

version 1.0



2023-2024 Catalogue



Innovative Life Sciences Tools

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Fermentation and Cell Cultivation Technology

Winpact is a product brand under Major Science, which provides a comprehensive and innovative line of cultivation products designed for different cell culture experiments and applications. It comes at a benchtop scale and has a large, color touch-screen panel with a user-friendly interface. Its distinctive functions include various programming operations to control the pump speed, pH levels, temperature, and more. The Winpact Fermentation System comes equipped with a full connection device to connect to any PC for real-time recording and environment control within the vessel.

About Major Science

Who We Are

Founded in 1994 by a team of experienced engineers as well as up-and-coming design specialists, Major Science designs, manufactures, and markets laboratory equipment that supports scientific research in life sciences laboratories. Headquartered in Taiwan, Major Science provides laboratory products and quality services to biotechnology companies, academic institutions and government research labs across the world.

Major Science is consistently delivering cutting-edge instruments for the bio-industry that cover nearly all of your laboratory needs. We provide the Winpact serials brand products which are the state-of-the-art fermentor and bioreactor for the fermentation and cell cultivation system. The Winpact serials brand products offer a wide range of fermentation systems and includes many of the most widely applied bench top-sized instruments for the life sciences field. In addition, we also offer innovative general instruments for all of your laboratory needs. Our general instrument product line includes Electrophoresis and Related Products, Gel Documentation System, Blue Light Technology, Mixer / Temperature Control and Peristaltic Pump.

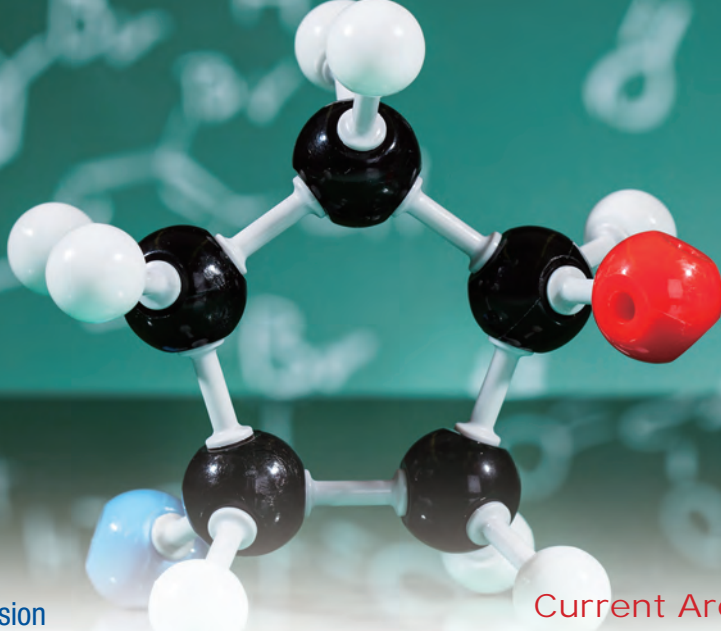
Major Science conducts business via our global distribution partners who also serve as our main sales force. These strategically-located partners ensure that Major Science supplies top-quality products, services, and support to all of our customers in any region of the globe. Products from Major Science are produced under international quality standards and specifications that excel in performance.

www.majorsci.com
info@majorsci.com

Our History

- 1994 Major Science founded as a biotechnology instrument distributor and provide engineering service in life sciences field.
- 1996 Began to sell Major Science branded general instruments.
- 2000 Announced our Winpact fermentation and cell cultivation product lines.
- 2005 Built up global awareness.
- 2008 Founded branch offices overseas.
- 2013 Accredited to SGS ISO 9001:2008
- 2017 Accredited to SGS ISO 9001:2015
- 2018 Accredited to TQCSI ISO 9001:2015





Our Mission

Major Science is devoted to create life sciences research instruments through quality and innovation. Our mission is to deliver integrated laboratory solutions to our customers and distribution partners through collaborative teamwork, thoughtful innovation, practical efficiency and outstanding service.

Our Vision

Major Science is devoted to serving customers in the scientific community across the globe, which means we are constantly progressing toward further innovation and working for wider applications for our products.

Creating innovative cell cultivation solutions is among one of our highest priorities. For the Winpact family product lines, we will be adding vessels that are bigger and smaller in size, as well as pilot and production scale vessels. Furthermore, we are developing the means to create connections from multiple cell culture vessels in different conditions to a single controller. In addition, Major Science is expanding on the cell cultivation line with more optional devices that can be integrated with our current systems. These expansion includes various vessel types, parts, accessories, and sub-systems. We will also embed the use of disposable systems that function with plastic instead of glass vessels.

Our Quality Policy

As of January, 2013, Major Science is accredited to the SGS ISO 9001:2008 compliance.

Major Science strives to achieve high standard for customer satisfaction, we promise to always improve our quality by means of research and development, as well as embrace any challenge come forth within.

Our Capabilities

- Innovative product design from our in-house R&D team
- Flexible production schedules
- ETL certified manufacturing facility
- CE and 3rd party certification
- OEM/ODM production experiences with leading companies
- Global marketing and product support
- Worldwide liability insurance across all product lines

Current Areas Of Focus

At Major Science, we are developing a comprehensive network of innovative products and services. We are continuously broadening our scope for people researching life sciences to provide an effective source of instrumentation.

Bioprocessing Technology

Bioreactor/Fermentors

Innovative SIP pilot and lab fermentation system suitable for all of your cell culture and fermentation engineering purposes

Cultivation Incubator

The ultimate bench-top model provide the stability and durability for all your fermentation and incubation needs

Life Sciences Research

Electrophoresis and Related Products

Provide excellent equipment for all of your nucleic acid and protein separation experiment

Gel Documentation System

Simple and innovative gel imaging systems and quantification software

Blue Light Technology

A comprehensive safe and environmental friendly blue light technology product range for real time gel observation during/after electrophoresis and gel treatments

Mixer/Temperature Control

A series of simple, compact and innovative incubators with shaking mechanisms for all of your application needs

Peristaltic Pump

Quality digital peristaltic pumps are suitable for various of your application needs

Chemical Engineering

Thermostirrer

Major Science thermostirrer series are equipped with built-in stirrers on the bottom of each well combined with excellent temperature control. A long motor durability product for chemical compound synthesis, combinatorial chemistry, sample concentration, denaturation, derivatization, enzyme analysis and process optimization



Our Values

Professionalism

Major Science has its own professional Research & Development team of scientists and product specialists that are further supported by an outperforming sales team. We integrate laboratory experiences with customers' feedback in order to ensure the best quality of products and services from the placing of your order to its delivery.

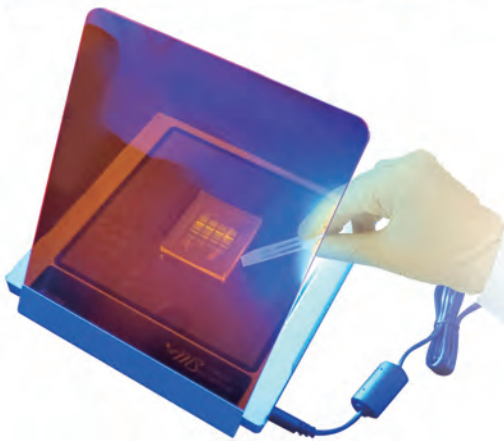
Serving our customers

Major Science cares about what you care and we are dedicated to gaining your confidence. Major Science dedicated in providing best efforts to all of our customers' needs whether they are customized products or technical supports or others.



Staying Green, protecting mankind

Major Sciences collaborate with our global distributors to distribute our products to every corner of the world, we take pride and corporate social responsibility of being a good global citizen in ensuring the protection of our environment.



User-friendly Instruments

Major Science offers easy-to-operate and convenient instruments in the world of biotechnology. We provide simple and intuitive methods such as touch-screen and keypads for different applications that are easy to navigate and operate.



Innovation

Major Science is determined to use not only our expertise in the laboratory, but also the prior experience of our users and employees to breakthrough with the future generations of our cultivation products along with the advancement of all our other products.

Bioprocessing Technology

*Please visit our website at www.majorsci.com for more product selection and detailed information.

All about Winpact Fermentation and Cell Cultivation System

Winpact serves as our major product brand under Major Science. We strive to create innovative fermentors and fermentation bioreactors for all your cell cultivation and fermentation needs.

▣ Cultivation Incubator 07-08

- Winpact Shaker
- Winpact Shaking Incubator

▣ Bioreactor / Fermentor 09-19

- ▶ Laboratory Bioreactor / Fermentor
 - Winpact Mass Flow Controller
 - Winpact Parallel System
 - Winpact One System
 - Winpact Evo System
 - Winpact Solid State Fermentation System
- ▶ Optional Devices and Accessories
- ▶ SIP Fermentation System
 - SIP Fermentation System

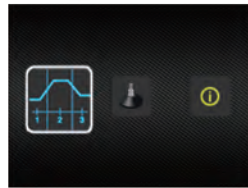


Winpact Shaker

WS-200 series



The WS-200 shaker is developed to offer an integrated solution for every mixing requirement. With a large 18.1"X18.1" platform and a wide selection of labware holders, this versatile machine can accommodate five 2L flasks or any combination of labwares up to 30kg. This powerful machine is equipped with a maintenance-free brushless DC motor that permits the device to operate noiselessly even at 500rpm under programmable mode of operation or continuous mode up to 999hr.



CE WS-200 / WS-201



Features

- Various speed settings from 20-500rpm
- Equipped with a robust brushless DC motor for economical and noiseless operation
- Two modes of operation available: programmable or continuous
- Versatile accessories available for advanced culturing solutions
- Auto detection and power shutdown to platform weight imbalance or belt breakage



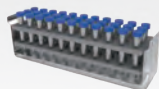
Specification

| Cat. No. | WS-200 | WS-201 |
|--------------------|------------------------------------------------------|---------------------------------------------------------------------|
| Description | Winpact Orbital Shaker (universal platform included) | Winpact Orbital Anti-moistured Shaker (universal platform included) |
| Platform Size | Approx. 18.1"x18.1" (460x460mm) | |
| Shaking Orbit | Approx. 0.7" (19mm) | |
| Speed Range | 20-500rpm | |
| Speed Increment | 1rpm | |
| Timer | 999 (hr): 59 (min) / Continuous | |
| Display | 3.5" Color TFT LCD screen | |
| Dimension (WxLxH) | Approx. 20.5"x24.4"x8.3" (520x620x210mm) | |
| Rated Voltage | 100-240V~, 50 / 60Hz, 2A | |
| Loading Capacity * | Approx. 500rpm: 11" (5kg), 250rpm: 66.1" (30kg) | |
| Anti-moistured | N/A | Yes |
| Weight | Approx. 88.2lb (40kg) | |

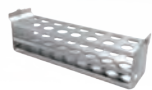
Accessories



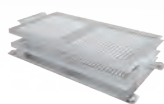
Universal platform
Cat. No.: SI-200-01



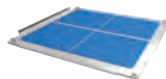
Adjustable angle tube rack (33x15ml)
Cat. No.: SI-200-02
*tube not included



Adjustable angle tube rack (16x50ml)
Cat. No.: SI-200-03



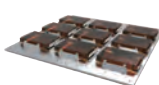
Universal spring rack
Cat. No.: SI-200-04



Sticky pad platform
Cat. No.: SI-200-05



Universal cushioned crossbar
Cat. No.: SI-200-06



Microplate holders
Cat. No.: SI-200-07
(platform not included)



Flask holder
Cat. No.: SI-200-08-13

Racks and Tray

* Different flask will reduce the maximum speed.

| Cat. No. | Product Description | Max. Platform Capacity |
|--------------------|----------------------------------------|------------------------|
| SI-200-01 | Universal platform | 1 |
| SI-200-02 | Adjustable angle Tube Rack (33x15ml) | 4 |
| SI-200-03 | Adjustable angle Tube Rack (16x50ml) | 4 |
| SI-200-04 | Universal Spring Rack | 2 |
| SI-200-05 | Sticky Pad platform | 1 |
| SI-200-06 | Universal Cushioned Crossbar platform | 1 |
| PPL-04-SI-SI-200-3 | Sticky pad 200x200mm | 4 |

Microplate and flask holder

| Cat. No. | Product Description | Max. Platform Capacity |
|-----------|----------------------|------------------------|
| SI-200-07 | Microplate holder | 9 |
| SI-200-08 | Flask holder, 50ml | 52 |
| SI-200-09 | Flask holder, 125ml | 25 |
| SI-200-10 | Flask holder, 250ml | 25 |
| SI-200-11 | Flask holder, 500ml | 16 |
| SI-200-12 | Flask holder, 1000ml | 9 |
| SI-200-13 | Flask holder, 2000ml | 5 |

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Winpact Shaking Incubator

SI-200



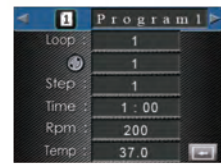
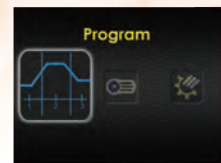
Major Science is introducing our newly innovated Winpact series shaking incubator. It provides you the stability and durability for all your fermentation and incubation needs. The system incorporate multi-safety features to put you at your ease of mind.

