

Life Science Equipment



Satisfaction with the requirements of European regulations and guidelines.



Real-time equipment monitoring and control system using mobile app.



Compliance with Guidelines for Restriction of Hazardous Substances Use.



Rocking motion.



Control of temperature / humidity / rpm / time, etc. through dedicated program.



More precise temperature control through temperature calibration.



Over temperature protection function.



PC communication via RS-232 / RS-485 / USB port.



2 year warranty Free A/S.

General Application

Hybridization Oven: Useful for wash and Binding experiments in molecular biology.

Heating Block: Required in culture experiments such as enrichment, enzyme reaction, immunoassay, etc.

Electrophoresis System: Electrophoresis of nucleic acid.

Power Supply for Electrophoresis System: Electrophoresis of nucleic acids and proteins.

	Description	Note	Model	Page	
Preparation Reaction Detection	Hybridization Oven	<ul style="list-style-type: none"> Performs hybridization progressively 10 Programs & 10 Steps 	Amb. +5 ~ 65°C / Amb. +41 ~ 149°F	HO	158
	Heating Block	<ul style="list-style-type: none"> Precise feedback temperature control up to 130°C Selection of aluminum blocks for various tubes 	Amb. +5 ~ 130°C / Amb +41 ~ 266°F	CHB	159
	Heating & Cooling Block	<ul style="list-style-type: none"> Convenient controlling for 10 programs & 10 steps Temperature control in 0.1°C and timer function included 	Amb. -20 ~ 95°C / Amb. 68 ~ 203°F	CCB	160
	Heating Shaker	<ul style="list-style-type: none"> High performance heating shaker at 100°C and 1500rpm Three specialized Interval Mix programs provided 	Max. 100°C Max. 1500rpm	CBS	161
	Electrophoresis System	<ul style="list-style-type: none"> Integral structure solid, clean, and easy to maintain UV-transparent gel tray for convenient checking of results 	Buffer Capacity (0.5, 1.0, 1.8 L)	EP	164
	Power Supply	<ul style="list-style-type: none"> Safe power supply with CE certificate Four-set simultaneous output and stackable structure 	Constant Voltage Constant Current	EPS	167

※ The contents of the above and the contents of this catalog may differ depending on the specific model and conditions of use. For the information about the features and specifications that applying to each models, please check the information on the corresponding page of each models.

Vortex Mixer

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Incubated Shaker

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PCR Workstation

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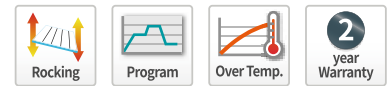


Ice Pan / Rack

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Hybridization Oven



Program control that allows the hybridization process to be performed sequentially

Structural Functional Features

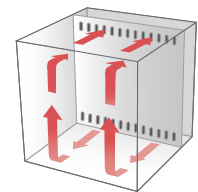
- Hybridization oven with compact design.
- Ideal for hybridization experiments where wash and dry is repeatedly required.
- Moisture provision tray for humidity control.
- Stable rocking motion.
- Internal air circulating to control temperature.
- Design with door that opens downward, minimizing the required space on the side of the device.
- Door with viewing window for easy internal observation.
- Stainless steel interior and shelves are excellent in terms of corrosion resistance and clean maintenance.
- Convenient to use in the Wash phase as a sliding shelf.



HO-10

Use Convenience Features

- 10 Programs & 10 steps program control.
- Alarm occurs at the end of each step.
- Temperature and rocking can be operated selectively.
- Microprocessor PID method for precise temperature control.
- Calibration function minimizes temperature difference.
- Provides preheating/precooling functions to perform the hybridization step after reaching the set temperature.
- Clear VFD panel for convenient operation status checking.
- Touch button & Jog dial for easy operation.



Outstanding Safety

- Alarm occurs when humidity is kept below the set value.
- Over temperature limit function.
- Alarm function when temperature sensor is disconnected.
- Preventing sample leakage by mounting pads from slippage onto the shelf.

