS
- Output Frequency: 20k Hz
- Automatic Tuning: Yes
- Microprocessor Control: N/A
- Duty Cycle (Pulsing): 10-90%
- Timer: 1-15 minutes
- Display: LED
- Temperature Controller: N/A
- Sound Abating Chamber: Optional
- Power Output: 0 - 300 WATTS
- Output Frequency: 20k Hz
- Automatic Tuning: Yes
- Microprocessor Control: Yes
- Duty Cycle (Pulsing): 1-99 sec.
- Timer: 1-99 minutes
- Display: 4 Line LCD
- Temp. Controller: 0-100°C
- Sound Abating Chamber: Optional
- Generator Dimensions for 150/300V/T: 12.0inWx 10.0inDx4.0 inH 30.5cm Wx25.4cm Dx10.2cmH
- Generator Dimen. for Ultrasonic 3000: 10.5inWx 12.0inDx23.5 inH 26.7cm Wx30.5cm Dx59.7cmH
- Transducer Dimen: 3.5in Dia. x4.0inL 8.9cm Dia. x 10.2cm L
- Voltage: 115Volts/60Hz; 230Volts/50Hz

Titanium Micro Tips (Micro Horns):



Catalog No.	Tip Diameter	Processing Vol.	Intensity	Type
0-120-0005	5/32" (3.8mm)	300 µl - 15 ml	Very-High	Stepped
0-120-0006	1/16" (1.6mm)	200 µl - 5 ml	Ultra-High	Tapered
0-120-0007	1/8" (3.2mm)	500 µl - 10 ml	Very-High	Tapered
0-120-0008	3/16" (4.8mm)	750 µl - 25 ml	High	Tapered

Titanium Standard Tips (Horns):

Solid Tips-are machined from a single piece of Titanium and are preferred when processing liquids with high surface tension. In addition, Solid Tips are generally less likely to cause sample cross contaminations.

Tapped Tips-All include 1 Titanium Replacement, Flat Tip. Flat Tips should be replaced when they show signs of excessive "pitting" and intensity/performance is greatly decreased.



Catalog No.	Tip Diameter	Processing Vol.	Intensity	Type
0-120-0009	3/8" (9.2mm)	5 ml - 200 ml	High	Solid
0-120-0010	1/2" (12.7mm)	10 ml - 300 ml	Medium-High	Tapered
0-120-0011	1/2" (12.7mm)	10 ml - 300 ml	Medium-High	Solid
0-120-0012	3/4" (19.1mm)	25 ml - 600 ml	Medium	Tapped
0-120-0013	3/4" (19.1mm)	25 ml - 600 ml	Medium	Solid
0-120-0014	1" (25.4mm)	50 ml - 1000 ml	Low	Tapped
0-120-0015	1" (25.4mm)	50 ml - 1000 ml	Low	Solid

Titanium Replacement Flat Tips:



Catalog No.	0-120-0016	0-120-0017	0-120-0018
Tip Diameter	1/2" (12.7mm)	3/4" (19.1mm)	1" (25.4mm)

Titanium Cup Tips:

It provide an easy way to process samples without direct exposure to the homogenizer tip, avoiding cross contamination. Titanium Cup Tips can simultaneously process sealed vial, test tubes or micro tubes with identical parameters.



Catalog No.	Tip Diameter	Reservoir Vol.	Intensity
0-120-0019	1 1/2" (38.1mm)	250ml	Medium
0-120-0020	2" (50.8mm)	2000ml	Low

Catalog No.	0-120-0021	0-120-0022
No. of Tubes	8	20

Continuous Flow Chamber:



This chamber permits continuous processing of liquids, and is designed for emulsifying and homogenizing applications. The continuous flow chamber may be sealed in a closed system when mounted, so that infectious materials can be used. It is equipped with a water flow-through cooling jacket to enable the temperature of the processed solution to be maintained at a desired level.

0-120-0026: Continuous Flow Chamber.

Models: SWB-10/20L, Stirring Water Bath

MRC stirring water bath applies the principle of magnetic stirring function to achieve a high water temp. uniformity inside the water bath. Moreover, a stirrer inside a flask or a beaker placed inside the water bath surrounding by water can still be driven. 10L stirring water bath series contains two modes. SWB-10L-1 is equipped with one stirring mechanism, whereas SWB-10L-2 is equipped with two stirring mechanisms. SWB-10L-2 is a more advance mode, which is designed for a higher level of experimental demand.