Features

- Special designed drainage channel protects the motor and inner circuitry from accidental spills
- Multiple early error-detection mechanisms ensure operators' safety and completeness of experiment despite malfunction
- Lab-proven superior temperature uniformity
- A wide selection of racks, holders, sticky pads and accessories provides all-ranged compatibility to cell cultivation labwares
- Automatic system shutdown in the event of system over-heating
- Sensitivity adjustable G-sensor with warning embedded for imbalance weight detection
- Programmable or continuous mode for personnel operation
- Brushless DC motor provides long and quiet operation, durable and maintenance-free usage
- Hermetic chamber design significantly reduces operation noise and enhances precise temperature control
- 2-point temperature calibration ensures high temperature performance



A spare air/gas inlet to create particular environment for specific kinds of cell/microbial



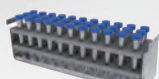
Specification

| Cat. No. | SI-200 |
|------------------------------|-------------------------------------------|
| Platform Size | Approx. 18.1"x18.1" (460x460mm) |
| Shaking Orbit | Approx. 0.7" (19mm) |
| Speed Range | 20-500rpm |
| Speed Increment | 1rpm |
| Communication Port | RS-485 |
| External Temperature Probe | PT-100 |
| Heating Temperature Range | Ambient +5°C to 65°C |
| Power | 600W |
| Temp Accuracy And Uniformity | ± 0.25°C at 37°C |
| Timer | 999 (hr) : 59 (min) / Continuous |
| Display | 3.5" Color TFT LCD screen |
| Dimension (WxLxH) | Approx. 23.2"x32.3"x20.9" (590x820x530mm) |
| Weight | Approx. 154.3lb (70kg) |
| Rated Voltage | 110 / 220V~, 50 / 60Hz, 6.3A |

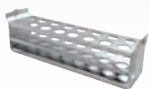
Accessories



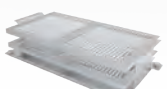
Universal platform
Cat. No.: SI-200-01



Adjustable angle tube rack (33x15ml)
Cat. No.: SI-200-02
*tube not included



Adjustable angle tube rack (16x50ml)
Cat. No.: SI-200-03



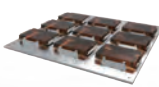
Universal spring rack
Cat. No.: SI-200-04



Sticky pad platform
Cat. No.: SI-200-05



Universal cushioned crossbar
Cat. No.: SI-200-06



Microplate holders
Cat. No.: SI-200-07
(platform not included)



Flask holder
Cat. No.: SI-200-08-13

Racks and Tray

* Different flask will reduce the maximum speed.

| Cat. No. | Product Description | Max. Platform Capacity |
|--------------------|----------------------------------------|------------------------|
| SI-200-01 | Universal platform | 1 |
| SI-200-02 | Adjustable angle Tube Rack (33x15ml) | 4 |
| SI-200-03 | Adjustable angle Tube Rack (16x50ml) | 4 |
| SI-200-04 | Universal Spring Rack | 2 |
| SI-200-05 | Sticky Pad platform | 1 |
| SI-200-06 | Universal Cushioned Crossbar platform | 1 |
| PPL-04-SI-SI-200-3 | Sticky pad 200x200mm | 4 |

Microplate and flask holder

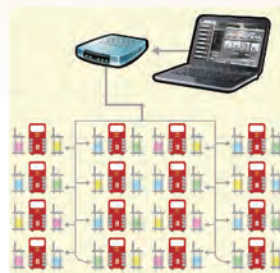
| Cat. No. | Product Description | Max. Platform Capacity |
|-----------|----------------------|------------------------|
| SI-200-07 | Microplate holder | 9 |
| SI-200-08 | Flask holder, 50ml | 52 |
| SI-200-09 | Flask holder, 125ml | 25 |
| SI-200-10 | Flask holder, 250ml | 25 |
| SI-200-11 | Flask holder, 500ml | 16 |
| SI-200-12 | Flask holder, 1000ml | 9 |
| SI-200-13 | Flask holder, 2000ml | 5 |

Winpact Parallel System

FS-05 Series

The Winpact Parallel Fermentation System is the ultimate and true parallel system for your parallel experiment. Whether you need to run two identical experiment or different experiment at the same time, the duo heating system allows you to run two thermostat heating, two dry heating or one thermostat and one dry heating simultaneously. The state of the art design is constructed with the upmost versatility for you to operate any vessel type and size in any combination you like. The remote software can control up to 16 vessels for true parallel operation.

- Duo heating system, thermostat and dry heating combined in one
- True Parallel System, 1 controller controls 2 vessels
- Interchangeable 5 types of autoclavable glass vessel
- Control up to 16 systems from a single interface
- Compatible with microbial and cell culture applications
- Intuitive user interface for short learning time
- Ethernet communication with Winpact SCADA software, and IP addressing
- Compatible with vessel volume from 0.5L to 20L
- Full selection of optional devices available
- Auto vessel angle control mechanism for solid state vessel
- Solid state vessel performs 0° - 90° rotation, and 120° for harvest



Remote control software connects up to 16 systems (total 32 vessels) at the same time via PC



Newly developed Winpact interface for easy operation



*0° - 90° rotation, 120° for harvest



Winpact One System

FS-06 Series

The most versatile, price and space saving fermentation system is now available from our Winpact fermentation product line-the Winpact One Fermentation System.

Winpact One is not only compact in size but also provides all the necessary tools as a standard instrument. The duo heating system allows you to choose any vessel type up to 10L for whichever application needs. The optional expansion module allows you to add additional devices to enhance the capability of the system. All necessities such as temperature, anti-foam, pH and DO probe are included in standard package.

- Duo heating system, thermostat and dry heating combined in one
- Most versatile and compact system on the market ((WxLxH) 250x510x500mm)
- Interchangeable 4 types of autoclavable glass vessel
- Control up to 16 systems from a single interface
- Compatible with microbial and cell culture applications
- Intuitive user interface for self-explanatory time with multi-language support
- Ethernet communication with Winpact SCADA software, and IP addressing
- Expansion module available for system upgrade for optional devices



- ① Single wall dish bottom vessel, 1L
- ② Double jacketed dish bottom vessel, 3L
- ③ Single wall air lifter vessel, 5L
- ④ Double jacketed air lifter vessel, 5L
- ⑤ Single wall dish bottom vessel with heating blanket, 5L
- ⑥ Single wall plain bottom vessel with heating base unit, 10L
- ⑦ Double jacketed dish bottom vessel, 500ml
- ⑧ Solid state, 5L

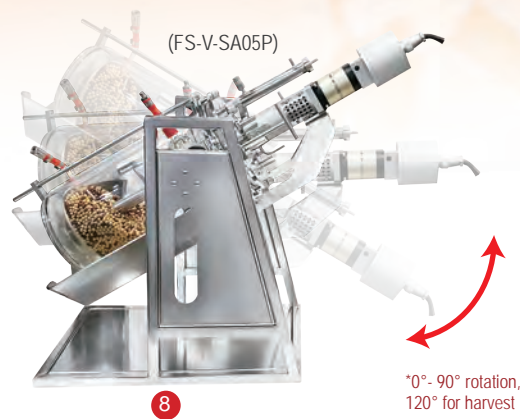
* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Winpact Evo System

FS-07 Series

Winpact Evo System is a one-side version of Winpact Parallel System yet offers cutting edge software. It retains all the features from FS-05 such as duo heating system, 16-system control from a remote computer, 5 types of autoclavable glass vessel ranging from 0.5L to 20L. We also significantly enhanced the functionalities and capabilities of its newly developed controller, including the versatility to accommodate solid state system.

- Intuitive user-interface for learnable operation time with multi-language support
- Ethernet communication with Winpact SCADA software, and IP addressing
- Winpact EZScript software for advance fermentation process (optional)
- Control up to 16 systems from a single interface on external PC
- Duo heating system, thermostat and dry heating all combined in one
- Compatible with microbial and cell culture applications
- Interchangeable 5 types of autoclavable glass vessel
- Auto vessel angle control mechanism for solid state vessel
- Solid state vessel performs 0°- 90° rotation, and 120° for harvesting



*0°- 90° rotation,
120° for harvest

*For more information, please contact your local distributors.



Winpact Mass Flow Controller

FS-O-MF series

The gas composition is important for microorganism/cell culture. To maintain different gases at a defined flow rate during bioprocesses, Winpact Mass Flow Controller can provide accurate and stable flow measurement and control.

Mass flow controller (MFC) is a precise device which is used to control a specific type of liquid or gas at a particular range of flow rates. MFC is composed of block, flow-splitter or bypass, sensor, printed circuit board (PCB), and control valves.

When gas flows into MFC, the sensor will detect its real volume and compare with the setting value (standard value), if the detection value is lower than setting value, the inner control valve will open slightly for increasing the input flow; conversely, if the detection value is higher than the setting value, the inner control valve will close slightly for reducing the input flow, for this reason, MFC is able to adjust the flow automatically and more accurately.

Besides this, overlay (headspace aeration) control is also useful for fermentation process. Winpact Mass Flow Controller also can sparge different gases into the reactor though the headspace and the sparger at the same time.

Now, Winpact Mass Flow Controller could be integrated into Winpact Fermentation system and achieve operational efficiency and creative stable environment in culture conditions.

Features

- Affordable price
- Self-made, high quality accurate gas control guarantee



*For more information, please contact your local distributors.

- ① Single wall dish bottom vessel, 1L
- ② Double jacketed dish bottom vessel, 3L
- ③ Single wall air lifter vessel, 5L
- ④ Double jacketed air lifter vessel, 5L
- ⑤ Single wall dish bottom vessel with heating blanket, 5L
- ⑥ Single wall plain bottom vessel with heating base unit, 10L
- ⑧ Solid state, 5L

Winpact Solid State Fermentation System

FS-V-SA05P

Solid state fermentation (SSF) can be used for enzyme, antibiotics, biofuel, and organic acid production in the food, pharmaceutical, cosmetic, industries, etc. One of the features for Solid state fermentation is to create low water level cultivating conditions for fungus, mold, filamentous fungi, and some bacteria growth. Winpact Solid State Fermentation system is designed for the laboratory scale research to get excellent results. It is featured with a 10.4" color touch screen, user-friendly interface and 4 built-in peristaltic pumps on the Linux based operation system. An automatic vessel angle control mechanism provides an outstanding mixing efficiency for solid state material research. This system is suitable for both aerobic and anaerobic fermentation with three kinds of impellers available (Broken, Anchor and Spiral type).

Features

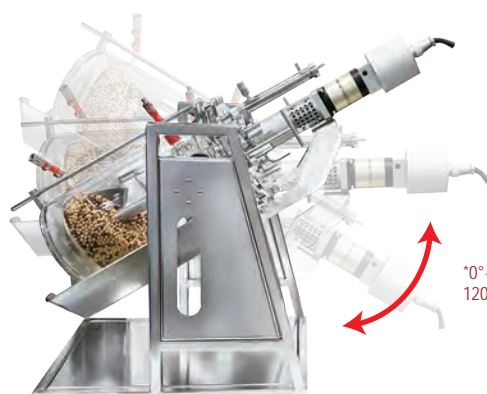
- Fully integrated system specifically designed for solid-state fermentation research involving saccharification, hydrolysis and more.
- Programmable angle-adjustable
(0-90° for culture control, 120° for harvest control) vessel tilting and stirring mechanism permits superior sample homogeneity
- Impellers are designed to reduce stickiness and it ensures sample integrity during the fermentation process.
- Integrated motor shaft & air sparger assembly creates precise, disturbance-free controls of aeration and mixing
- Chemically resistant double jacketed borosilicate glass vessel design
- Can be used with pH and DO probes to control culture conditions (anchor type impellers only)
- Customizable impellers and aeration controller available

**The minimum speed varies from 1-5 rpm depending on the medium viscosity.

**In pH and DO measurement condition, the minimum medium volume is 4L and water content is more than 50%, tilting angle not over 30 degree.

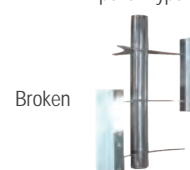
***The measure value of pH and DO may not accurate when using in solid-state culture condition.

****pH and DO probe is not within the scope of warranty when using in solid-state vessel.



*0° - 90° rotation,
120° for harvest

Impeller Type:



Broken



Anchor



Spiral

| | | |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Control Unit | Control Panel | 10.4" color touch-screen Interface, (Resolution: 800 x 600 pixels) |
| | Communication Port | Remote control through Ethernet, Analog AUX port for system extension |
| | Storage Program | Up to 59,994 programs for different kinds of condition. |
| | Data Internal Storage | Up to 100 data files. |
| | Data External Storage Interface | USB port |
| | Cabinet Material | Front panel: ABS / Housing: Painted iron |
| | Rated Voltage | 110V~ / 220V~ ; 50/60 Hz |
| Aeration | Inlet Gas Flow-meter | 0, 1-10LPM |
| Dimension | Overall Diameter 350mm; Overall Height with Condenser 683 mm; Overall Height without Condenser 448 mm Dimension (with vessel holder) 430mm (L) x 730mm (W) x 780 mm (H) | |
| Temperature | Heating | Thermostat system: Built-in heat exchanger, 550W heater/water circulation pump |
| | Cooling | Automatic cooling water valve |
| | Range | 5°C (41°F) above coolant up to 60°C (140°F) |
| | Resolution | 0.1°C |
| | Control Mode | Manual or programmable 15-step PID control. |
| Agitation | Drive | Removable top brushless motor |
| | Speed Range | 0, 1 – 60 rpm |
| | Resolution | 1rpm |
| | Control Mode | Manual or programmable 15-step PID control. |
| | Impeller | 1. Broken type (FS-A-IM305) 2. Anchor type (FS-A-IM408) 3. Spiral type (FS-A-IM507) (Select one from the above type, and only anchor impeller can be used with pH and DO probes) *Note: Customized impellers are available. |
| Vessel Swing | Angle Range | Normal operation: 0° -90°, adjustable time interval Harvest mode: 0° / 120° |
| | Control Mode | Programmable control |

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* Technical specifications subject to change without notice.