Specification

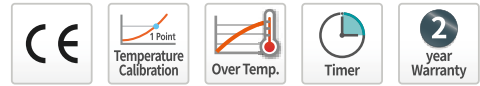
Model		HO-10
Chamber volume (L / cu ft)		10 / 0.35
Temperature	Range (°C / °F)	Amb. +5 ~ 65 / Amb. +9 ~ 149
	Fluctuation at 50°C, 9rpm (±°C / ±°F)	0.5 / 0.9
	Variation at 50°C, 9rpm (±°C / ±°F)	0.5 / 0.9
Rocking System	Motion type	Rocking
	Speed range (rpm)	5 to 50
	Max. load (kg / lbs)	1 / 2.2
	Adjustable tilt	8.5° ± 1
Dimensions	Platform (W x D, mm / inch)	256 x 198 / 10.08 x 7.79
	Interior (W x D x H, mm / inch)	278 x 262 x 160 / 10.94 x 10.31 x 6.3
	Exterior (W x D x H, mm / inch)	400 x 410 x 264 / 15.75 x 16.14 x 10.39
	Net weight (kg / lbs)	14 / 30.86
Electrical requirements (230V, 60Hz, A)		1.2
Cat. No.		AAH1B011K
Electrical requirements (230V, 50Hz, A)		2.4
Cat. No.		AAH1B012K



※ The lowest temperature that can be controlled depends on changes in room temperature and sample temperature. Therefore, please contact the distributor of our products before purchasing for technical consultation.

※ Technical data (according to DIN 12880)

Heating Block



Precise feedback temperature control up to 130°C

Structural Functional Features

- Optimal heat transfer is achieved by the tight coupling design of the main body.
- Transparent and durable polycarbonate lid protects the sample and provides improved temperature distribution.
- Compact design makes it easy to move and use space.
- Polypropylene (PP) material with excellent chemical resistance.
- Two extractors for easy removal block are provided as standard.
- Aluminum blocks with excellent thermal conductivity. (option)
- Two models with different cover heights are provided depending on the block (tube size) used.

Use Convenience Features

- The temperature can be set accurately in units of 0.1°C.
- Feedback control enables precise temperature control.
- Calibration function minimizes temperature difference.
- Easy to operate with clear VFD display, touch keys and control knobs.
- Provides operating elapsed time check.
- Count-down timer provided. (up to 99 hours and 59 minutes)

Outstanding Safety

- Structure with minimal inflow of reagent or sample.
- Convenient and safe operation by notifying the status of heating condition.
- Overheating temperature prevention function. (heating panel, control unit)
- Over-current prevention function.



CHB-350S

with Exchangeable Block (option)

CHB-350T

with Exchangeable Block 2ea (option)



with Extractor 2ea (standard)

Specification

Model	CHB-350S	CHB-350T
Temperature		
Range (°C / °F)	Amb. +5 ~ 130 / Amb +41 ~ 266	Amb. +5 ~ 130 / Amb +41 ~ 266
Fluctuation at 80°C (±°C / ±°F)	0.1 / 0.18	0.1 / 0.18
Variation at 80°C (±°C / ±°F)	0.5 / 0.9	0.5 / 0.9
Display	Up to 130°C, 0.1°C resolution	Up to 130°C, 0.1°C resolution
Heat up time Ambient to 130°C (min)	15	15
Control	Feedback control	Feedback control
Timer	1min to 99hrs 59min	1min to 99hrs 59min
Safety device	Over temperature protection, Over current protection	
Material		
Body	PP, Powder coated steel	PP, Powder coated steel
Cover	PC	PC
Block	Black hard anodized Aluminum	Black hard anodized Aluminum
Dimensions		
Exterior (W x D x H, mm / inch)	249 x 330 x 125 / 9.8 x 12.99 x 4.92	249 x 330 x 250 / 9.8 x 12.99 x 9.84
Net weight (kg / lbs)	3.9 / 8.6	4.3 / 9.48
Electrical Requirements (230V, 50/60Hz, A)	3.5	
Cat. No.	AAHJ1015K	AAHJ1115K
Electrical Requirements (120V, 60Hz, A)	6.7	
Cat. No.	AAHJ1013U	AAHJ1113U

Heating & Cooling Block



Convenient use thanks to easy temperature control with 10 programs and 10 steps

Structural Functional Features

- 10 Programs & 10 steps program control.
- Program can be set to 99 repetitions or infinite repetitions.
- Optimal heat transfer is achieved by the tight coupling design of the main body.
- Transparent and durable polycarbonate lid protects the sample and provides improved temperature distribution.
- Compact design makes it easy to move and use space.
- Polypropylene (PP) material with excellent chemical resistance.
- Two extractors for easy removal block are provided as standard.
- Aluminum blocks with excellent thermal conductivity. (option)