Features

- Microprocessor control with digital performance & great temp. control accuracy
- Great temp. controlled performance
- LCD screen showing temperature and timer simultaneously
- Stirring speed control
- Stirring function for both water bath and flask or beaker
- User temp. calibration
- Built-in water agitation
- One or dual stirring mechanism capability

Model: SWB-10L, 10 liter

Product Description

MRC stirring water bath applies the principle of magnetic stirring function to achieve a high water temperature uniformity inside the water bath. Moreover, a stirrer inside a flask or a beaker placed inside the water bath surrounding by water can still be driven.

1 OL stirring water bath series contains two modes. SWB-1 OL-1 is equipped with one stirring mechanism, whereas SWB-1 OL-2 is equipped with two stirring mechanisms. SWB-1 OL-2 is a more advance mode, which is designed for a higher level of experimental demand.

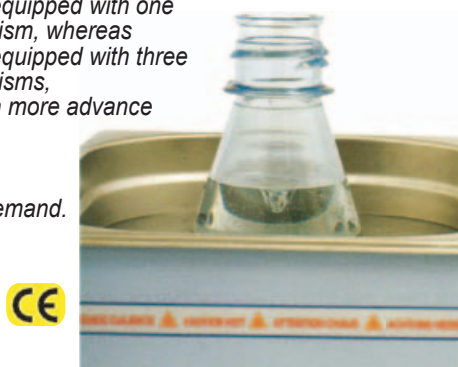


Model: SWB-20L, 20 liter

Product Description

20L stirring water bath series is a big capability product line. Obviously, it contains all the features & advantages of 10 liter stirring water bath series. A magnetic stirring function to achieve a high water temperature uniformity inside the water bath. Moreover, a stirrer inside a flask or a beaker placed inside the water bath surrounding by water can still be driven. 20L stirring water bath series contains two modes.

SWB-20L-1 is equipped with one stirring mechanism, whereas SWB-20L-3 is equipped with three stirring mechanisms. SWB-20L-3 is a more advance mode, which is designed for a higher level of experimental demand.



SWB-10L

SWB-20L

Stirring Water Bath

- SWB-10L-1-110/220 Stirring Water Bath (10L) with 1 built-in stirrer
- SWB-10L-2-110/220 Stirring Water Bath (10L) with 2 built-in stirrers
- SWB-20L-1-110/220 Stirring Water Bath (20L) with 1 built-in stirrer
- SWB-20L-3-110/220 Stirring Water Bath (20L) with 3 built-in stirrers

Specification

- Controller: Digital microprocessor controller
- Power: 600W
- Display: LCD - User friendly operating (Time and Temperature can be seen at the same time)
- Safety Device: Warning indication on screen and automatically shut down
- Stirring Speed: 400~1800rpm
- Number of Stirring Mechanism: 1 for SWB-10L-1, 2 for SWB-10L-2
- Bath Temperature: 5°C above ambient to 99°C
- Bath Tank Material: 304 stainless steel
- Bath Inner Dimension: 240 x 300 x 150mm (WxLxH)
- Bath Capability: approx. 10 L
- Lid Material: Transparent acrylic material assembled with stainless steel construction
- Operating Temperature: Ambient to 40°C
- Unit Dimension: 255 x 355 x 240mm without Lid (WxLxH)
- Construction: Painted iron metal
- Data Log: RS 232
- Data Log software package available
- Weight: approx. 9.0kg
- Rated Voltages: 110V or 220V.

Specification

- Controller: Digital microprocessor controller
- Power: 800W
- Display: LCD - User friendly operating (Time and Temperature can be seen at the same time)
- Safety Device: Warning indication on screen and automatically shut down
- Stirring Speed: 400~1800rpm
- Number of Stirring Mechanism: 1 for SWB-20L-1, 3 for SWB-20L-3
- Bath Temperature: 5°C above ambient to 99°C
- Bath Tank Material: 304 stainless steel
- Bath Inner Dimension: 300 x 500 x 150mm (WxLxH)
- Bath Capability: approx. 20 L
- Lid Material: Transparent acrylic material assembled with stainless steel construction
- Operating Temperature: Ambient to 40°C
- Unit Dimension: 330 x 540 x 240mm without Lid (WxLxH)
- Construction: Painted iron metal
- Data Log: RS 232
- Data Log software package available
- Weight: approx. 14.0kg
- Rated Voltages: 110V or 220V.