Controller Specification

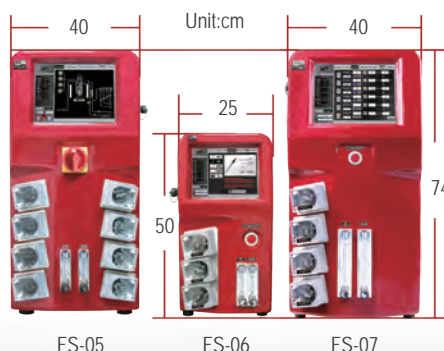
| Controller | Duo Heating Control (FS-05, FS-06, FS-07) | | | | | |
|-----------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Vessel | Double Jacketed (FS-V-A series) | Single Wall (FS-V-B series) | Air Lifter (FS-V-C series) | Single Wall with Heating Blanket (FS-V-B series) | Single Wall with Heating Base Unit (FS-V-D series) | Solid State (FS-V-SA05P) |
| Agitation Motor | Brushless motor | Brushless motor | N/A | Brushless motor | Brushless motor | Brushless motor |
| Impeller* | *Rushton-type; Pitched-blade | *Rushton-type; Pitched-blade | N/A | *Rushton-type; Pitched-blade | *Rushton-type; Pitched-blade | Broken type; Anchor type; Spiral type |
| Temp Range | 5 °C above coolant to 60°C | 5 °C above coolant to 60°C | Double Jacketed: 5°C above coolant to 60°C Single Wall: without temp control | 5°C above coolant to 60°C | 5°C above coolant to 90°C | 5°C above coolant to 60°C |
| Vessel Size | 500ml - 10L | 1 - 10L | 5L only, single wall or double jacketed | 1 - 20L | 3 - 10L | 5L only |
| Speed Range | *Rushton type 30 - 1800 rpm (0.5, 1L); 30 - 1200 rpm (3, 5L); 30 - 1000 rpm (10L) Pitched blade 30-300 rpm | *Rushton type 30 - 1800 rpm (1L); 30 - 1200 rpm (3, 5L); 30 - 1000 rpm (10L) Pitched blade 30-300 rpm | N/A | *Rushton type 30 - 1800 rpm (1L); 30 - 1200 rpm (3, 5L); 30 - 1000 rpm (10L); 30 - 700 rpm (15, 20L) Pitched blade 30-300 rpm | *Rushton type 30 - 1200 rpm (3, 5L); 30 - 1000 rpm (10L) Pitched blade 30-300 rpm | 1-60rpm |
| Heating | Built-in heat exchanger | | | Heating blanket | Heating base unit | Built-in heat exchanger |
| Cooling | External chiller, automatic cooling water valve | | | | | |
| Aeration | L-shape or ring sparger | L-shape or ring sparger | Micro-sparger | L-shape or ring sparger | L-shape or ring sparger | Grounding port: shaft sparger |
| Grounding Port | No need | No need | Yes | No need | No need | No need |
| Application | Excellent for temperature sensitive and shear-force sensitive cells such as mammalian and insect cell culture | Great for aerobic or anaerobic microbial culture; suitable for plant cell and photosynthesis cell culture | Excellent for shear-sensitive cells; ideal for plant cells, fungal cells, algae cell and photosynthesis cell culture | Ideal for rapid temperature change aerobic and anaerobic microbial (bacteria and yeast) fermentation | Excellent for aerobic and anaerobic microbial (bacteria, yeast) culture, such as E.coli | Special for the culture of microbial in substrates with low water levels condition , generally suitable for fungi, such as filamentous fungi |

*For FS-V-A, FS-V-B and FS-V-D series, the standard impeller is Rushton type; Pitched blade is available for cell culture upon request.

Winpact Controller Selection Guide

| Model | FS-05 | FS-06 | FS-06 + FS-06EPM* | FS-07 |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------|-------------------|-------------|
| Product Name | Winpact Parallel | Winpact One | Winpact One | Winpact Evo |
| Heating System | Duo heating | | | |
| Working Volume Range | 500ml - 20L | 500ml - 10L | 500ml - 10L | 500ml - 20L |
| Autoclavable Glass Vessels | Yes | | | |
| Interchangeable Vessels | Compatible with all types of vessels, except for 5L solid state which is only for FS-05 and FS-07 controller | | | |
| Number Of Vessels Controlled Per Controller | 2 | 1 | 1 | 1 |
| Number Of Vessels Controlled Via Remote Software | Max 32 | Max 16 | Max 16 | Max 16 |
| Touchscreen Controller | 10.4" | 8" | 8" | 10.4" |
| Number Of Peristaltic Pumps | 8 | 3 | 3 | 4 |
| Gas Mixing Options | Available | No | Available, * | Available |
| Oxygen Enrichment | Available | No | Available, * | Available |
| Mass Flow Controller | Available | No | No | Available |
| Off Gas Analyzer | Available | No | No | Available |
| ORP Probe | Available | No | Available, * | Available |
| Lighting Module | Available | No | Available, * | Available |
| External Pump | 4 max. | 1 max. | 2 max. | 2 max. |
| Solid State | Available | No | No | Available |

* Optional expansion module (FS-06-EPM) needed.



| | | | | | | | |
|--|-------------------|--------------------------------------------------------------------------|------|--------------------|-------|-------|-------|
| | Vessel Type | Double Jacketed Dish Bottom Vessel (FS-V-A series) | | | | | |
| | Material | Borosilicate glass / 316L stainless steel for headplate and all fittings | | | | | |
| | Working Volume ** | 500ml | 1L | 3L | 5L | 10L | |
| | Total Volume Δ | 1L | 1.5L | 3.8L | 6.8L | 12.5L | |
| | Vessel Type | Single Wall Dish Bottom Vessel (FS-V-B series) | | | | | |
| | Material | Borosilicate glass / 316L stainless steel for headplate and all fittings | | | | | |
| | Working Volume ** | 1L | 3L | 5L | 10L | | |
| | Total Volume Δ | 1.5L | 3.8L | 6.8L | 12.5L | | |
| | Vessel Type | Air Lifter Vessel (FS-V-C series) | | | | | |
| | Material | Borosilicate glass / 316L stainless steel for headplate and all fittings | | | | | |
| | Working Volume ** | 5L single wall | | 5L double jacketed | | | |
| | Total Volume Δ | 7L | | | | | |
| | Vessel Type | Single Wall Dish Bottom Vessel With Heating Blanket (FS-V-B series) | | | | | |
| | Material | Borosilicate glass / 316L stainless steel for headplate and all fittings | | | | | |
| | Working Volume ** | 1L | 3L | 5L | 10L | 15L | 20L |
| | Total Volume Δ | 1.5L | 3.8L | 6.8L | 12.5L | 18.7L | 23.7L |
| | Vessel Type | Single Wall Plain Bottom Vessel With Heating Base Unit (FS-V-D series) | | | | | |
| | Material | Borosilicate glass / 316L stainless steel for headplate and all fittings | | | | | |
| | Working Volume ** | 3L | | 5L | | 10L | |
| | Total Volume Δ | 3.7L | | 6.7L | | 13.1L | |
| | Vessel Type | Solid State (FS-V-SA05P) | | | | | |
| | Material | Borosilicate glass / 316L stainless steel for headplate and all fittings | | | | | |
| | Working Volume ** | 5L | | | | | |
| | Total Volume Δ | 6.8L | | | | | |

** Suggested Max.

Δ Total volumes are approximate and may vary slightly.

• Winpact **EZScript software for advanced fermentation process.

** Winpact EZScript is a command software specifically designed with user-define programming capability to optimize and control of your process.



No software purchase necessary
Ethernet cable connection for remote control

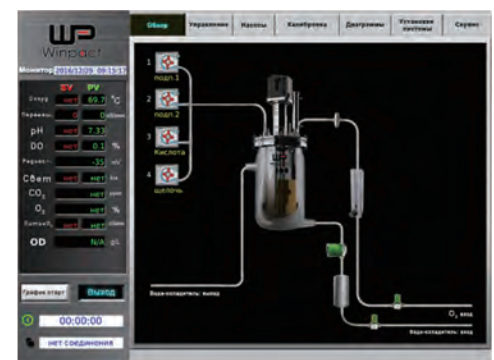


*PC and switch hub are not included

Language Selection

- English
- Spanish
- Russian
- Japanese
- Traditional Chinese
- Simplified Chinese

Close Apply



Multi-language operation interface (Russian language)



Charting

Real-time data recording and exporting



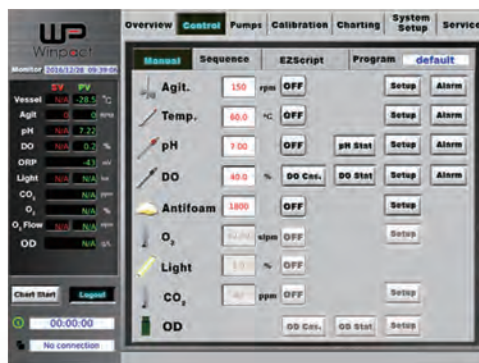
System Setup

Set up for optional devices



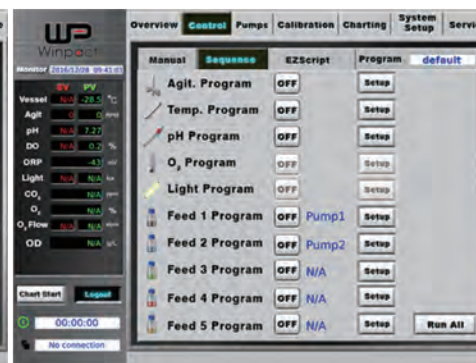
Calibration

Easy sensor calibration with assisted menu



Control / Manual

Manual operation, sequence or EZScript control(optional) of each parameter.



Control / Sequence



Pumps

Control speed, direction, total volume and flow rate

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Vessel Application

| Application | Vessel | FS-V-A series | FS-V-B series | FS-V-C series | FS-V-B series | FS-V-D series | FS-V-SA05P |
|----------------------------------------------|--------|------------------------------------|--------------------------------|-------------------|-----------------------------------------------------|--------------------------------------------------------|-------------|
| | | Double Jacketed Dish Bottom Vessel | Single Wall Dish Bottom Vessel | Air Lifter Vessel | Single Wall Dish Bottom Vessel with Heating Blanket | Single Wall Plain Bottom Vessel with Heating Base Unit | Solid State |
| Mammalian Cell Culture | | ●● | ●○ | ○○ | ●○ | ○○ | ○○ |
| Aerobic Microorganism Culture (Note 1) | | ●● | ●● | ●● | ●● | ●● | ○○ |
| Micro-aerobic Microorganism Culture (Note 2) | | ●● | ●● | ○○ | ●● | ●● | ○○ |
| Anaerobic Microorganism Culture (Note 3) | | ●● | ●● | ○○ | ●● | ●● | ○○ |
| Fragile Cell Culture (Note 4) | | ●● | ●○ | ●● | ●○ | ○○ | ○○ |
| Photosynthesis Cell Culture (Note 5) | | ●○ | ●● | ●● | ○○ | ●○ | ○○ |
| Plant Cell Culture | | ●○ | ●○ | ●● | ○○ | ○○ | ○○ |
| Insect Cell Culture | | ●● | ●○ | ○○ | ●○ | ○○ | ○○ |
| Solid State / Semi-solid State | | ○○ | ○○ | ○○ | ○○ | ○○ | ●● |

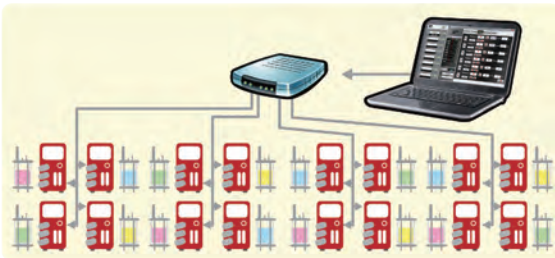
Note:

1. Some bacteria; yeast; fungi
2. Facultative culture (i.e. some Lactobacillus; ethanol production)
3. Same as Note 2
4. This vessel is excellent for fragile cells, which easily sheared by any type of mechanical impeller
5. Plant; algae; cyanobacteria (blue-green algae)

●● Excellent ●○ Good ○○ Not recommended



Duo Heating Control: FS-05 / FS-06 / FS-07 series



PC remote controlling software connects up to 16 systems

- These Winpact controllers can operate with all types of vessels
- Compatible with microbial and cell culture applications
- Intuitive user-interface for fast learning curve with multi-language support
- Ethernet communication with Winpact SCADA software, and IP addressing

Control multi-vessel systems on one page.



Optional Devices and Accessories



pH Probe



DO Probe



Temperature Probe



ORP Probe



Gas Inlet Control Module



Mass Flow Controller



Winpact Humidifier
FS-O-HMD (solid state only)



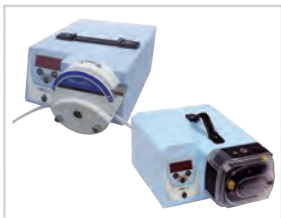
CO₂ / O₂ Off Gas Analyzer



Gas Mixing Station



Gas Mixing Station with Mass
Flow Controller



External Pump



Brushless Motor



Lighting Module



Composite Handle



Vessel Stand



Headplate Stand



Feeding Bottle Loading Port



Fermentation Bottle Holder



Motor Shaft Protection Cap



Stainless Steel Supporting Foot



Consumable Kit

Other Optional Devices:

- Antifoam Probe
- Impellers
 - Rushton 6 Blade Impeller
 - Pitched Blade Impeller
 - Foam Breaker
 - Broken Type Impeller (solid state only)
 - Anchor Type Impeller (solid state only)
 - Spiral Type Impeller (solid state only)
- Sampling Devices
 - Triport Sampling Device
 - Dual Ports Sampling Device
 - Ball Valve Sampling Device
 - Pneumatic Sampling Device
- EZScript Software
- Optical Density Sensor Modules
- Quad Loading Port
- Stainless Steel Condenser
- Protective Cover for Sterilization (solid state only)



*Please visit our website at www.majorsci.com for more product selection and detailed information.
*Please contact Major Science for more information on other optional devices.

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

SIP (Pilot Scale) Fermentation System / Bioreactor

The 30L / 50L SIP Pilot Scale Fermentation Systems allow you easily to run small volume of fermentation experiments. These systems are perfectly suitable for small up-scaling in the academic labs. The easy programmability and application of our Winpact software let you find your peace of mind regarding operation procedures. System comes with rolling wheels for mobility. All materials are made from the highest standard to ensure optimization of your fermentation process. A variety of optional devices are also available for selection to maintain an optimum performance.

