ATTO
Power Supply Equipment series

Safety, Accuracy and Simple operability!

For Electrophoresis & Blotting

Multifunctional / High spec type

WSE-3200 PowerStation III
WSE-3500 PowerStation HC

Small / Lightweight type

AE-8135 myPower II 300
AE-8155 myPower II 500

50 years with Electrophoresis

Since 1964 ATTO Made in Tokyo SupportingLifeResearch

ATTO Power Supply Equipment

Power supply is required for electrophoresis and blotting such as separation/analysis of protein/nucleic acid. Operator needs to choose the suitable equipment depending on application.
ATTO can provide power supply having good specification and function.

WSE-3500 PowerStation HC
High current spec.
For semi-dry/wet blotting etc.

WSE-3200 PowerStation Ⅲ
High voltage spec.　Versatile model.
For electrophoresis and semi-dry blotting of mini gel size etc.

Multifunctional/ High spec type

"PowerStation" series is the equipment having high specification ATTO recommend, such as output/display accuracy, output stability, safety and low power consumption.
Various output conditions for electrophoresis and blotting are pre-installed. Also free files are avilable for memorizing original output conditions.
Large dial and LED display make operation easy and clear. It distributes power to max 4 units simultaneously.
Moreover, this vertical body with a handgrip can be transported easily and saves space.

Compact/ Economical type

"myPower" series is one of the compactest and lightest power supply equipment for electrophoresis and blotting, which has also versatile applicability.
The compact body has various function such as constant current/constant voltage/cross-over output function, timer/alarm and safety measure.
Setting output conditions is easy by large dial and LED display. All sorts of alarms and melodies are selectable and operator can detect which one of several units finish distributing power.
The design for saving space can be transported easily, available for distributing power to max. 2 units.

AE-8135 myPower Ⅱ300
High current spec.
For electrophoresis, semi-dry blotting etc.

AE-8155 myPower Ⅱ500
High voltage spec.
For electrophoresis etc.

Specification (Output)/Field of Application

Model		WSE-3200	WSE-3500	AE-8135	AE-8155
Product name		PowerStation Ⅲ	PowerStation HC	myPower Ⅱ300	myPowerⅡ500
					
Voltage	Setting	10-1000V (1V step)	5-150V (1V step)	1-300V (1V step)	1-500V (1V step)
	Output	10-1000V	5-150V	1-300V	1-500V
Current	Setting	1-500mA (1mA step)	0.01-3.00A (0.01A step)	1-400mA (1mA step)	1-200mA (1mA step)
	Output	0-500mA	0-3.00A	1-400mA (0mA-, depending on setting)	1-200mA (0mA-, depending on setting)
Power	Setting	0-200W (1W step)		---	
	Output	0-200W		Load limitation (0.01-50W)	Load limitation (0.01-25W)

Application		PowerStation Ⅲ	PowerStation HC	myPower Ⅱ300	myPower Ⅱ500
Electrophoresis	Small polyacrylamide gel (PAGE smaller then about 9x9 cm)	○	△	○	○
	Midium polyacrylamide gel (PAGE bigger than about 10x10cm)	○	×	○	○
	Coolinig polyacrylamide gel (Cooling PAGE)	○	×	×	△
	Large polyacrylamide gel (Sequence gel)	△	×	×	×
	Disc isoelectric focusing (Disc IEF)	○	×	△	△
	Plate isoelectric focusing (Plate IEF)	△	×	×	×
	Submerge agarose (Plate agarose electrophoresis)	○	△	○	△
Blotting	Semi-dry blotting	△	○	△	×
	High speed semi-dry blotting	△	○	△	×
	Wet (Tank) blotting	×	○	×	×

○ : Suitable　△ : Restricted by condition　× : NOT suitable

●The requested value of voltage/current(/power) is altered by electrophoresis apparatus or blotting device used for experiment.

- In the case of polyacrylamide electrophoresis (SDS-PAGE, Native-PAGE etc.), it requires relatively high voltage(V). Especially, cooling operation or large electrophoresis chamber (Long distance between electrodes) needs it.
- In the case of agarose electrophoresis or blotting, it requires relatively high current (several hundred mA~A). Especially, it is needed for blotting. Please confirm required current value in the case of large blotting area, high speed blotting or tank method (wet method) blotting.
- Some blottings require low voltage (less than 20V). PowerStation III is not suitable for this case.
- Constant output at low current area (0~some mA) is necessary for isoelectric focusing.
- If power supply is connected to some electrophoresis chamber, total required value is the number of chamber x current (mA), so more current (mA) and power (W) is necessary.
  The interior of power supply equipment is parallel.