CCB-350

with Exchangeable Block (option)

Use Convenience Features

- The temperature can be set accurately in units of 0.1°C.
- Feedback control enables precise temperature control.
- Calibration function minimizes temperature difference.
- Easy to operate with clear VFD display, touch keys and control knobs.
- Provides operating elapsed time check.
- Count-down timer provided. (up to 99 hours and 59 minutes)

Outstanding Safety

- Structure with minimal inflow of reagent or sample.
- Convenient and safe operation by notifying the status of heating condition.
- Overheating temperature prevention function. (heating panel, control unit)
- Over-current prevention function.



Specification

Model	CCB-350
Temperature	
Range (°C / °F)	Amb. -20 ~ 95 / Amb. -36 ~ 203
Fluctuation at 37°C (±°C / ±°F)	0.1 / 0.18
Variation at 37°C (±°C / ±°F)	0.5 / 0.9
Display	Up to 95°C, 0.1°C resolution
Control	Feedback control
Timer	1min to 99hrs 59min
Safety device	Over temperature protection, Over current protection
Material	
Body	PP, Powder coated steel
Cover	PC
Block	Black hard anodized Aluminum
Dimensions	
Exterior (W x D x H, mm / inch)	249 x 330 x 168 / 9.8 x 12.99 x 6.61
Net weight (kg / lbs)	5 / 11.02
Electrical Requirements (220V, 50/60Hz, A)	2
Cat. No.	AAHJ5015K
Electrical Requirements (120V, 60Hz, A)	4
Cat. No.	AAHJ5013U

Heating Shaker



Up to 100°C, 1500rpm, and program control

Structural Functional Features

- Three specialized interval mix programs are provided. (45/55/65°C & 1,000rpm, 1 minute operation/stop)
- 10-step temperature and shaking control set.
- Program can be set to 99 repetitions or infinite repetitions.
- Optimal heat transfer is achieved by the tight coupling design of the main body.
- Compact design makes it easy to move and use space.
- Polypropylene (PP) material with excellent chemical resistance
- Improved durability with integrated shaking module. (registration: 10-1429256)
- Aluminum block with excellent thermal conductivity and block cover (option) made of polypropylene.



CBS-350
with Block (option)

Use Convenience Features

- The temperature can be set accurately in units of 0.1°C.
- Feedback control enables precise temperature control.
- Calibration function minimizes temperature difference.
- Protecting the sample by starting with soft shaking.
- Easy to operate with clear VFD display, touch keys and control knobs.
- Provides operating elapsed time check.
- Count-down timer provided. (up to 99 hours and 59 minutes)

Outstanding Safety

- Structure with minimal inflow of reagent or sample.
- Convenient and safe operation by notifying the status of heating condition.
- Overheating temperature prevention function. (heating panel, control unit)
- Over-current prevention function.

Specification

Model		CBS-350
Temperature		
Range (°C / °F)		Amb. +5 ~ 100 / Amb. +41 ~ 212
Fluctuation at 80°C (±°C / ±°F)		0.3 / 32.54
Variation at 80°C (±°C / ±°F)		0.7 / 33.26
Display		Up to 100°C, 0.1°C resolution
Control		Feedback control
Shaking System		
Motion type		Orbital
Speed range (rpm)	96-well tube block	150 to 1500
	0.5 ml tube block	150 to 1000
	1.5 ml/2.0 ml tube block	150 to 1000
	15 ml tube block	150 to 900
	Ø12 tube block	150 to 850
	Ø13 tube block	150 to 850
50 ml tube block		150 to 800
Amplitude, Orbital size (mm, dia.)		2
Timer		1min to 99hr 59min
Safety device		Over temperature protection, Over current protection
Material		
Body		PP, Powder coated steel
Cover		PP
Block		Black hard anodized Aluminum
Dimensions		
Exterior (W x D x H, mm / inch)		249 x 325 x 120 / 9.8 x 12.79 x 4.72
Net weight (kg / lbs)		8.25 / 18.19
Electrical Requirements (230V, 50/60Hz, A)		1.7
Cat. NO.		AAHJ4015K
Electrical Requirements (120V, 60Hz, A)		3.4
Cat. No.		AAHJ4013U