30L / 50L System



FS-50L



Motor
Manual or automatic control of constant agitation speed

Control Station
Large screen and graphical user interface



FS-50L

Peristaltic Pump
Uses four Watson Marlow built-in peristaltic pumps for all your feeding needs

Stainless Steel Vessel
Special designed heating jacket provides better heating efficiency



FS-30L

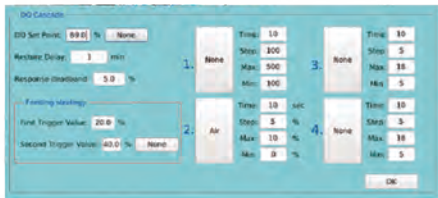
* ASME standard



Features

- Wide range of vessel selection, from 30L to 50L working volume
- Colorful interface at 10.4" or above
- Fully automated process with remote monitoring
- 15-step automatic program setting
- Orbital welding ensures minimal residue buildup
- Highest grade construction with 316L stainless steel
- Jacket design provides astounding temperature control
- Exhaust pressure relief valve for maximum safety precaution
- Multiple safety design integration for peace of mind operation
- Remote monitoring & controlling software free from purchase
- Password protection for multiple users with customized special requirements
- Various optional devices for process optimization and needs
- Ethernet communication with Winpact SCADA software, and IP address

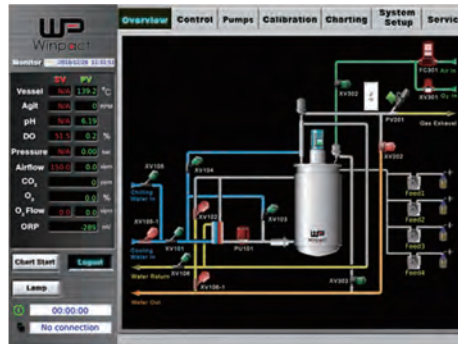
| | | |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Capacity | 30L | 50L |
| Total Volume | 42L | 67L |
| Working Volume | 30L | 50L |
| Vessel And Jacket Maximum Working Pressure | 3 bar (43.5 psig) / 4 bar (58 psig) | |
| Type | Double layered fully enclosed capsule-type tank | |
| Material | Direct contact to medium - 316L stainless steel; all others - 304 stainless steel | |
| Surface Finish | Interior polish ≤ 5 Ra/in (0.6 μm) Mechanical polishing; Electropolish optional Exterior polish ≤ 32 Ra/in (0.8 μm) MeSize(including manual lifter) | |
| Size(including manual lifter) | 130 x 95 x275 cm | 130 x 95 x295 cm |



Four-staged DO cascade



15-Step programmable PID control



Immediate visualization on operation overview



Easy and intuitive operation for manual and sequence control



One-Touch automatic sterilization for vessel and system tubing



Online system calibration with system feedback



System expansion with various optional devices

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

SIP (Pilot Scale) Fermentation System Bioreactor

100L System

(Approx. 170Wx130Dx245H cm, Open distance of headplate lift : 60 cm)



Harvest valve
Sanitary level
diaphragm type

Detachable aseptic
feeding device

Mechanical seal with auto generated
lubricant and automatic cooling device



Pump

200L System

(Approx. 200Wx150Dx330H cm, Open distance of headplate lift : 40 cm)

* Customized vessel is available

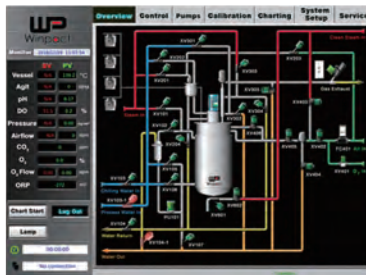
Winpact offers pilot and production scale bioreactor/fermentation systems for all of your large scale fermentation needs. Our standard SIP Production Scale Fermentation System is constructed with BPE standard piping with orbital welding and top grade automatic valves to allow stable and repeatable result for every experiment. All of our features are designed to provide a high level of productivity and automation while maintaining a low operation cost. All other great features including total sterilization process, mechanical seal break indication, golden vessel ratio design and complete selection of optional devices for optimizing the fermentation process.

Features

- Wide range of vessel selection, from 100L to 1000L working volume
- Multi-lingual 12" colored graphical control interface
- Fully automated process with remote monitoring
- 15-step automatic program setting
- Orbital welding ensures minimal residue buildup
- Highest grade construction with Stainless Steel SUS316L
- Hive jacket design provides astounding temperature control
- Exhaust pressure relief valve for maximum safety precaution
- Multiple safety design integration for peace of mind operation
- Remote monitoring & controlling software free from purchase
- Password protection for multiple users with customized access levels
- Various optional devices for process optimization and needs
- Ethernet communication with Winpact SCADA software, and IP address



- Pneumatic valves for accurate and automatic control
- Orbital welding provides top quality



Monitor page for operation overview



Automatic and manual operation



Automatic sterilization process



Online system calibration

SIP (Production Scale) Fermentation System / Bioreactor



500L System
(Approx. 300Wx1900Dx360H cm)



1000L System
(Approx. 330Wx340Dx450H cm)



5000L System

*For system over 200L, please contact Major Science or authorized distributors for more information.

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Life Sciences Research

Power Supply

Major Science power supplies are perfect for your everyday electrophoresis use. Our power supplies are ideal for DNA, RNA and protein electrophoresis as well as blotting.

Major Science power supplies are available for routine horizontal and vertical electrophoresis. These safe and user-friendly devices offer advanced specification, high performance, long life span, and compact sizing.

Electrophoresis System

Major Science offers a comprehensive line of equipment and related products for a variety of electrophoresis experiments. This portfolio includes full-sized horizontal and vertical cells, electro-blotting systems, semi-dry blotting systems and other products.

Power Supply 21-25

- Handy 100V
- Mini Pro 300V / 500V
- Lively 300V / 500V / 3AP

Nucleic Acid Electrophoresis 26-33

- Mini Horizontal
- Midi plus / plus-1 / plus-2 Horizontal
- Maxi Horizontal

Protein Electrophoresis 34-35

- Mini Vertical

Blotting 36-38

- Complete Min Electro Blot System
- Semi Dry Mini and Semi Dry Midi



Handy 100V Power Supply

MP-100

The Handy 100V Power Supply is specifically designed for DNA and RNA electrophoresis. It allows two constant voltages of either 50V or 100V. The low cost, light weight and small foot print make it perfect for teaching labs as well as routine electrophoresis use. It can be purchased individually or in packages with horizontal gel electrophoresis systems for economical purposes.

Features

- 50V or 100V constant voltage output
- 400mA maximum current
- 40W maximum power
- Safety device
- Ultra compact size
- Developed specifically for DNA and RNA electrophoresis
- Great value at very competitive pricing
- Bundled package with MJ-105A and MT-108

Specifications

| Cat. No. | MP-100 |
|-----------------------|-----------------------------------------------|
| Output Voltage | 50V / 100V |
| Output Current | 400mA |
| Output Power | 40W |
| Output Type | Constant voltage |
| Voltage Selection | 50V and 100V |
| Safety Device | No-load detection; shrouded plugs and sockets |
| Operation Temperature | 4°C - 40°C |
| Dimension (WxLxH) | Approx. 2.4"x1.6"x4.7" (60x40x120mm) |
| Terminal Pairs | 1 pair |
| Material | Polycarbonate (PC) |
| Weight | Approx. 0.7lb (0.3kg) |
| Rated Voltage | 100 - 120V~ only |

Ordering Information

| Cat. No. | Product Description |
|----------|-------------------------|
| MP-100 | Handy 100V Power Supply |

*Please visit our website at www.majorsci.com for more product selection and detailed information.



MP-100



Specifically designed for DNA and RNA electrophoresis.



MP-100 + MJ-105A



MP-100 + MT-108



MP-100 + MJ-105A + MBE-300

Mini Pro 300V / 500V Power Supply

MINI-300
MINI-500

Featuring in small size and versatility, the newly designed Mini Pro 300V / 500V Power Supply are ideal choices for any researchers. Capable of providing constant voltage or current in 1V or 1mA increment, the unit is perfectly suitable to run both vertical polyacrylamide or horizontal agarose gel electrophoresis experiments. Continuous or timed operation can be easily set up using the simple and user-friendly interface. Moreover, the upgraded 2 step programmable function is more practical for protein electrophoresis. Mini Pro 300V and 500V both feature 2 electrode pairs, allowing 2 gels to be run simultaneously, saving both time and valuable bench space. With an universal voltage rating, Mini Pro 300V and 500V are also designed and constructed to the most rigorous safety standards. Package including single or dual horizontal electrophoresis system and mini vertical electrophoresis system are excellent choices for educational or person lab purposes.



MINI-300



Features

- Constant voltage or constant current operation
- 1V increment voltage control; 1mA increment current control
- Max 300V, 400mA and 60W for Mini Pro 300V
- Max 500V, 400mA and 120W for Mini Pro 500V
- Two pairs of outlet terminals
- Timer with alarm function
- Safety device
- Compact size and lightweight
- Competitive pricing choice
- Packages with midi sized horizontal electrophoresis systems and vertical electrophoresis systems
- 2 step programmable control



MINI-500



2 step programmable control

Specifications

| Cat. No. | MINI-300 | MINI-500 |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Output Voltage / Inc. | Step1: 10 - 300V / 1V Step2: 10 - 300V / 1V | Step1: 10 - 500V / 1V Step2: 10 - 500V / 1V |
| Output Current / Inc. | Step1: 10 - 400mA / 1mA Step2: 10 - 400mA / 1mA | Step1: 1 - 400mA / 1mA Step2: 1 - 400mA / 1mA |
| Power | 60W | 120W |
| Output Type | Constant voltage or constant current | |
| Control | Microprocessor controller | |
| Terminal Pairs | 2 pairs | |
| Timer | 999 (min) with alarm / continuous (set=0) | |
| Safety Device | No load detection; shrouded plugs and sockets | |
| Operation Temperature | 4°C - 40°C | |
| Dimension (WxLxH) | Approx. 5.5"x7.5"x3.3" (140x191x84mm) | |
| Material | Polycarbonate housing and aluminum base plates | |
| Weight | Approx. 2.2lb (1kg) | |
| Rated Voltage | 100 - 240V~, 50-60Hz, 2A | 100 - 240V~, 50-60Hz, 2.5A |
| Program | 2-STEP Program | |
| Presetting Value | STEP1(V: 300V); STEP2(V: 300V) STEP1(A: 16mA); STEP2(A: 24mA) STEP1(T: 15min); STEP2(T: 120min) | STEP1(V: 500V); STEP2(V: 500V) STEP1(A: 16mA); STEP2(A: 24mA) STEP1(T: 30min); STEP2(T: 240min) |
| | *if time is set 0, system will keep running until user manually stops. *If voltage or current is set 0 in step 2, system will not proceed to step 2. | |

Ordering Information

| Cat. No. | Product Description |
|----------|----------------------------|
| MINI-300 | Mini Pro 300V Power Supply |
| MINI-500 | Mini Pro 500V Power Supply |



* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Lively 300V/ 500V/ 3AP Power Supply

MP-310
MP-510
MP-320

Major Science offers 3 models of power supplies constructed with microprocessor controller and 4 pairs of outlet terminals which covers the broadest range of application in general laboratory. The microprocessor control can perform either continuous or timed output, and user is able to pause and resume anytime without resetting the timer.

MS Lively Power Supply is power enough to perform horizontal and vertical electrophoresis as well as two dimensional electrophoresis SDS-PAGE applications. In addition, it can operate with a fully programmable mode and offer up to 6 multi-step setting conditions. The 2.4" TFT-LCD colored screen also allows you to see all the running/setting conditions while operating. For those beginners in electrophoresis, the built-in data for some typical running condition could be extremely helpful. All 3 models are designed with great safety features to ensure safety of the lab and experiment.



MP-310



MP-510



MP-320



Features

- Four pairs of output terminals
- 2.4" TFT-LCD colored screen shows all parameters during operation
- Timer with alarm function
- Compact size with stackable case
- Constant voltage/ current/ power operation mode
- Typical running condition helps electrophoresis beginner
- Wide application for DNA, RNA and protein electrophoresis and blotting
- Advanced safety device design
- Universal rated voltage for worldwide distributions

Specifications

| Cat. No. | MP-310 | MP-320 | MP-510 |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------|
| Output Voltage / Inc. | 5 - 300V / 1V | 5 - 300 / 1V | 5 - 500 / 1V |
| Output Current / Inc. | 1 - 700mA / 1mA | 10 - 3,000mA / 10mA | 1 - 800mA / 10mA |
| Power | Output: 150W; Input: 200W | 300W | 300W |
| Rated Voltage | 100-240V~; 47-60Hz | 100-240V~; 47-60Hz | 100-240V~; 47-60Hz |
| Type Of Output | 1. Voltage or Current with automatic crossover 2. When target constant mode is set, system automatically adjusts the two other parameter to maximum to allow constant run (later could be changed by user) | | |
| Program Storage | 30 programmed files | | |
| Program Multi-Step | Up to 6 steps | | |
| Editable Program Function | 1. Typical running conditions program 2. Manual editable program | | |
| Display | 2.4" TFT | | |
| Control | Microprocessor controller | | |
| Safety Device | No Load detect | | |
| | Leakage detect | | |
| | Over temperature protection | | |
| | Over load detection | | |
| | Sudden load change detection (could be enabled by proper setting) | | |
| Timer | Shrouded plugs and sockets | | |
| | Constant: 9999 (min) with alarm / continuous Program: 999 (min) with alarm / continuous | | |
| Crossover | YES | | |
| Stackable | YES | | |
| Automatic Recovery After Power Failure | YES | | |
| Operating Temperature | 4°C- 40°C | | |
| Construction Material | PC housing and flame retardant ABS faceplate | | |
| Dimension (WxLxH) | Approx. 8.5"x13.2"x4.1" (215x335x104mm) | | |
| Weight | Approx. 4.6lb (2.1kg) | | |

Ordering Information

| Cat. No. | Product Description |
|----------|--------------------------|
| MP-310 | Lively 300V Power Supply |
| MP-320 | Lively 3AP Power Supply |
| MP-510 | Lively 500V Power Supply |



Four pairs of outlet terminals



Stackable case

Mini Horizontal Gel Electrophoresis System

MJ-105A MT-108

For MJ-105A

The MJ-105A horizontal electrophoresis system offers many advantages for nucleic acid separation. Agarose gels are convenient to cast and samples are easy to load with this recognizable mini horizontal cell. Its molded design prevents cracks and leakages and the sturdy PC provides a 130°C temperature capacity. The safety interlock cover is designed to prevent electrical hazards during electrophoresis. It is ideal for several applications, including Northern and Southern blotting, Cosmid library restriction analysis, STS screening, microsatellite analysis, PCR fragment analysis, RFLP analysis, DNA finger-printing and high throughput analysis.

For MT-108

MT-108 horizontal electrophoresis units offer many advantages for nucleic acid separation. Agarose gels are easy to cast and samples are easy to load. MT-108's longer tray allows running of bigger fragments to attain higher resolution. Its molded design prevents cracks or leakages, and its sturdy PC provides a temperature capacity of up to 130°C. A safety interlocking cover is designed to prevent electrical hazards during electrophoresis runs. It is ideal for many applications, including Northern and Southern blotting, Cosmid library restriction analysis, STS screening, Microsatellite analysis, PCR fragment analysis, RFLP analysis, DNA fingerprinting and high-throughput analysis.