Constant current/voltage/power output
Precise control power supply

WSE-3200 PowerStation Ⅲ

WSE-3500 PowerStation HC

Multi-function/High spec/High accuracy/High stability

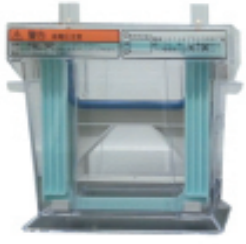
WSE-3200 PowerStation Ⅲ
High voltage spec. Versatile model.
For electrophoresis such as SDS-PAGE.
Available with semi-dry blotting of mini gel.

WSE-3500 PowerStation HC
High current spec.
For high speed semi-dry blotting, semi-dry/ wet blotting etc.

Product No.	Model	Product Name
2311145	WSE-3200	PowerStation Ⅲ
2311124	WSE-3500	PowerStation HC

- Precise control of current (mA)/voltage (V)/power (W) and cross-over output
- Accuracy of output/display and output stability supporting high reproducibility
- Easy setting: preinstalled output conditions, free files for memrizing original condition
  Main output conditions are input
- Large LED display and dial for easy operation
- Timer/Alarm function
- Low power consumption (about 15 % off compared with conventional product)
- Automatic recovery function of previous status when power is restored after blackout
- Corresponding to wideband frequency and fluctuation of input voltage

Electrophoresis chamber
"mPAGE"



"PowerStation III"

For electrophoresis

"PowerStation HC"

Blotting system
"HorizeBLOT 2M-R"

For blotting

Constant current/voltage/power output
Precise control power supply

Specification

	WSE-3200 PowerStation Ⅲ	WSE-3500 PowerStation HC
Contraol	Constant Voltage/Constant Current/COnstant Power/Crossover	
Setting	Voltage : 10-1000 V (1 V step) Current : 1 - 500m A (1 mA step) Power : 1 - 200W(1 W step)	Voltage : 10-150 V (1 V step) Current : 0.01- 3.00 A (10mA step) Power : 1 - 200W(1 W step)
Output	Voltage : 10-1000V (Display 1000＝Full) Current : 0 -500mA (Display 0 -) Power : 0 -200W (Display 0 -) } Max. 200W	Voltage : 5-150V (Display 0 -) Current : 0 -3.00A (Display 0 -) Power : 0 -200W (Display 0 -) } Max. 200W
Output accuracy	Voltage : Below 10-50V, ±1.5V* 51-150V, ±3%＋5digits* 151-1000V, ±2%＋5digits* *against setting value	Voltage : 10-150V, ±3%＋5digits* *against setting value
Display accuracy	Voltage : within the range of ± (0.2% of rdg＋5digits) Current : within the range of ± (0.5% of rdg＋5digits) Power : within the range of ± (0.5% of rdg＋5digits)	
Timer	1 -999min (Set 0min: continuous putput), 1 min step, Countdown	
Alarm	Press keys (1 time), Errors (1 time), Time up (5 times)	
Condition storage	Preset 23 files Free 21 files, 10 chain files	Preset 30 files Free 21 files, 10 chain files
Safety mechanism	Short (short circuit current), Leakage (leak current to ground), Open (removal of load), Arc (discharge), Detection of input high voltage, Trouble of fan, Rise in internal temperature Each error is shown on the display (Err 0-9).	
Blackout Protection	Automatic recovery function of previous status when power is restored after blackout	
Output terminal	4 pairs in parallel	
Input power	Voltage: AC85-264V Frequency: 47-66Hz	
Consumption	Less than 300W	
Regulatory	Japan Electrical Appliance and Material Safety Law(PSE)	
Dimension/ Weight	96 (W) ×325 (D) ×195 (H) mm/2.4kg (Main body)	

※If less then 20V of voltage is required such as blotting, "WSE-3200 PowerStation III" is not suitable equipment.

Operation example

Ready with blotting system "HorizeBLOT 2M-R" and "PowerStation HC".

Connect blotting system to power supply equipment.

Turn on the power. Select [P20} by [PROGRMA] buttong and dial.

※[P20] is preset condition for blotting of 1 Mini gel.

Press [Run] button and operation starts. When time is up, an alarm rings and power distribution stops automatically.

Constant current/voltage/power output compact power supply

AE-8135 myPower Ⅱ300

AE-8155 myPower Ⅱ500

Compact, Light & Economical model with display easy to view and ararm.

AE－8135 myPower Ⅱ 300

For agarose electrophoresis (DNA electrophoresis), semi-dry blotting (Western blotting of protein) and so on!

AE－8155 myPower Ⅱ 500

For general eelctrophoresis such as SDS-PAGE (polyacrylamide gel electrophoresis of protein)!