Accessories Page 163 Heating Block

Accessories




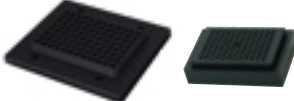



Accessories for Heating Block, Heating & Cooling Block

Image	Model	Description	Max. Mountable Tube	Dimensions (W x D x H, mm / inch)	Mountable Capacity of Blocks		
					CHB-350S	CHB-350T	CCB-350
	00CHB0000028	1.5 / 2.0 ml Tube block (micro-tube)	48	153 x 98 x 41 / 6.02 x 3.86 x 1.61	1	1	-
	00CHB0000045	1.5 / 2.0 ml Tube block (micro-tube)	30	98 x 76.5 x 41 / 3.86 x 3.01 x 1.61	2	2	1
	00CHB0000029	0.5 ml Tube block (micro-tube)	48	98 x 76.5 x 41 / 3.86 x 3.01 x 1.61	2	2	1
	00CHB0000030	0.2 ml Tube block (micro tube / strips / 96-well plate)	96	153 x 98 x 41 / 6.02 x 3.86 x 1.61	1	1	-
	00CHB0000031	15 ml Tube block (conical tube)	15	98 x 76.5 x 51 / 3.86 x 3.01 x 2.01	2*	2	1*
	00CHB0000032	50 ml Tube block (conical tube)	6	98 x 76.5 x 51 / 3.86 x 3.01 x 2.01	2*	2	1*
	00CHB0000033	50 ml Tube block (conical tube)	6	98 x 76.5 x 87 / 3.86 x 3.01 x 3.42	2*	2	1*
	00CHB0000034	Φ10 mm Tube block	35	98 x 76.5 x 51 / 3.86 x 3.01 x 2.01	2*	2	1*
	00CHB0000035	Φ12 mm Tube block	24	98 x 76.5 x 51 / 3.86 x 3.01 x 2.01	2*	2	1*
	00CHB0000036	Φ13 mm Tube block	24	98 x 76.5 x 51 / 3.86 x 3.01 x 2.01	2*	2	1*
	00CHB0000037	Φ15 mm Tube block	20	98 x 76.5 x 51 / 3.86 x 3.01 x 2.01	2*	2	1*
	00CHB0000038	Φ16 mm Tube block	16	98 x 76.5 x 51 / 3.86 x 3.01 x 2.01	2*	2	1*
	00CHB0000039	Φ18 mm Tube block	12	98 x 76.5 x 51 / 3.86 x 3.01 x 2.01	2*	2	1*
	00CHB0000040	Φ20 mm Tube block	12	98 x 76.5 x 51 / 3.86 x 3.01 x 2.01	2*	2	1*

※ It can be equipped when the lid is opened.



Accessories for Heating Shaker

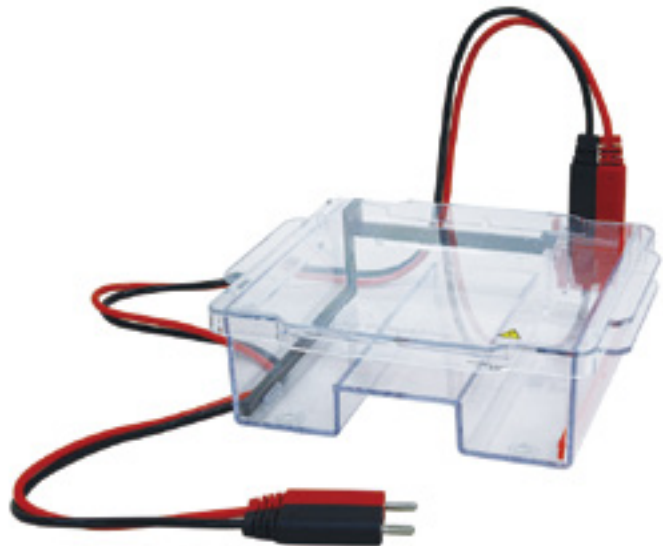
Image	Model	Description	Max. Mountable Tube	Dimensions (W x D x H, mm / inch)	Mountable Capacity of Blocks	
					CBS-350	
	AAAJ4501	0.5 ml Tube block with block cover	48	98 x 76.5 x 30 / 3.86 x 3.01 x 1.18	1	
	AAAJ4502	1.5 / 2.0 ml Tube block with block cover	24	98 x 76.5 x 41 / 3.86 x 3.01 x 1.61	1	
	AAAJ4503	50 ml Tube block with block cover	6	98 x 76.5 x 51 / 3.86 x 3.01 x 2.01	1	
	AAAJ4504	0.2 ml Tube block with block cover	96	111 x 76.5 x 15 / 4.37 x 3.01 x 0.59	1	
	AAAJ4505	15 ml Tube block with block cover	15	98 x 76.5 x 51 / 3.86 x 3.01 x 2.01	1	
	AAAJ4506	Φ12 mm Tube block with block cover	24	98 x 76.5 x 51 / 3.86 x 3.01 x 2.01	1	
	AAAJ4507	Φ13 mm Tube block with block cover	24	98 x 76.5 x 87 / 3.86 x 3.01 x 3.42	1	