Features

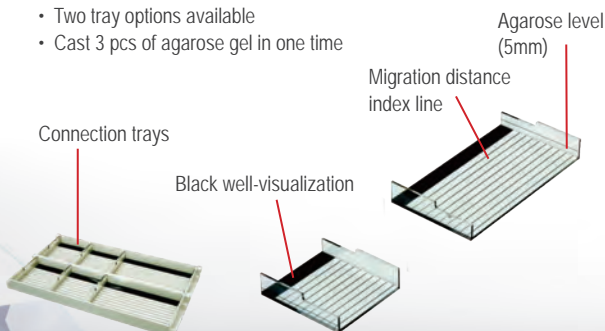
- Less agarose consumption
- Less running buffer consumption
- Multichannel pipette-compatible
- Single molded tank
- Safety & Ventilation lid
- High temperature capability, 130°C
- Easy sample loading
- Great indications for gel making and running
- No tapes, clamps or springs needed for gel casting
- No direct heat impact from power supply unit

For MJ-105A additional features

- Transparent tank and lid
- Real time observation with MBE-300
- Contains 2 sets of gel maker stand
- Cast 6 pcs of agarose gel in one time

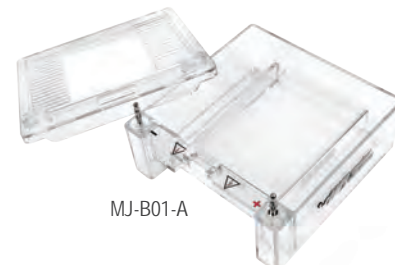
For MT-108 additional features

- Two tray options available
- Cast 3 pcs of agarose gel in one time



MJ-105A is offered as a complete system for the user to cast, and run electrophoresis. including:

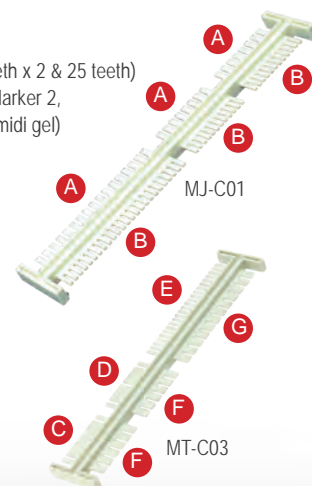
- 1 x Transparent tank and transparent lid
- 2 x MJ-G01 (Gel Maker Stand)
- 2 x MJ-T02 (107x60mm Tray)
- 4 x MJ-T01 (52x60mm Tray)
- 1 x MJ-C01 (Double side comb: 8 teeth x 2 & 17 teeth; 12 teeth x 2 & 25 teeth)
- 1 x MT-C03 (Multiple pipette compatible 23 teeth, Prep 1 & Marker 2, Prep 2 & Marker 2; 6 teeth x 2 for mini gel & 12 teeth for midi gel)
- 1 x Black & red electrophoresis cable



MT-108 is offered as a complete system for the user to cast, and run electrophoresis. including:

- 1 x Snow tank and transparent lid
- 1 x MT-G01 (Gel Maker Stand)
- 1 x MT-T01 (105x83mm Tray)
- 2 x MT-T02 (50x83mm Tray)
- 1 x MJ-C01 (Double side comb: 8 teeth x 2 & 17 teeth; 12 teeth x 2 & 25 teeth)
- 1 x MT-C03 (Multiple pipette compatible 23 teeth, Prep 1 & Marker 2, Prep 2 & Marker 2; 6 teeth x 2 for mini gel & 12 teeth for midi gel)
- 1 x Black & red electrophoresis cable

| | Cat. No. | Tooth Thickness | Tooth Width | Sample Volume for a 5mm thick gel (ul) |
|---|----------|-----------------|-------------|----------------------------------------|
| A | MJ-C01 | 1.0mm | 4.0mm | 20 |
| B | MJ-C01 | 1.5mm | 2.8mm | 21 |
| C | MT-C03 | 1.0mm | 36.0mm | 180 |
| D | MT-C03 | 1.0mm | 17.0mm | 85 |
| E | MT-C03 | 1.0mm | 3.0mm | 15 |
| F | MT-C03 | 1.0mm | 6.0mm | 30 |
| G | MT-C03 | 1.0mm | 6.5mm | 32.5 |

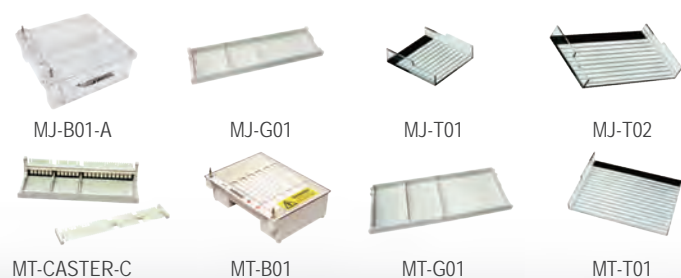


Specification

| Cat. No | MJ-105A | MT-108 |
|-----------------------|-------------------------------------|--------------------------------------|
| Appearance | Transparent tank & transparent lid | Snow tank & transparent lid |
| Material | PC (Polycarbonate) | |
| Lid Material | PC (Polycarbonate) | AS (Acrylonitrile-Styrene Copolymer) |
| Temperature Capacity | 130°C | |
| Transparent Lid | Safety ventilation design | |
| Gel Dimension (WxL) | 4.2"x2.4" (107x60mm) | 4.1"x3.3" (105x83mm) |
| | 2.1"x2.4" (52x60mm) | 2"x3.3" (50x83mm) |
| Tray | Black well-visualization strip | |
| | Migration distance index line | |
| | Agarose level, 0.2" (5mm) | |
| Rapid Casting Gel | Use gel maker stand | |
| Maximum Gel Thickness | 0.39" (10mm) | |
| Maximum Sample | 25 samples | |
| Buffer Volume | 0.05gal (200ml) | 0.11gal (400ml) |
| Operating Temperature | 4 - 40°C | |
| Dimension (WxLxH) | 5.8"x5.7"x2.3" (148.3x145.8x59.1mm) | 5.4"x7.4"x2.3" (136x188x58mm) |
| Weight | Approx. 1.1lb (0.5kg) | Approx. 1.5lb (0.7kg) |

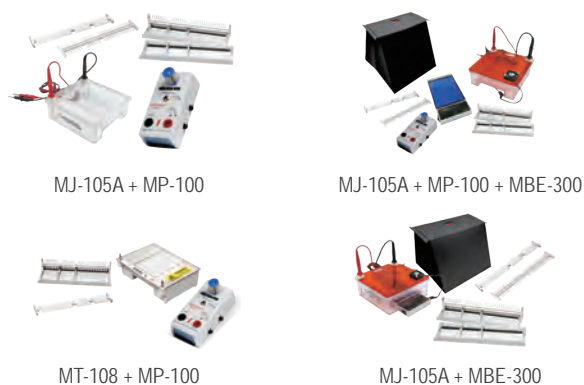
Accessories

| Cat. No | Product Description |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MJ-105A Accessories | |
| MJ-B01-A | Transparent tank and lid, without accessories |
| MJ-LID-AM580 | 580nm amber filter lid with fan, suitable for MJ-105A |
| MBE-LID-AM580 | An inclined 580nm amber filter, suitable for MBE-200 and MBE-300 |
| MJ-G01 | Gel maker stand |
| MJ-T01 | 52x60mm Tray |
| MJ-T02 | 107x60mm Tray |
| MJ-C01 | Analytical comb (8 teeth x 2 for mini gel & 17 teeth for midi gel (thickness: 1.0mm), 12 teeth x 2 for mini gel & 25 teeth for midi gel (thickness: 1.5mm)) |
| MT-C03 | Analytical comb 1.0mm-thick (multiple pipette compatible 23 teeth, Prep 1 & Maker 2, Prep 2 & Maker 2 on one side; 6 teeth x 2 for mini gel & 12 teeth for midi gel on the other side) |
| MBE-150-CABLE | Threaded Black and Red Electrophoresis Cable |
| MJ-CASTER-C | 2 x MJ-G01; 4 x MJ-T01; 2 x MJ-T02; 1 x MJ-C01 and 1 x MT-C03 |
| MBE-HOOD | Synthetic paper hood |
| MT-108 Accessories | |
| MT-B01 | Wide Mini Tank and lid, without accessories |
| MT-G01 | Gel maker stand |
| MT-T01 | 105x83mm Tray |
| MT-T02 | 50x83mm Tray |
| MJ-C01 | Analytical Comb (8 teeth x 2 for mini gel & 17 teeth for midi gel (thick: 1.0mm), 12 teeth x 2 for midi gel & 25 teeth for midi gel (thick: 1.5mm)) |
| MT-C03 | Analytical Comb 1.0mm-thick (multiple pipette compatible 23 teeth, Prep 1 & Maker 2, Prep 2 & Maker 2 on one side; 6 teeth x 2 for mini gel & 12 teeth for midi gel on the other side) |
| MT-P01 | Electrophoresis Cable (black and red) for MT-108 only |
| MT-CASTER-C | 1 x MT-G01; 1 x MT-T01; 2 x MT-T02; 1 x MJ-C01 and 1 x MT-C03 |



Ordering Information

| Cat. No | Product Description |
|---------|----------------------------------------------------|
| MJ-105A | Transparent Mini Horizontal Electrophoresis System |
| MT-108 | Wide Mini Horizontal Electrophoresis System |



* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Midi plus / plus-1 / plus-2 Horizontal Electrophoresis System

ME7-7-10
ME10-7-10
ME15-7-10-15

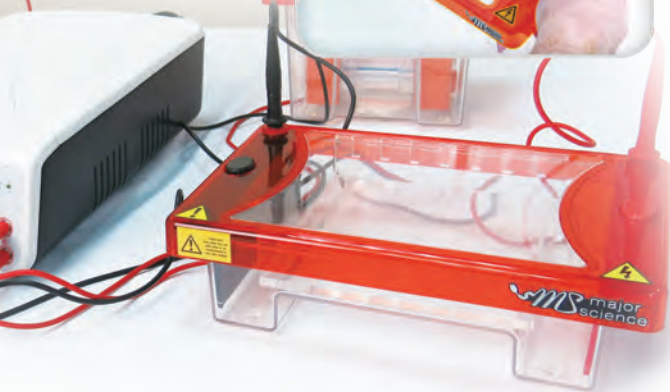
Our Midi series have been designed for routine horizontal gel electrophoresis with wide degrees of versatility. All of our gel tanks are made from injection molded construction for durable and leak proof environment. Varieties of special combs are available to maximize your sample size.

Midi plus includes the 70x70 and 70x100mm gel trays for a maximum of 64 samples, designed for low to medium numbers of samples.

Midi plus-1 includes 100x70 and 100x100mm gel tray to allow 100 samples per gel to be resolved. Ideal for those routinely check medium numbers of samples over short to medium gel run lengths.

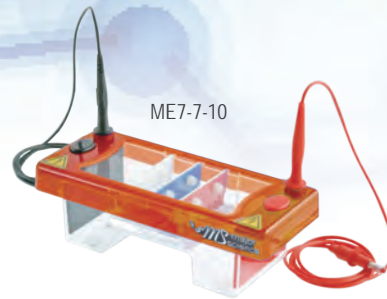
The Midi plus-2 system provides three sizes of trays to maximize your sample size, 150x70, 150x100, 150x150mm. Midi plus-2 allows up to 210 samples per run per gel.

Easy click lid removal



Features

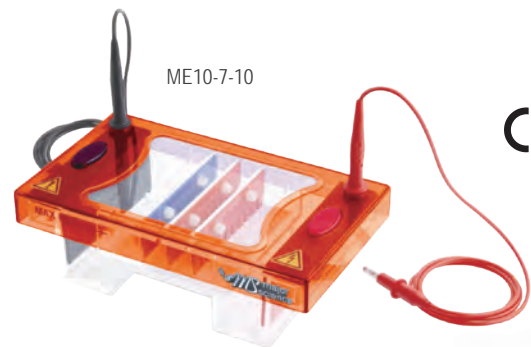
- Low buffer consumption
- Single molded tank
- Two tray options available (ME7-7-10, ME10-7-10)
- Three tray options available (ME15-7-10-15)
- Easy sample loading
- Multi-channel pipette compatible
- Great indications for gel making and running
- No tape, clamps or springs needed



CE

ME7-7-10 is offered as a complete system for the user to cast, and run electrophoresis. including:

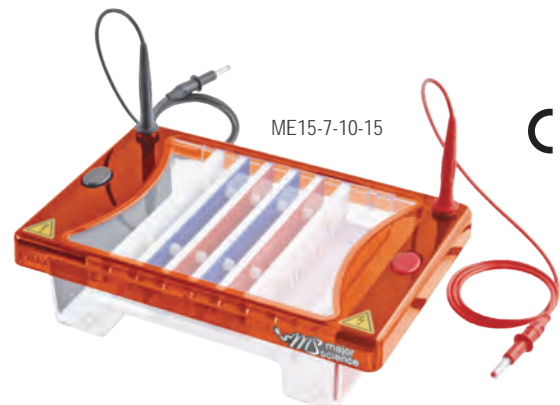
- 1 x Electrophoresis tank & lid
- 1 x ME7-UV7 (70x70mm UV tray)
- 1 x ME7-UV10 (70x100mm UV tray)
- 2 x ME7-8-1 (8 sample combs, 1mm thick)
- 1 x ME7-UVDAM (UV tray dams, 2pcs)
- 1 x ME7-LG (Loading guides (Set))
- 1 x Black & red electrophoresis cable



CE

ME10-7-10 is offered as a complete system for the user to cast, and run electrophoresis. including:

- 1 x Electrophoresis tank & lid
- 1 x ME10-UV7 (100x70mm UV tray)
- 1 x ME10-UV10 (100x100mm UV tray)
- 2 x ME10-16-1 (16 sample combs, 1mm thick)
- 1 x ME10-UVDAM (UV tray dams, 2pcs)
- 1 x ME10-LG (Loading guides (Set))
- 1 x Black & red electrophoresis cable



CE

ME15-7-10-15 is offered as a complete system for the user to cast, and run electrophoresis. including:

- 1 x Electrophoresis tank & lid
- 1 x ME15-UV7 (150x70mm UV tray)
- 1 x ME15-UV10 (150x100mm UV tray)
- 1 x ME15-UV15 (150x150mm UV tray)
- 2 x ME15-20-1 (20 sample combs, 1mm thick)
- 1 x ME15-UVDAM (UV tray dams, 2pcs)
- 1 x ME15-LG (Loading guides (Set))
- 1 x Black & red electrophoresis cable