W Water Baths, Oil Bath

Orbital Large Shaking Water Bath

Speed	10~250rpm
Orbit diameter	25mm
Speed readout	Tachometer
Temperature control	PID
Temperature readout	Digital
Working temperature range	Ambient+ 5°C ~75°C
Stability	±0.2°C
Power watts	1200W
Optional accessory	Gable Cover
Platform	450X290
Inner tank size (mm)	560X405X200
Size (mm)	740X530X450
Weight (kg) (N.W. / G.W.)	50.0/53.0

Power Supply: AC 110V 60Hz (220V 50/60Hz available)

Number Of Clamps	35	24	15	12	6	2	1
Capacity Of Flask	50ml	125ml	250ml	500ml	1000ml	2000ml	3000ml

- Ideal for a wide range of laboratory applications requiring controlled temp. with orbital shaking motion.
- Suitable for long time operation up to weeks and months.
- Separate switches for speed ON/OFF & heater ON/OFF.
- Individual readout for RPM & digital readout for temp.
- All stainless steel inner tank, platform & clamps.
- Maintenance-free induction brushless motor.
- Differential clamps available.
- Microprocessor based on PID temperature control.
- Speed and temperature adjustable.
- Quality certification: ISO 9001



OSB-1000D

Gable Cover

Model: BS-1836, Boiling Sterilizer



Features:

- All hydraulically pressed 18.8 stainless steel, can withstand electrolysis without corrosion.
- Long life immersion stainless nickel pipe heater & corrosion proof.
- Precision mechanical timer with bell switch control.
- Waterless overheating prevention system with auto power cut-off.
- Build-in low level cut-off device.

Specifications:

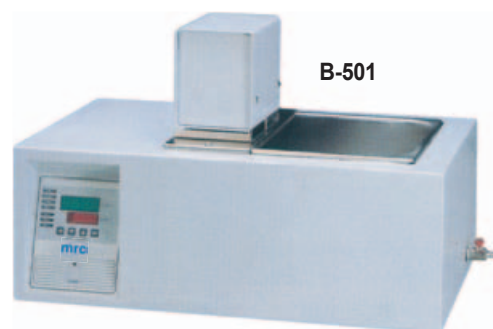
- Timer: 0-60 min. mechanical timer with bell
- Heater: 1500 watts
- Thermostat: Temp. over to 150°C auto cut-off power
- Body material: 18.8 stainless steel
- Tray Dimen.: W350xD165xH30(mm)
- Overall Dimension: W525xD190xH170(mm)
- Net/Gross Weight: 3.5/4.0Kgs
- Power Supply: 220V 50-60Hz -7Amp

Model: B-501, Heated Circulating Oil Bath

3 Models with Choice of Temperature Range and Bath Capacity ● Over Heating Safety Device is Equipped ● Wide Range of Temperature Control ● Digital Temperature Setting & Readout ● External Circulating Pump is Available on Special Order

Specifications:

Model	B-501	B-502	B-503
Temp. Range	Room Temp.+5°C to 200 °C	Room Temp.+5°C to 200 °C	Room Temp.+5°C to 300 °C
Stability	±0.1C	±0.1C	±0.1C
Setting/readout	Digital	Digital	Digital
Heater	1.2KW	1.2KW	1.2KW
Stirring	By Built-in Circulation Pump		
Inside Dimension	W19.5xD23.5xH15cm	W39.5xD29.5xH15cm	W30xD30xH20cm
Outside Dimension	W54xD34.5xH35.5cm	W73xD39xH33.5cm	W66xD40xH39.5cm
Volume	6.8L	17.4L	18L
Power Source	110/220V50/60HZ 13A/6.5A	110/220V50/60HZ 13A/6.5A	110/220V50/60HZ 13A/6.5A