Electrophoresis System

Differentiated ease of use electrophoresis system

Structural Functional Features

- Horizontal electrophoresis system.
- Integral structure of transparent polycarbonate material ensures excellent durability and convenient sample checking.
- Cathode/anode and direction marking on the bottom of the tank makes it very convenient to use for checking the direction of electrophoresis.
- Easy to move with handles on the sides of the tank.
- There are rubber feet on the bottom of the tank and gel caster to prevent slip.
- Electrodes are easy to remove from tank and it's easy to clean the tank.
- Providing 31 well and 16 well Comb at the same interval as a multi-channel pipette, enabling fast loading of large quantities of samples. (EP-10, EP-18)

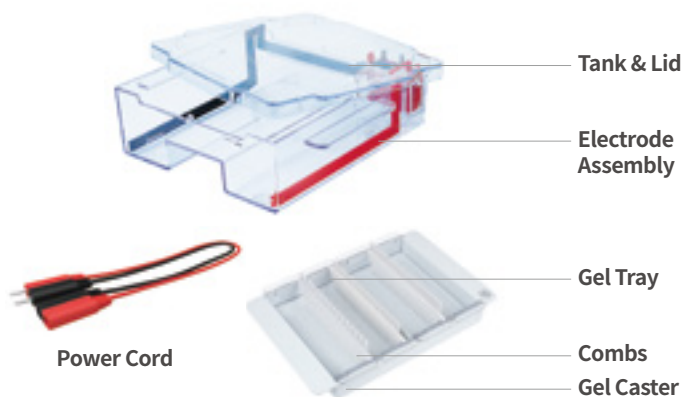


EP-10

with Power Cord (standard)

Use Convenience Features

- The gel tray is UV-transparent, and no need of separation for the Agarose Gel from the tray to check the results. (UV-A)
- Level marker is engraved on the gel tray to make it easy to make gel of constant thickness.
- Level meter included in gel caster for easy to uniformity of gel generating. (EP-10, EP-18)
- Power cord being connected/disconnected easily are divided into cathode/anode by black/red. Large quantities of samples can be loaded at once. (based on EP-18, total 198EA (including marker))