Specification

| Cat. No. | ME7-7-10 | ME10-7-10 | ME15-7-10-15 |
|-------------------------|-------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------------------|
| Dimension (WxLxH) | 8.3"x3.5"x3.5" (210x90x90mm) | 8.7"x4.9"x3.5" (220x125x90mm) | 10.4"x6.9"x3.5" (265x175x90mm) |
| Gel Dimension (WxL) | 2.8"x2.8" (70x70mm) 2.8"x3.9" (70x100mm) | 3.9"x2.8" (100x70mm) 3.9"x3.9" (100x100mm) | 5.9"x2.8" (150x70mm) 5.9"x3.9" (150x100mm) 5.9"x5.9" (150x150mm) |
| Maximum Sample | 32 for 2.8"x2.8" (70x70mm) Tray (2x16 sample combs) | 50 for 3.9"x2.8" (100x70mm) Tray (2x25 sample combs) | 70 for 5.9"x2.8" (150x70mm) Tray (2x35 sample combs) |
| | 64 for 2.8"x3.9" (70x100mm)Tray (4x16 sample combs) | 100 for 3.9"x3.9" (100x100mm) Tray (4x25 sample combs) | 140 for 5.9"x3.9" (150x100mm) Tray (4x35 sample combs) |
| | | | 210 for 5.9"x5.9" (150x150mm) Tray (6x35 sample combs) |
| Buffer Volume | 0.06gal (225ml) | 0.08gal (300ml) | 0.13gal (500ml) |
| Construction | Injection molded construction | | |
| | Durable, leak proof environment for complete safety and long life | | |
| Cassette Type Electrode | Inexpensive, easy to replace | | |
| | Made of 99.99% corrosion resistant pure platinum | | |
| Electrical Safety | Lid can only be fastened in one way | | |
| | Upon lid removal, power is disconnected from buffer chamber | | |
| Rapid Casting Gel | Use casting dams | | |

Ordering Information

| Cat. No. | Product Description |
|--------------|-------------------------------------------------------------------------------------------------|
| ME7-7-10 | Midi plus, 70x70mm & 70x100mm UV tray, 2x8 sample 1mm thick combs, loading guides and dams |
| ME7-UV7 | Midi plus, 70x70mm UV tray |
| ME7-UV10 | Midi plus, 70x100mm UV tray |
| ME7-UVS | 70mm UV gel scoop |
| ME7-UVDAM | Midi plus, UV tray dams (2 pcs) |
| ME7-LG | Loading Guides |
| ME7LID | Midi plus lid (No cables) |
| ME7TANK | Midi plus Tank (including electrodes) |
| ME7-BSB | Buffer Saver Blocks for Midi plus, package of 2 |
| ME10-7-10 | Midi plus-1, 100x70mm & 100x100mm UV tray, 2x16 sample 1mm thick combs, loading guides and dams |
| ME10-UV7 | Midi plus-1, 100x70mm UV tray |
| ME10-UV10 | Midi plus-1, 100x100mm UV tray |
| ME10-UVS | 100mm UV gel scoop |
| ME10-UVDAM | Midi plus-1, UV tray dams (2 pcs) |
| ME10-LG | Loading Guides for Midi Plus-1 |
| ME10LID | Midi plus-1 lid (No cables) |
| ME10TANK | Midi plus-1 Tank (including electrodes) |
| ME10-BSB | Midi plus-1 buffer saving block, save up to 100ml, 2/pk |
| ME7/10-FC | Midi plus/Midi plus-1, Flexicaster |
| ME15-7-10-15 | Midi plus-2, 150x70, 100 & 150mm UV tray, 2x20 sample 1mm thick combs, loading guides and dams |
| ME15-UV7 | Midi plus-2, 150x70mm UV tray |
| ME15-UV10 | Midi plus-2, 150x100mm UV tray |
| ME15-UV15 | Midi plus-2, 150x150mm UV tray |
| ME15/20-FC | Midi plus-2/Maxi, Flexicaster |
| ME15-UVS | 150mm UV gel scoop |
| ME15-UVDAM | Midi plus-2, UV tray dams (2 pcs) |
| ME15-LG | Loading Guides for Midi plus-2 |
| ME15LID | Midi plus-2, lid (No cables) |
| ME15TANK | Midi plus-2 Tank (including electrodes) |
| ME15-BSB | Midi plus-2, saver blocks, pk/2 |



Casting dams allow gels to be rapidly cast



MINI-300

Recommended economic power supply

For ME7-7-10

| Cat. No. | Comb Description | Sample Volume |
|---------------|--------------------------------|---------------|
| ME7-1-0.75 | Prep 1, Marker 1, 0.75mm thick | 152ul |
| ME7-2-0.75 | Prep 2, Marker 2, 0.75mm thick | 68ul |
| ME7-4-0.75 | Prep 4, Marker 2, 0.75mm thick | 36ul |
| ME7-8MC-0.75 | 8 sample MC, 0.75mm thick | 8ul |
| ME7-8-0.75 | 8 sample, 0.75mm thick | 19ul |
| ME7-10-0.75 | 10 sample, 0.75mm thick | 14ul |
| ME7-12MC-0.75 | 12 sample MC, 0.75mm thick | 10ul |
| ME7-16-0.75 | 16 sample, 0.75mm thick | 7ul |

| Cat. No. | Comb Description | Sample Volume |
|--------------|-------------------------------|---------------|
| ME7-1-1.5 | Prep 1, Marker 1, 1.5mm thick | 304ul |
| ME7-2-1.5 | Prep 2, Marker 2, 1.5mm thick | 135ul |
| ME7-4-1.5 | Prep 4, Marker 2, 1.5mm thick | 72ul |
| ME7-8MC-1.5 | 8 sample MC, 1.5mm thick | 17ul |
| ME7-8-1.5 | 8 sample, 1.5mm thick | 37ul |
| ME7-10-1.5 | 10 sample, 1.5mm thick | 27ul |
| ME7-12MC-1.5 | 12 sample MC, 1.5mm thick | 20ul |
| ME7-16-1.5 | 16 sample, 1.5mm thick | 15ul |

| | | |
|------------|-----------------------------|-------|
| ME7-1-1 | Prep 1, Marker 1, 1mm thick | 203ul |
| ME7-2-1 | Prep 2, Marker 2, 1mm thick | 90ul |
| ME7-4-1 | Prep 4, Marker 2, 1mm thick | 48ul |
| ME7-8MC-1 | 8 sample MC, 1mm thick | 11ul |
| ME7-8-1 | 8 sample, 1mm thick | 25ul |
| ME7-10-1 | 10 sample, 1mm thick | 18ul |
| ME7-12MC-1 | 12 sample MC, 1mm thick | 14ul |
| ME7-16-1 | 16 sample, 1mm thick | 10ul |

| | | |
|------------|-----------------------------|-------|
| ME7-1-2 | Prep 1, Marker 1, 2mm thick | 405ul |
| ME7-2-2 | Prep 2, Marker 2, 2mm thick | 180ul |
| ME7-4-2 | Prep 4, Marker 2, 2mm thick | 96ul |
| ME7-8MC-2 | 8 sample MC, 2mm thick | 23ul |
| ME7-8-2 | 8 sample, 2mm thick | 50ul |
| ME7-10-2 | 10 sample, 2mm thick | 36ul |
| ME7-12MC-2 | 12 sample MC, 2mm thick | 27ul |
| ME7-16-2 | 16 sample, 2mm thick | 20ul |



Fast fix slot electrodes, no need rewiring



Complete package offers as standard

For ME10-7-10

| Cat. No. | Comb Description | Sample Volume |
|----------------|--------------------------------|---------------|
| ME10-1-0.75 | Prep 1, Marker 1, 0.75mm thick | 270ul |
| ME10-2-0.75 | Prep 2, Marker 2, 0.75mm thick | 118ul |
| ME10-4-0.75 | Prep 4, Marker 2, 0.75mm thick | 57ul |
| ME10-8-0.75 | 8 sample, 0.75mm thick | 30ul |
| ME10-10MC-0.75 | 10 sample MC, 0.75mm thick | 20ul |
| ME10-12-0.75 | 12 sample, 0.75mm thick | 17ul |
| ME10-16-0.75 | 16 sample, 0.75mm thick | 12ul |
| ME10-20MC-0.75 | 20 sample MC, 0.75mm thick | 10ul |
| ME10-25-0.75 | 25 sample, 0.75mm thick | 7ul |

| Cat. No. | Comb Description | Sample Volume |
|---------------|-------------------------------|---------------|
| ME10-1-1.5 | Prep 1, Marker 1, 1.5mm thick | 540ul |
| ME10-2-1.5 | Prep 2, Marker 2, 1.5mm thick | 236ul |
| ME10-4-1.5 | Prep 4, Marker 2, 1.5mm thick | 115ul |
| ME10-8-1.5 | 8 sample, 1.5mm thick | 61ul |
| ME10-10MC-1.5 | 10 sample MC, 1.5mm thick | 41ul |
| ME10-12-1.5 | 12 sample, 1.5mm thick | 34ul |
| ME10-16-1.5 | 16 sample, 1.5mm thick | 24ul |
| ME10-20MC-1.5 | 20 sample MC, 1.5mm thick | 20ul |
| ME10-25-1.5 | 25 sample, 1.5mm thick | 15ul |

| | | |
|-------------|-----------------------------|-------|
| ME10-1-1 | Prep 1, Marker 1, 1mm thick | 360ul |
| ME10-2-1 | Prep 2, Marker 2, 1mm thick | 158ul |
| ME10-4-1 | Prep 4, Marker 2, 1mm thick | 77ul |
| ME10-8-1 | 8 sample, 1mm thick | 41ul |
| ME10-10MC-1 | 10 sample MC, 1mm thick | 27ul |
| ME10-12-1 | 12 sample, 1mm thick | 23ul |
| ME10-16-1 | 16 sample, 1mm thick | 16ul |
| ME10-20MC-1 | 20 sample MC, 1mm thick | 14ul |
| ME10-25-1 | 25 sample, 1mm thick | 10ul |

| | | |
|-------------|-----------------------------|-------|
| ME10-1-2 | Prep 1, Marker 1, 2mm thick | 720ul |
| ME10-2-2 | Prep 2, Marker 2, 2mm thick | 315ul |
| ME10-4-2 | Prep 4, Marker 2, 2mm thick | 153ul |
| ME10-8-2 | 8 sample, 2mm thick | 81ul |
| ME10-10MC-2 | 10 sample MC, 2mm thick | 54ul |
| ME10-12-2 | 12 sample, 2mm thick | 45ul |
| ME10-16-2 | 16 sample, 2mm thick | 32ul |
| ME10-20MC-2 | 20 sample MC, 2mm thick | 27ul |
| ME10-25-2 | 25 sample, 2mm thick | 20ul |

*Sample volume (SV) = sample volume per well, for 5 mm thick gel (ul)

For ME15-7-10-15

| Cat. No. | Comb Description | Sample Volume |
|----------------|--------------------------------|---------------|
| ME15-1-0.75 | Prep 1, Marker 1, 0.75mm thick | 371ul |
| ME15-2-0.75 | Prep 2, Marker 2, 0.75mm thick | 169ul |
| ME15-4-0.75 | Prep 4, Marker 2, 0.75mm thick | 91ul |
| ME15-10-0.75 | 10 sample, 0.75mm thick | 34ul |
| ME15-12-0.75 | 12 sample, 0.75mm thick | 30ul |
| ME15-20-0.75 | 20 sample, 0.75mm thick | 16ul |
| ME15-35-0.75 | 35 sample, 0.75mm thick | 7ul |
| ME15-10MC-0.75 | 10 sample MC, 0.75mm thick | 22ul |
| ME15-14MC-0.75 | 14 sample MC, 0.75mm thick | 22ul |
| ME15-16MC-0.75 | 16 sample MC, 0.75mm thick | 20ul |
| ME15-18MC-0.75 | 18 sample MC, 0.75mm thick | 8ul |
| ME15-28MC-0.75 | 28 sample MC, 0.75mm thick | 8ul |
| ME15-30MC-0.75 | 30 sample MC, 0.75mm thick | 9ul |

| | | |
|-------------|-----------------------------|-------|
| ME15-1-1 | Prep 1, Marker 1, 1mm thick | 495ul |
| ME15-2-1 | Prep 2, Marker 2, 1mm thick | 225ul |
| ME15-4-1 | Prep 4, Marker 2, 1mm thick | 122ul |
| ME15-10-1 | 10 sample, 1mm thick | 45ul |
| ME15-12-1 | 12 sample, 1mm thick | 41ul |
| ME15-20-1 | 20 sample, 1mm thick | 21ul |
| ME15-35-1 | 35 sample, 1mm thick | 10ul |
| ME15-10MC-1 | 10 sample MC, 1mm thick | 29ul |
| ME15-14MC-1 | 14 sample MC, 1mm thick | 29ul |
| ME15-16MC-1 | 16 sample MC, 1mm thick | 27ul |
| ME15-18MC-1 | 18 sample MC, 1mm thick | 11ul |
| ME15-28MC-1 | 28 sample MC, 1mm thick | 11ul |
| ME15-30MC-1 | 30 sample MC, 1mm thick | 13ul |

| Cat. No. | Comb Description | Sample Volume |
|---------------|-------------------------------|---------------|
| ME15-1-1.5 | Prep 1, Marker 1, 1.5mm thick | 743ul |
| ME15-2-1.5 | Prep 2, Marker 2, 1.5mm thick | 338ul |
| ME15-4-1.5 | Prep 4, Marker 2, 1.5mm thick | 182ul |
| ME15-10-1.5 | 10 sample, 1.5mm thick | 68ul |
| ME15-12-1.5 | 12 sample, 1.5mm thick | 61ul |
| ME15-20-1.5 | 20 sample, 1.5mm thick | 32ul |
| ME15-35-1.5 | 35 sample, 1.5mm thick | 15ul |
| ME15-10MC-1.5 | 10 sample MC, 1.5mm thick | 44ul |
| ME15-14MC-1.5 | 14 sample MC, 1.5mm thick | 44ul |
| ME15-16MC-1.5 | 16 sample MC, 1.5mm thick | 41ul |
| ME15-18MC-1.5 | 18 sample MC, 1.5mm thick | 17ul |
| ME15-28MC-1.5 | 28 sample MC, 1.5mm thick | 17ul |
| ME15-30MC-1.5 | 30 sample MC, 1.5mm thick | 19ul |

| | | |
|-------------|-----------------------------|-------|
| ME15-1-2 | Prep 1, Marker 1, 2mm thick | 990ul |
| ME15-2-2 | Prep 2, Marker 2, 2mm thick | 450ul |
| ME15-4-2 | Prep 4, Marker 2, 2mm thick | 243ul |
| ME15-10-2 | 10 sample, 2mm thick | 90ul |
| ME15-12-2 | 12 sample, 2mm thick | 81ul |
| ME15-20-2 | 20 sample, 2mm thick | 43ul |
| ME15-35-2 | 35 sample, 2mm thick | 20ul |
| ME15-10MC-2 | 10 sample MC, 2mm thick | 59ul |
| ME15-14MC-2 | 14 sample MC, 2mm thick | 59ul |
| ME15-16MC-2 | 16 sample MC, 2mm thick | 54ul |
| ME15-18MC-2 | 18 sample MC, 2mm thick | 23ul |
| ME15-28MC-2 | 28 sample MC, 2mm thick | 23ul |
| ME15-30MC-2 | 30 sample MC, 2mm thick | 25ul |



Extensive range of combs
 Black: 0.75mm for ultra resolved bands
 White: 1mm supplied as standard
 Red: 1.5mm for large sample volume
 Blue: 2mm for large sample volume

*Sample volume (SV) = Sample volume for 5mm thick gel (ul) per well.