B-501



New Option

Optional With External Circulation Pump

Models: OH-50, OH-600, Water Welder



OH-50

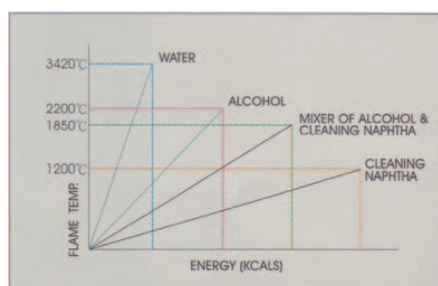
Just add di-water & plug the plug. Then you can get the mixed gas of hydrogen & oxygen which pass through the fan to condense water vapor. The functions of booster are to add the enthalpy, to reduce the flame temperature, to rise the pressure of gas and to increase the energy. It's a very economical method to have a hi-temperature flame.

Features:

- Fuel are water, electric power and a little of solvent. Easy to get and storage safty.
- $2H_2 + O_2 \rightarrow 2H_2O$ (vapor). the vapor left from burning is non toxic & non pollution.
- Good designed machine constructure, for continuous operation.
- Torch with built-in defusion stone, pressure switch, over-pressure relieve valve, to protect the machine absolutly safty.
- Flame temperature range is up to $3420^{\circ}C$ or can be down to $1200^{\circ}C$.
- Easy to change the flame size especially in very fine flame usage area. Tip orifice size are from 0.076mm < t(30#) to 1,056mmct (16#)
- Compact and easy operation.

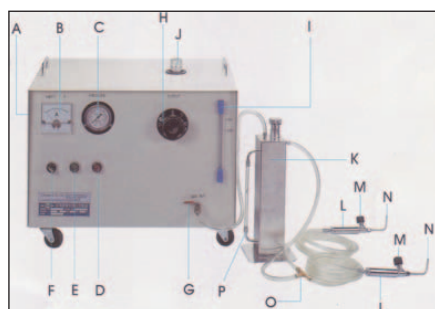
Applications:

- Metal welding: lead-tin soldering, gold, silver, copper, brass brazing, for spot & plate welding, such as ear-ring, necklace, chains, finger ring, etc.
- Glass process: ampoule sealing, quartz glass process, mercury switch sealing, glass capillary tube forming, bending, etc.
- Motor industry: stator copper-thread welding and no need to peel the cover.
- Hi-melting point metal welding: thermal couple thread welding, led plate connecting, computer stripping teflon tape cable cover peeling and cutting. gold wire ball bonding.
- Sun glasses hing's welding.
- Arcrylic surface or edge flame polishing.
- Tooth mold pin hole mending.
- Lead acid battery electrode plate welding.
- Heat treatment for small part and precise craft.



Booster's Function Diagram

Model	OH-50	OH-80	OH-150	OH-300
Max. KCAL Output	270 Kcal/hr	430 Kcal/hr	800 Kcal/hr	1600 Kcal/hr
Max. Power Input	400 watts	640 watts	1200 watts	2400 watts
Max. Torch Tip Orifice	No.21	No.20	No.19	No.18
Electrolyte Capacity	1.6e	3e	6e	10e
DI Water Comsumption Rate	0.02e/hr	0.035e/hr	0.06e/hr	0.12e/hr
DI Water Addition Interval	8hr	8hr	8hr	8hr
Power	110/220V 50/60 Hz 1ϕ	110/220V 50/60 Hz 1ϕ	110/220V 50/60 Hz 1ϕ	110/220V 50/60 Hz 1ϕ
Packing Dimension W x D x H(m/m)	370x370x340	510x410x400	580x500x560	680x540x560
(N.W)	24kgs	34kgs	55kgs	67kgs
Solvent Consumption Rate (BOOSTER)	0.005e/hr	0.009e/hr	0.015e/hr	0.03e/hr
NO. Of Simultaneous Operation Torch With # 21 Tip	1	2	4	6



- A. Colling fan
- B. Input a meter
- C. Gas pressure gauge
- D. Tank hi pressure cut off pilot
- E. Power on pilot
- F. Power switch
- G. Gas out valve
- H. Output adj.