Product No.	Model	Product Name
2311175	AE-8135	myPower Ⅱ 300
2311185	AE-8155	myPower Ⅱ 500

- Current (mA)/Voltage (V), Crossover output control
- Compact and Vertical design
- Light weight: 740g
- Easy operation; easy setting by a large dial
- Display easy to view: slant face pane with large LED display
- Timer/Alarm function Alarm melody can be selectable
- Safety mechanism: Erroe detection, Automatic shut down
- Automatic recovery function of previous status when power is restored after blackout

"myPower Ⅱ300"

Blotting system
"HorizeBLOT 2M-R"

For blotting

"myPower Ⅱ500"

Electrophoresis chamber
"mPAGE"

For electrophoresis

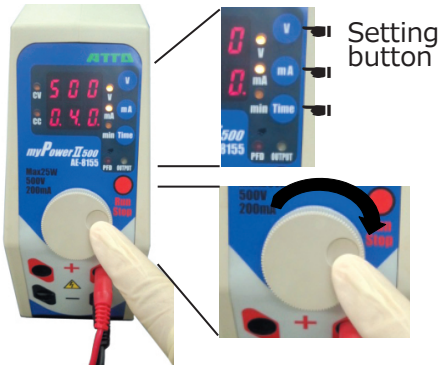
Constant current/voltage/power output compact power supply

Specification

	AE-8135 myPower Ⅱ 300	AE-8155 myPower Ⅱ 500
Control	Constant Voltage/Constant Current/Crossover	
Setting	Voltage : 1-300V(1 V step) Current : 1-400mA(1 mA step)	Voltage : 1-500V(1 V step) Current : 1-200mA(1 mA step)
Output	Voltage : 1-300V Current : 1-400mA } Max. 50W (0- Depending on setting)	Voltage : 1-500V Current : 1-200mA } Max. 25W (0- Depending on setting)
Display accuracy	Voltage/Current:within the range of ± （1%FS± 1 digit)	
Timer	1-999min (equivalent to about 16.6 hours), 0 min continuous output, 1min step, Countup	
Alarm	Selection of alarm presence/absence at the start of output, Selectable alarm or melody at the end of output (Alarm x7, Melody x13 types)	
Safety mechanism	Short circuit detection (Err1)/ Open detection (Err2) Automatic output stop, Warning alarm	
Blackout Protection	Automatic recovery function of previous status when power is restored after blackout	
Output terminal	2 pairs in parallel	
Input power	Voltage: AC100-115V（AC200-230V） Frequency: 50／60Hz	
Consumption	70W	40W
Dimension/ Weight	74（W）×170（D）×170（H）mm ／ 0.74kg（Main body）	

Feature

Setting



When power is turned on, display blinks.
Set current (A), voltage (V) and time (min) by each buttong and dial with watching large LED display.
Prevous condition is memorized.

Compact and Light weight

7.4cm width, 740g:
Easy to carry around

Image

Melody alarm

7 types of alarm or 13 types of melody are available for selection.
The end of output is notified by the sound you chose.

Ex) Yankee Doodle
The Ride of the Valkyries
El Condor Pasa
Promenade from
Picture at an Exhibition
Oh My Darling, Clementine
Hol-Di-Ri-Dia
The second movement from
From The New World
Pomp and Circumstance

About Power Supply Equipment

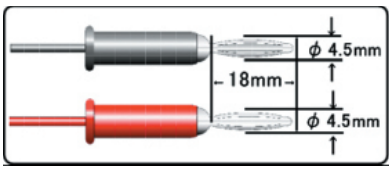
Condition of conducting electricity

Please refer to the instruction manual of electrophoresis apparatus or blotting system which is connected to power supply for setting the condition. In general, it is said that current is proportional to conducting area, and voltage is proportional to distance between electrode (length of gel).
For example, the condition is set to 20mA constant current per 1 sheet of gel with dual chamber and 2 sheets are set, 40 mA is required to set because conducting area is double.
Also the condition set to 20mA constant current for 1 mm thick gel is the same as that sett to 40mA for 2 mm thick gel.

If 1 power supply equipment is connected to 2 electrophoresis chamber (output terminals are connected to each chamber) , conducting area increases like the above explnation (Normally, there is parallel circuit in power supply). So, in the case of constant current setting, current value needs to be set in double. On the other hand, in the case of constant coltage setting, current value doesn't need to be reset.
About voltage, high voltage may be required depending on the operating condition such as that migration distance is long (large electrophoresis apparatus is used) or temperature is low etc. This is because the resistance increases.

Connection to lead wire

Lead wire attached to ATTO electrophoresis apparatus is connectable.
If you use lead wire of another company, please confirm the size and safety measures.



ATTO Corporation

2016.5

Providing research solutions for Biochemistry/Molecular Biology/
Genetic engineering development

Head Office: 3-2-2 Motoasakusa, Taito-ku, Tokyo, 111-0041 JAPAN

TEL: 81-3-5827-4863 FAX: 81-3-5827-6647 Email: eig@atto.co.jp

URL http://www.atto.co.jp/