MC = Multi-channel pipette compatible

* All images are for reference only, actual products might differ from the pictures above.
 * Technical specifications subject to change without notice.

Maxi Horizontal Gel Electrophoresis System

ME20 series ME26-16-24-32

For ME20 series

Maxi is primarily designed for resolution of high throughput of samples as in cloning or PCR experiments. Maxi allows ultra high-resolution separations over extended runs. Tray sizes correspond to standard blotter sizes. It also allows for easy sample transfer onto a membrane for further analysis. Three tray sizes are available, 200x200mm, 200x250mm and 200x100mm. Multi-channel pipette compatible combs for up to 40 samples each facilitate speedy loading of up to 440 samples per gel. 50 sample combs (not multi-channel pipette compatible) allow maximum sample capability of 550 samples per gel.

For ME26-16-24-32

Maxi-plus is designed for rapid screening of very large numbers of cloning or PCR samples, and it has the maximum capacity of 672 samples per gel. This allows loading and analysis of exactly seven 96 well format microliter plates. The large gel run length of 320mm also allows resolution of samples over a long distance for separation of complex sample bands such as in restriction fragment analysis. Maxi-plus is available with a full length tray of 260x320mm or with two other tray length options of 260x160mm and 260x240mm so that user's exact requirements can be met. In addition to options for single length gel trays, Maxi-plus is available with all three gel tray lengths to provide the maximum flexibility, versatility and value. Buffer recirculation ports are included as standard to allow enhanced resolution over extended runs, while loading guides enhance visibility for easy sample loading.

Features

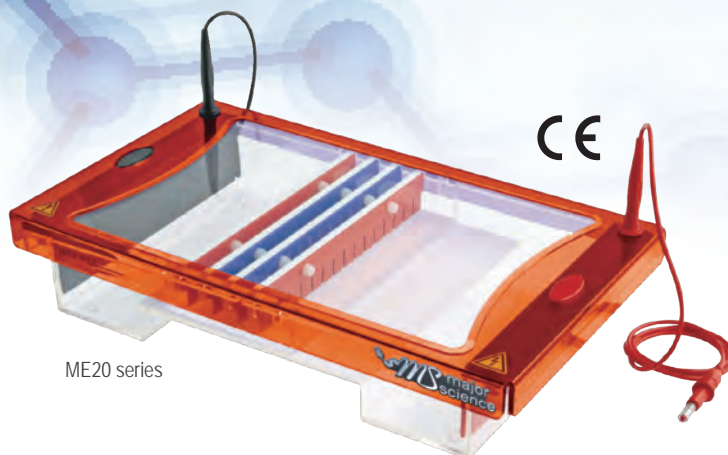
- Low buffer consumption
- Multi-channel pipette compatibility
- Great indications for gel making and running
- No tape, clamps or springs needed

For ME20 series additional features

- Up to 450 samples per tray

For ME26-16-24-32 additional features

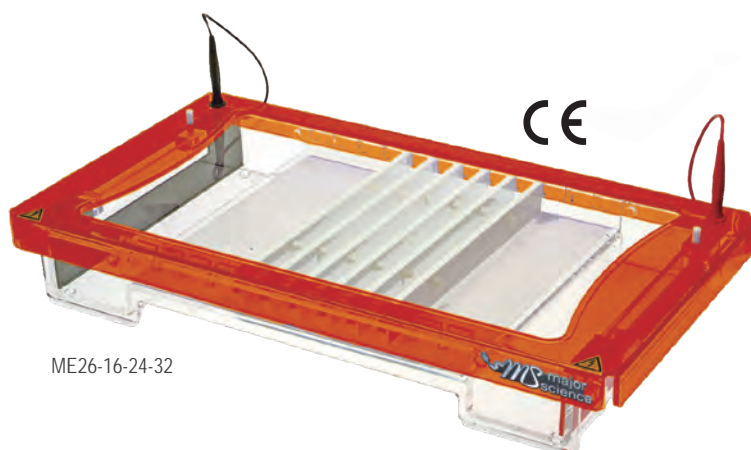
- Up to 672 samples per tray
- Three tray options available



ME20 series

ME20 series is offered as a complete system for the user to cast, and run electrophoresis. including:

- 1 x Electrophoresis tank & lid
- 1 x ME20-UV10 (200x100mm UV tray)
- 1 x ME20-UV20 (200x200mm UV tray)
- 1 x ME20-UV25 (200x250mm UV tray, for ME20-25 only)
- 2 x ME20-20MC-1 (20 sample combs, 1mm thick)
- 1 x ME20-UV DAM (UV tray dams, 2pcs)
- 1 x ME20-LG (Loading guides (Set))
- 1 x Black & red electrophoresis cable



ME26-16-24-32

ME26-16-24-32 is offered as a complete system for the user to cast, and run electrophoresis. including:

- 1 x Electrophoresis tank & lid
- 1 x ME26-UV16 (260x160mm UV tray)
- 1 x ME26-UV24 (260x240mm UV tray)
- 1 x ME26-UV32 (260x320mm UV tray)
- 6 x ME26-28MC-1 (28 sample combs, 1mm thick)
- 1 x ME26-LG (Loading guides (Set))
- 1 x Black & red electrophoresis cable
- 1 x Flexi caster



All combs are multichannel pipette compatible



Loading guides allow easy well identification and sample loading

Specification

| Cat. No. | ME20-10-20 | ME20-25 | ME26-16-24-32 |
|-------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimension (WxLxH) | 15.6"x9.1"x3.5" (395x230x90mm) | | 19.7"x11"x3.5" (500x280x90mm) |
| Gel Dimension (WxL) | 7.9"x3.9" (200x100mm) 7.9"x7.9" (200x200mm) 7.9"x9.8" (200x250mm)(Optional) | 7.9"x9.8" (200x250mm) | 10.2"x6.3" (260x160mm) 10.2"x9.5" (260x240mm) 10.2"x12.6" (260x320mm) |
| Maximum Sample | 200 for 7.9"x3.9" (200x100mm) Tray (4x50 sample combs) 450 for 7.9"x7.9" (200x200mm) Tray (9x50 sample combs) | 550 for 7.9"x9.8" (200x250mm) Tray (11x50 sample combs) | 336 for 10.2"x6.3" (260x160mm) Tray (6x56 sample combs) 504 for 10.2"x9.5" (260x240mm) Tray (9x56 sample combs) 672 for 10.2"x12.6" (260x320mm) Tray (12x56 sample combs) |
| Buffer Volume | 0.32gal (1200ml) | | 0.37gal (1400ml) |
| Construction | Injection molded construction | | N /A |
| | Durable, leak proof environment for complete safety and long life | | N /A |
| Cassette Type Electrode | Inexpensive, easy to replace | | |
| | Made of 99.99% corrosion resistant pure platinum | | |
| Electrical Safety | Lid can only be fastened in one way | | |
| | Upon lid removal, power is disconnected from buffer chamber | | |
| Rapid Casting Gel | Use casting dams | | Use flexible caster |

Ordering Information

| Cat. No. | Product Description | Cat. No. | Product Description |
|------------|------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------|
| ME20-10-20 | Maxi, 200x100 & 200x200mm UV tray, 2x20 sample combs | ME26-16-24-32 | Maxi-plus 260x160mm, 260x240mm, 260x320mm UV tray, 6x28 sample combs |
| ME20-25 | Maxi, 200x250mm UV tray, 2x20 sample combs | ME26-UV16 | Maxi plus, 260x160mm UV tray |
| ME20-UV10 | Maxi, 200x100mm UV tray | ME26-UV24 | Maxi plus, 260x240mm UV tray |
| ME20-UV20 | Maxi, 200x200mm UV tray | ME26-UV32 | Maxi plus, 260x320mm UV tray |
| ME20-UV25 | Maxi, 200x250mm UV tray | ME26-FC | Flexible caster for gels up to 320mm. Casts 70, 100, 150,160, 200, 240 and 320mm long gels |
| ME15/20-FC | Midi plus-2/Maxi, Flexicaster | ME26-UVS | 260mm UV gel scoop |
| ME20-UVS | 200mm UV gel scoop | ME26-LG | Loading Guides for Maxi-plus |
| ME20-UVDAM | Maxi, UV tray dams (2 pcs) | ME26LID | Maxi-plus lid (No cables) |
| ME20-LG | Loading Guides for Maxi | ME26TANK | Maxi-plus Tank (including electrodes) |
| ME20LID | Maxi lid (No cables) | | |
| ME20TANK | Maxi Tank (including electrodes) | | |

Accessories

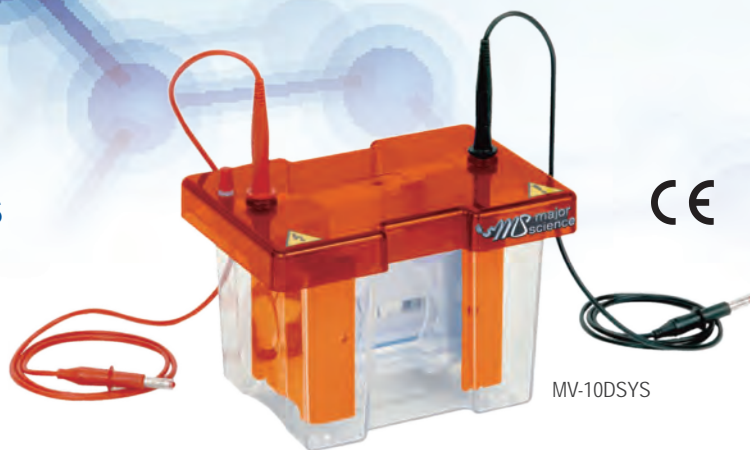
| Cat. No | Comb Description | Sample Volume | Cat. No | Comb Description | Sample Volume |
|----------------|--------------------------------|---------------|----------------|-----------------------------|---------------|
| ME20-1-0.75 | Prep 1, Marker 1, 0.75mm thick | 506ul | ME20-16-1.5 | 16 sample, 1.5mm thick | 61ul |
| ME20-2-0.75 | Prep 2, Marker 2, 0.75mm thick | 236ul | ME20-20MC-1.5 | 20 sample MC, 1.5mm thick | 41ul |
| ME20-4-0.75 | Prep 4, Marker 2, 0.75mm thick | 115ul | ME20-25-1.5 | 25 sample, 1.5mm thick | 32ul |
| ME20-10-0.75 | 10 sample, 0.75mm thick | 54ul | ME20-30-1.5 | 30 sample, 1.5mm thick | 26ul |
| ME20-16-0.75 | 16 sample, 0.75mm thick | 30ul | ME20-36-1.5 | 36 sample, 1.5mm thick | 22ul |
| ME20-20MC-0.75 | 20 sample MC, 0.75mm thick | 20ul | ME20-40MC-1.5 | 40 sample MC, 1.5mm thick | 17ul |
| ME20-25-0.75 | 25 sample, 0.75mm thick | 16ul | ME20-50-1.5 | 50 sample, 1.5mm thick | 16ul |
| ME20-30-0.75 | 30 sample, 0.75mm thick | 13ul | | | |
| ME20-36-0.75 | 36 sample, 0.75mm thick | 11ul | ME20-1-2 | Prep 1, Marker 1, 2mm thick | 1350ul |
| ME20-40MC-0.75 | 40 sample MC, 0.75mm thick | 8ul | ME20-2-2 | Prep 2, Marker 2, 2mm thick | 630ul |
| ME20-50-0.75 | 50 sample, 0.75mm thick | 8ul | ME20-4-2 | Prep 4, Marker 2, 2mm thick | 306ul |
| | | | ME20-10-2 | 10 sample, 2mm thick | 144ul |
| ME20-1-1 | Prep 1, Marker 1, 1mm thick | 675ul | ME20-16-2 | 16 sample, 2mm thick | 81ul |
| ME20-2-1 | Prep 2, Marker 2, 1mm thick | 315ul | ME20-20MC-2 | 20 sample MC, 2mm thick | 54ul |
| ME20-4-1 | Prep 4, Marker 2, 1mm thick | 153ul | ME20-25-2 | 25 sample, 2mm thick | 42ul |
| ME20-10-1 | 10 sample, 1mm thick | 72ul | ME20-30-2 | 30 sample, 2mm thick | 34ul |
| ME20-16-1 | 16 sample, 1mm thick | 41ul | ME20-36-2 | 36 sample, 2mm thick | 29ul |
| ME20-20MC-1 | 20 sample MC, 1mm thick | 27ul | ME20-40MC-2 | 40 sample MC, 2mm thick | 23ul |
| ME20-25-1 | 25 sample, 1mm thick | 21ul | ME20-50-2 | 50 sample, 2mm thick | 21ul |
| ME20-30-1 | 30 sample, 1mm thick | 17ul | | | |
| ME20-36-1 | 36 sample, 1mm thick | 14ul | ME26-28MC-0.75 | 28 sample MC, 0.75mm thick | 25ul |
| ME20-40MC-1 | 40 sample MC, 1mm thick | 11ul | ME26-56MC-0.75 | 56 sample MC, 0.75mm thick | 10ul |
| ME20-50-1 | 50 sample, 1mm thick | 10ul | ME26-28MC-1 | 28 sample MC, 1mm thick | 34ul |
| | | | ME26-56MC-1 | 56 sample MC, 1mm thick | 14ul |
| ME20-1-1.5 | Prep 1, Marker 1, 1.5mm thick | 1013ul | ME26-28MC-1.5 | 28 sample MC, 1.5mm thick | 51ul |
| ME20-2-1.5 | Prep 2, Marker 2, 1.5mm thick | 473ul | ME26-56MC-1.5 | 56 sample MC, 1.5mm thick | 20ul |
| ME20-4-1.5 | Prep 4, Marker 2, 1.5mm thick | 230ul | ME26-28MC-2 | 28 sample MC, 2mm thick | 68ul |
| ME20-10-1.5 | 10 sample, 1.5mm thick | 108ul | ME26-56MC-2 | 56 sample MC, 2mm thick | 27ul |

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Mini Vertical Gel Electrophoresis Apparatus

MV-10DSYS

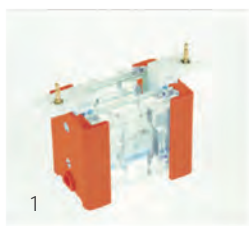
Mini Vertical is an injection molded vertical electrophoresis system providing a leak-proof environment and safe operation. Its vertical tank is designed for blotting compatibility. The dual 100x100mm plate is the most popular application and it is capable of handling up to 4 plates. In addition, packages with Mini 300V Power supply is ideally offered to individuals in the laboratory at a competitive and acceptable pricing to avoid time waiting for basic instruments and to accelerate experimental progress. Simple rapid and leak-proof gel casting.