- I. Electrolyte tank sight glass
- J. Di water add port
- K. Booster
- L. Defusion stone pipe
- M. Flame adj. valve
- N. Torch tip
- O. Three way connection
- P. Booster sight glass

Furnace & Sterillizer

Models: DT-100/150, Turntable For Petri Dishes

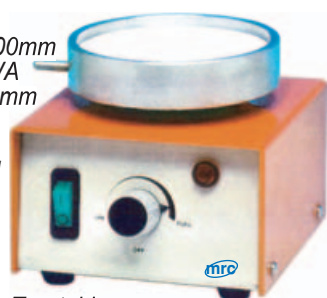
Model DT-100:

- Holds Petri Dishes up to 100mm
- 230V (or 115V) 12VDC, 6VA
- Dimen. 120Wx110Hx145Dmm
- Net weight: 1,1 Kg.

Model DT-150:

- Same as DT-100 described above, but up to 150mm
- Petri Dishes Dimensions: 160Wx110Hx160Dmm

MRC has introduced the DT-100 & DT-150 These new Turntables are designed for inoculation of Petri Dishes up to 150mm in diameter.



They utilise touch-free IR-Sensor technology, which guarantees extremely simple operation with the movements of the hand. Alternatively they can be operated with an optional foot pedal. These units offer Flexible Start-Stop functions or the second timer control with variable rotational periods from 1-25 seconds. For longer applications the time can be extended to 125 seconds. The DT-100 features a continuously variable rotational speed control with a range of 14 to 110rpm. The DT-150 range is 14 to 210 rpm. This control ensures uniform plating of petri dishes up to a diameter of 100mm (optional: up to 150mm). The highest degree of sterility is ensured by the device's stainless steel construction and its flame-sterilisability.

Model: HM-3000, Bacti-Cinerator Sterilizer

The Bacti-Cinerator sterilizer sterilizes microorganisms utilizing infrared heat produced by a ceramic core element. The ceramic element contains no asbestos & ensures max. sterility without splatter across the work surface area. Complete sterilization occurs within 5-7 seconds at optimum sterilizing temperature of 1500°F (815.6°C). The small footprint makes the Bacti-Cinerator sterilizer an ideal instrument for anaerobic and aerobic chambers alike. Several user friendly accessories are also available for the Bacti-Cinerator sterilizer

Performance:

- The center high-temperature: 815°C±5°C
- The Max-diam. of sterilizer goods: 014mm
- The length of sterilizer: 100mm
- Dimension: 130Wx102Dx180H 9
- Net weigh: 1.3Kg

Features:

- Sterilizes needles, loops, & culture tube mouths in five to 7 seconds at optimum sterilizing temperature of 815.6°C (1500°F)
- Ceramic funnel tube enclosed in stainless-steel perforated guard & stainless-steel support stand
- For AC220V 50/60HZ



Model: ST-Series, Melting Furnace For Gold

Maximum temperature acoustic alarm • Digital instrumentation • Double heat insulation
Accurate e temperature control • Platinum thermocouple "PYT" • High performance
High power concentration • Very easy to use

Specifications:

Model	DIM. (mm) WxDxH	CAP.TY GOLD	Kg	MAX. TEMP.	POWER	VOLT
ST-1	250x220x310	Kg.1	4.0	1120°C	Kw 0.7	220/210
ST-2	250x220x350	Kg.2	5.5	1120°C	Kw 1.1	220/210

Spare Parts:

Accessories	ST-1	ST-2
Crucibles	G. 59	G. 121
Resistor	KR S1	KR S2
Thermocouple	Th. S1	Th. S2



Model: MTR-22, Multi-Purpose Mixer

MRC MTR22 Multi-Mix has the capability to perform three modes of mixing, all of which are programmable & can all be used in the same "run". Or, if you just want to rotationally mix, set the unit to rotate. It is very simple to operate and program, runs can be programmed in seconds. You can mix many different sizes of tubes ranging from 1.5 ml to 50 ml with the two interchangeable mixing platforms that come standard with the unit.

Tubes are held in-place with unique rubber flexible grippers; that surround and firmly hold tubes of varying diameters.