Level marker

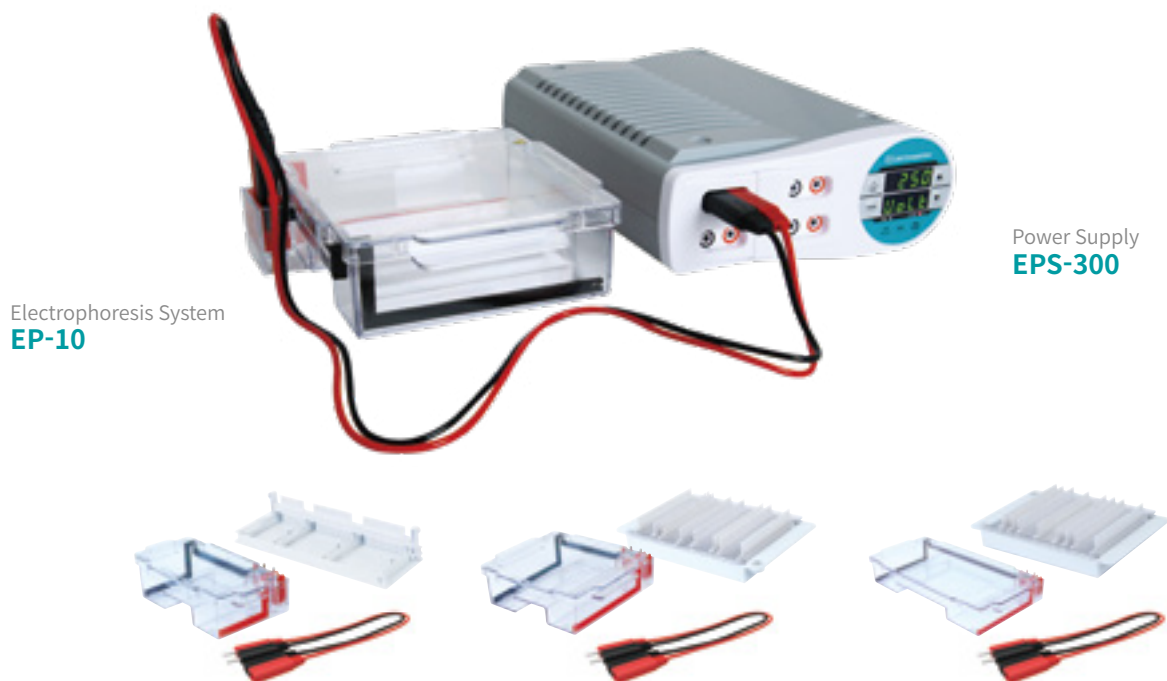


Gel caster level meter



Anti-slip rubber feet

Constructed with a power supply for electrophoresis of nucleic acids and proteins.



Electrophoresis System
EP-10

Power Supply
EPS-300

Product composition

Model	EP-05	EP-10	EP-18
Electrophoresis Unit (Tank & Lid, Electrode, Power Cord)	1 set	1 set	1 set
Gel Caster	1 ea	1 ea	1 ea
Gel Tray	3 ea	2 ea (2 Combs can be installed per tray)	1 ea (Up to 6 Combs can be installed)
Comb	27/40 well (1.0 mm) x 1ea	20/31 well (1.0 mm) x 2ea 20/31 well (1.5 mm) x 2ea 16/20 well (1.0 mm) x 2ea 16/20 well (1.5 mm) x 2ea 25/34 well (1.0 mm) x 2ea 25/34 well (1.5 mm) x 2ea	20/31 well (1.0 mm) x 2ea 20/31 well (1.5 mm) x 2ea 16/20 well (1.0 mm) x 2ea 16/20 well (1.5 mm) x 2ea 25/34 well (1.0 mm) x 2ea 25/34 well (1.5 mm) x 2ea

Specification

Model	EP-05	EP-10	EP-18	
Buffer capacity (L / cu ft)	0.5 / 0.017	1 / 0.035	1.8 / 0.063	
Material	Electrophoresis tank, Lid	PC (Polycarbonate)		
	Electrodes	Platinum wire		
Dimensions (W x D x H, mm / inch)	Electrophoresis tank	219 x 134 x 71 / 8.62 x 5.27 x 2.79	219 x 214 x 71 / 8.62 x 8.42 x 2.79	387 x 214 x 71 / 15.24 x 8.42 x 2.79
	Gel caster	254 x 87 x 18 / 10 x 3.42 x 0.79	167 x 264 x 30 / 6.57 x 10.39 x 1.18	167 x 264 x 30 / 6.57 x 10.39 x 1.18
	Gel tray	81 x 82 x 17 / 3.19 x 3.23 x 0.67 58 x 82 x 17 / 2.28 x 3.23 x 0.67	181 x 103 x 30 / 7.12 x 4.05 x 1.18	181 x 206 x 30 / 7.12 x 8.11 x 1.18
	Comb	225 x 45 / 8.86 x 1.77	158 x 46 / 6.22 x 1.81	158 x 46 / 6.22 x 1.81
	Electrophoresis unit weight (kg / lbs)	0.39 / 0.86	0.6 / 1.32	0.93 / 2.05
Cat. No.	AAAJ6011	AAAJ6021	AAAJ6031	