Specifications:

Capacity: Platform 1: 22 Tubes: 1.5ml-15 (Installed when new)
Platform 2: 6x50ml Tubes & 2x1.5-15ml Tubes (Included as an accessory) • RPM: Variable from 5-30 RPM • Timer: Up to 999 Sec., max mixing time: 12 hours • Reciprocating Timer: Up to 999 Sec. • Rotation Angle in Reciprocation Mode: 15°-90° (in 15° increments) • Turning angle vortex mode: 1 to 5 • Vortexing times: 1 to 5 • Maximum timer: 12 hours • Power: 110 /220V • Dimensions: 13.5" x 7" x 7.5" • Weight: 6.7 Lbs. / 3 Kgs

The MTR22 can mix in the following motions:

1. Rotate 360°, forward or reverse, & forward, then reverse
2. Reciprocating Rocker, back & forth like a traditional rocker
3. Vortex, (cavitate) Tube Capacity, 2 Platforms:
Platform 1: 22 Tubes: 1.5ml-15ml (Installed)
Platform 2: Six, 50ml Tubes & Two 1.5-15ml Tubes (Included)

Mingling Machine, Vortex, Blender

Model: TR-300/600, Mingling Machine

Suitable to stir the materials which are powder cream, paint, advertisement dyestuff, printing ink, greases, dental fillings, ceramic masses, ointments and high viscosity.

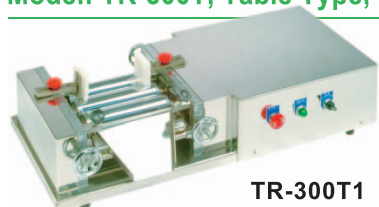
Features:

Minitype & space saving • High-speed, low-noise, & powerful horsepower • Small size & easy to move along • Use 110v, 220v • Horsepower: 1/2hp • Model of the machine: su 304 • Constant contact pressure of the scraper knife • Easy gap adjustment • Parallels roller gap • Easy cleaning

Areas of Application:

The three-roll mills are used for intensive fine grinding, dispersion & homogenization of pasty masses to free-flowing materials.

Model: TR-300T, Table Type, Mingling Machine



TR-300T1

Motor	Roller Size	Size (WxDxH)	Weight
TR-300T1	Ø63mm x 200mm	880x430x240mm	63kg
TR-300T2	Ø76mm x 200mm	880x430x240mm	65kg

Models: TR-300F/600, Floor Type Mingling Machine for paint ink



TR-300F

TR-600

- Ceramics & glass colors
- Printing inks
- Electronics
- Cosmetics
- Food
- Dental fillings, dental impression masses
- Greases
- Ceramic masses
- Ointments

Motor	Roller Size	Size (WxDxH)	Weight
TR-300F1	Ø63mm x 200mm	520x430x840mm	80kg
TR-300F2	Ø76mm x 200mm	520x430x840mm	83kg
TR-600	Ø152mm x 406mm	840x860x100mm	230kg

Model: SI-D236, Vortex-TurboMix Distrupror

SI-D236



- Rapid hands-free disruption of up to 12 microtubes (1.5ml or 2.0ml) at one time
- Timer maintains operating speed for up to 15 minutes, or continuous operation, even in cold rooms
- Supplied Pop-off cup easily attaches for use as a standard single-tube vortex mixer
- Less costly than ultrasonic units or homogenizers
- Use with Disruptor Beads™, made from spherical lead free soda lime glass, available in two sizes
- Disruptor Beads are used with Disruptor Genie or
- TurboMix™ attachment for Vortex-Genie® 2 family of mixers

Model: BagMixer 400W, Lab Blender



World best seller, BagMixer® 400 is a powerful and easy-to-use lab blender. In use with a filter-bag, there is no risk of cross-contamination: the blending is accurate, reliable and quick. Adapted to any kind of application, it is the perfect tool for microbiological analysis.

Performance:

- Window door
- Fixed blending speed (8 strokes/sec.)
- Variable blending time (30-210 secs. or open-running)
- Security drip tray

Features:

Silent • Optimum extraction • Unbreakable window door • Life-time guarantee on shock-absorbers • All stainless steel • 270° retractable door • Easy cleaning

Specifications:

- Useful volume: 50-400ml
- Power: 220/110V-50/60Hz
- Size (L x l x h): 39 x 26 x 29 cm
- Weight: 16.5kg