Accessories



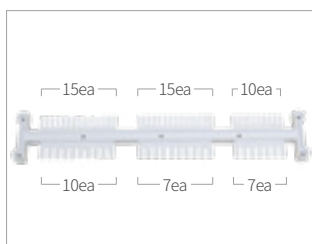
Electrophoresis Unit



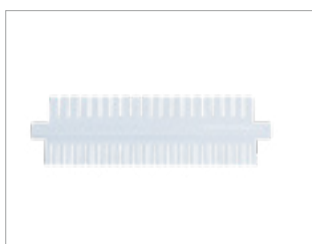
Gel Caster Unit



Electrode Assembly



Comb 27/40 well



Comb 20/31 well



Comb 16/20 well



Comb 25/34 well

Comb Specification

Comb	27/40 well		20/31 well		16/20 well		25/34 well	
Well (ea)	27	40	20	31	16	20	25	34
Width (mm / inch)	4.8 / 0.19	3.0 / 0.11	4.8 / 0.19	3.0 / 0.11	6.0 / 0.24	4.8 / 0.19	4.5 / 0.18	3.0 / 0.11
Volume (μl)	30	20	48 / 72*	30 / 45*	60 / 90*	48 / 72*	45 / 68*	30 / 45*

* Volume per well of 1.0 mm / 1.5 mm depending on Comb thickness.

Cat. No.	Description	model
AAAJ6501	Electrophoresis unit (tank, lid, electrode assembly)	EP-05
AAAJ6502	Electrophoresis unit (tank, lid, electrode assembly)	EP-10
AAAJ6503	Electrophoresis unit (tank, lid, electrode assembly)	EP-18
AAAJ6511	Gel caster unit (gel caster, gel tray)	EP-05
AAAJ6512	Gel caster unit (gel caster, gel tray)	EP-10
AAAJ6513	Gel caster unit (gel caster, gel tray)	EP-18
AAAJ6521	Electrode assembly	EP-05
AAAJ6522	Electrode assembly	EP-10
AAAJ6523	Electrode assembly	EP-18
AAAJ6531	Comb 27/40 well, thickness 1 mm - (5ea)	EP-05
AAAJ6532	Comb 20/31 well, thickness 1 mm - (5ea)	EP-10/18
AAAJ6533	Comb 20/31 well, thickness 1.5 mm - (5ea)	EP-10/18
AAAJ6534	Comb 16/20 well, thickness 1 mm - (5ea)	EP-10/18
AAAJ6535	Comb 16/20 well, thickness 1.5 mm - (5ea)	EP-10/18
AAAJ6536	Comb 25/34 well, thickness 1 mm - (5ea)	EP-10/18
AAAJ6537	Comb 25/34 well, thickness 1.5 mm - (5ea)	EP-10/18

Power Supply for Electrophoresis System



Multipurpose Power Supply can be used Horizontal agarose gel, Vertical polyacrylamide gel running, various blotting experiments, Etc.



EPS-300

Structural Functional Features

- Power supply optimized for electrophoresis system.
- It consists of four sets of output terminals, so four electrophoresis devices can be used at the same time.
- Space-efficient use with stackable design.
- Folding legs on the lower part make it convenient to operate and check the status.
- Constant voltage and constant current, convenient use as two operation modes provided.
- PC communication via RS-232 Port.

Use Convenience Features

- Accurate current and voltage by microprocessor.
- Pause and restart functions.
- Count-down timer. (up to 99 hours and 59 minutes)
- Displaying the operating time.
- Safety function that cuts off the electric output when no load or sudden change of load is detected.
- Possible to monitor experimental conditions such as Voltage, current value, change the setting value, stopping and reactivating. (when purchased LC GreenBox)

Outstanding Safety

- Rapid resistance change detection and detection of current leakage to prevent accidents by cutting power.
- Protection against over-current/over-voltage/overpower.
- Over-temperature protection.

Accessories

Cat. No.	Description	Dimension (W x D x H, mm / inch)
AAAQ1011	LC GreenBox	156 x 94 x 34 / 6.14 x 3.7 x 1.34

Specification

Model	EPS-300
Output range	5~250V, in 1V increments 10mA~3000mA, in 10mA increments (Max. 300W)
Type of output	Constant voltage mode, constant current mode
Output terminals	4 pair recessed banana jack in parallel
Timer	1min to 99hr 59min
Pause/resume function	Yes
Display	7-segment 4 digit LED, 2 line
Operating conditions	0~40°C (32~104°F), 0~80% RH
Dimensions (W x D x H, mm / inch)	240 x 310 x 100 / 9.45 x 12.2 x 3.94
Net weight (kg / lbs)	2.5 / 5.51
Electrical requirement (VAC, Hz)	100-240VAC, 50/60Hz
Current consumption (A)	1.5-3.6
Cat. No.	AAAH6541