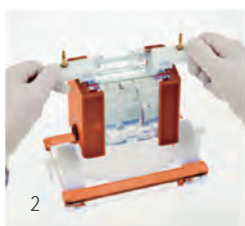
MV-10DSYS

This product is offered as a complete system for the user to cast, and run electrophoresis. including:

- 1 x Electrophoresis tank & lid & inner running module
- 1 x MV-10NG (100x100mm notched glass plates, 2mm thick, pk/2)
- 1 x MV-10PGS1 (100x100mm plain glass plates with 1mm bonded spacers, pk/2)
- 1 x MV-10DP (dummy plate)
- 2 x MV-10-12-1 (12 sample combs, 1mm thick)
- 1 x MV-10DCAST (100x100mm casting base)
- 1 x MV 10ICB (mini cooling pack)
- 1 x Black & red electrophoresis cable



1
Insert glass plates and slide gates to create efficient seal.



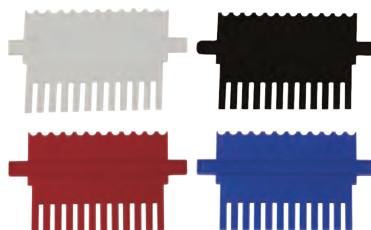
2
Transfer to casting base and tighten cams.



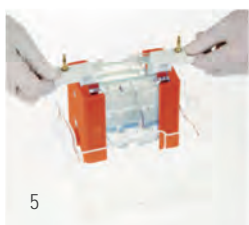
3
It is best to turn the cams in opposite directions to each other.



4
Pour gel solution, insert combs and allow gel to polymerize.



Extensive range of combs
Black: 0.75mm for ultra resolved bands
White: 1mm supplied as standard
Red: 1.5mm for large sample volume
Blue: 2mm for large sample volume



5
Transfer to tank, fill with buffer and run.



MC = Multi-channel pipette compatible



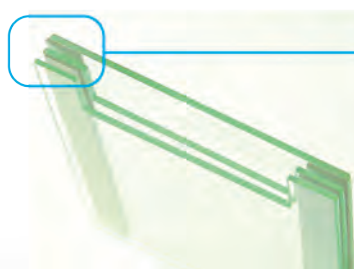
* If your want to run 4 gels, a set of notched glass plate and also bonded spacer would be required to buy separately.



MV10-Mini300

Features

- Low buffer consumption
- Single molded tank
- Up to 4 gels run at one time
- Great indications for gel making and running
- Ice cooling pack
- Easy gel casting and no gel leakage
- Competitive pricing
- Compatible with all precast gels (100x100mm or 100x80mm)



MV-10DSYS

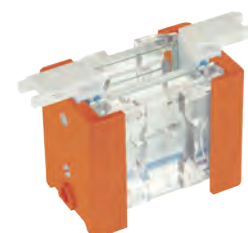
is capable to run up to 4 gels when using a triple glass plate sandwich.

Specification

| Cat. No. | MV-10DSYS |
|------------------------------|-------------------------------------------------------------------|
| Dimension (WxLxH) | Approx. 7.5"x5.1"x5.9" (190x130x150mm) |
| Plate Dimension (WxL) | Approx. 3.9" 3.9" (100x100mm) |
| Gel Dimension (WxL) | Approx. 3.4"x3.2" (85x80mm) |
| Maximum Sample | 80 samples, 20 samples per gel |
| Buffer Volume | 0.07gal -0.32gal (250 -1200ml) |
| Ice Cooling Pack | Yes |
| Dummy Plate And Casting Base | Yes |
| Construction | Injection molded construction |
| | Durable, leak proof environment for complete safety and long life |
| Electrical Safety | Lid can be fastened in only one way |
| | Upon lid removal, power is disconnected from buffer chamber |
| Rapid Casting Gel | Use gel maker stand |

Ordering Information

| Cat. No. | Product Description |
|-----------------|---------------------------------------------------------------------------|
| MV-10DSYS | Complete Mini Vertical Gel Electrophoresis Apparatus |
| | Mini 100x100mm Dual, 2 sets of glass plates with 1mm thick bonded spacers |
| | 2x12 sample, 1mm thick combs, cooling pack, dummy plate and casting base |
| MV10EXCASTERSYS | External Casting System, upstand + base |
| MV10EXCASTER | External Casting Upstand - no casting base |
| MV-10DCAST | 100x100mm casting base |
| MV-10DCASTM | Replacement Silicone Mat for 100x100mm casting base |
| MV-10LID | MV-10 lid (No cables) |
| MV-10TANK | MV-10 tank |
| MV-10ICB | Mini cooling pack |
| MV-10PG | 100x100mm plain glass plates, 2mm thick (pk/2) |
| MV-10PGS0.75 | 100x100mm plain glass plates with 0.75mm bonded spacers (pk/2) |
| MV-10PGS1 | 100x100mm plain glass plates with 1mm bonded spacers (pk/2) |
| MV-10PGS1.5 | 100x100mm plain glass plates with 1.5mm bonded spacers (pk/2) |
| MV-10PGS2 | 100x100mm plain glass plates with 2mm bonded spacers (pk/2) |
| MV-10NG | 100x100mm notched glass plates, 2mm thick (pk/2) |
| MV-10NGS0.75 | 100x100mm notched glass plates with 0.75mm bonded spacers (pk/2) |
| MV-10NGS1 | 100x100mm notched glass plates with 1mm bonded spacers (pk/2) |
| MV-10NGS1.5 | 100x100mm notched glass plates with 1.5mm bonded spacers (pk/2) |
| MV-10NGS2 | 100x100mm notched glass plates with 2mm bonded spacers (pk/2) |
| MV-10DP | Dummy plate, 100x100mm |
| MV-10S0.75 | 100mm spacers - 0.75mm (pk/2) |
| MV-10S1 | 100mm spacers - 1mm (pk/2) |
| MV-10S1.5 | 100mm spacers - 1.5mm (pk/2) |
| MV-10S2 | 100mm spacers - 2mm (pk/2) |



MV10EXCASTER

Accessories

MC = Multi-channel pipette compatible

SV = Sample volume for 5mm thick gel (ul)

| Cat. No | Product Description | SV |
|-----------------|-------------------------------------|-------|
| MV-10-1-0.75 | Comb 1 Prep, 1 Marker, 0.75mm thick | 500ul |
| MV-10-5-0.75 | Comb 5 sample, 0.75mm thick | 70ul |
| MV-10-8MC-0.75 | Comb 8 sample MC, 0.75mm thick | 40ul |
| MV-10-9-0.75 | Comb 9 sample, 0.75mm thick | 35ul |
| MV-10-10-0.75 | Comb 10 sample, 0.75mm thick | 30ul |
| MV-10-12-0.75 | Comb 12 sample MC, 0.75mm thick | 25ul |
| MV-10-16MC-0.75 | Comb 16 sample MC, 0.75mm thick | 20ul |
| MV-10-20-0.75 | Comb 20 sample, 0.75mm thick | 15ul |
| MV-10-1-1 | Comb 1 Prep, 1 Marker, 1mm thick | 650ul |
| MV-10-5-1 | Comb 5 sample, 1mm thick | 100ul |
| MV-10-8MC-1 | Comb 8 sample MC, 1mm thick | 60ul |
| MV-10-9-1 | Comb 9 sample, 1mm thick | 50ul |
| MV-10-10-1 | Comb 10 sample, 1mm thick | 40ul |
| MV-10-12-1 | Comb 12 sample, 1mm thick | 35ul |
| MV-10-16MC-1 | Comb 16 sample MC, 1mm thick | 25ul |
| MV-10-20-1 | Comb 20 sample, 1mm thick | 20ul |

| Cat. No | Product Description | SV |
|----------------|------------------------------------|--------|
| MV-10-1-1.5 | Comb 1 Prep, 1 Marker, 1.5mm thick | 1000ul |
| MV-10-5-1.5 | Comb 5 sample, 1.5mm thick | 140ul |
| MV-10-8MC-1.5 | Comb 8 sample MC, 1.5mm thick | 80ul |
| MV-10-9-1.5 | Comb 9 sample, 1.5mm thick | 70ul |
| MV-10-10-1.5 | Comb 10 sample, 1.5mm thick | 30ul |
| MV-10-12-1.5 | Comb 12 sample MC, 1.5mm thick | 50ul |
| MV-10-16MC-1.5 | Comb 16 sample MC, 1.5mm thick | 40ul |
| MV-10-20-1.5 | Comb 20 sample, 1.5mm thick | 30ul |
| MV-10-1-2 | Comb 1 Prep, 1 Marker, 2mm thick | 1300ul |
| MV-10-5-2 | Comb 5 sample, 2mm thick | 200ul |
| MV-10-8MC-2 | Comb 8 sample MC, 2mm thick | 120ul |
| MV-10-9-2 | Comb 9 sample, 2mm thick | 100ul |
| MV-10-10-2 | Comb 10 sample, 2mm thick | 80ul |
| MV-10-12-2 | Comb 12 sample, 2mm thick | 70ul |
| MV-10-16MC-2 | Comb 16 sample MC, 2mm thick | 50ul |
| MV-10-20-2 | Comb 20 sample, 2mm thick | 40ul |

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* Technical specifications subject to change without notice.

Complete Mini Electro Blot System

Complete Mini Sub Blot System

MEBM10 / MSB10
MV-10CBS

Electro Blot Systems are primarily designed for wet electrophoresis of proteins, and offer a combination of increased capacity with economical features. Electro Blot Systems have increased capacity over standard systems. Up to five gel blot cassettes may be utilized at any time for Electro Blot Mini. This is especially useful in high throughput laboratories. A uniform electric field is provided by a high intensity coiled electrode and ensures uniform transfer across the blot surface. The cassette's open architecture that ensures the maximum blot area allows direct transfer of current. Its rigid construction that ensures contact between the gel and membrane is retained throughout the blot and an even pressure is maintained. These units are compatible with magnetic stirrers to aid heat dispersal and prevent pH drifts in the buffer due to incomplete buffer mixing. Each unit includes a cooling pack to further enhance transfer efficiency by removing excess heat. This also saves buffer for added economy.

The Complete Electrophoresis Systems include both modules for gel electrophoresis, electroblotting and accessories, to provide a complete Mini gel casting, running and electroblotting system. The electroblotting module includes four inter-locking cassettes and sixteen fiber pads. A high intensity current is generated by coiled platinum electrodes. These features, in conjunction with the advanced cooling system allow for rapid electroblotting in as little as one hour.

For MEBM series Features

- Ideal for wet electroblotting of proteins – Western Blotting
- Hinged cassettes for added convenience
- Accommodates gel thickness from 0.25 to 3mm

For MV-CBS series Features

- Versatile: Interchangeable modules for slab gel and Electroblotting using a single universal buffer tank
- Hinged cassettes
- High intensity electrodes
- blot capacity
- Rapid set-up cooling

Mini Electro Blot System

CE

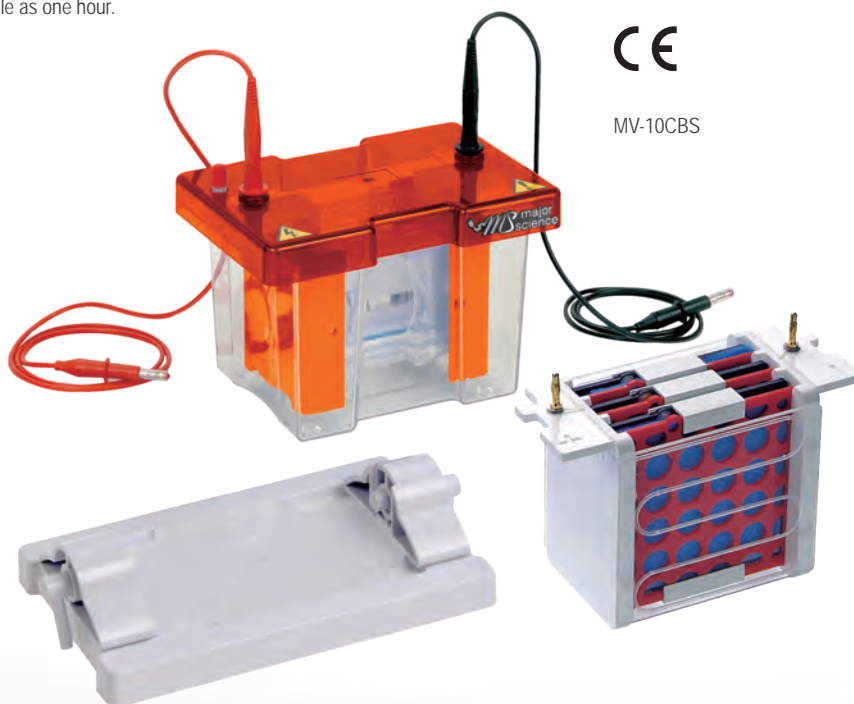


MEBM10

Complete Mini Electro & Blot System

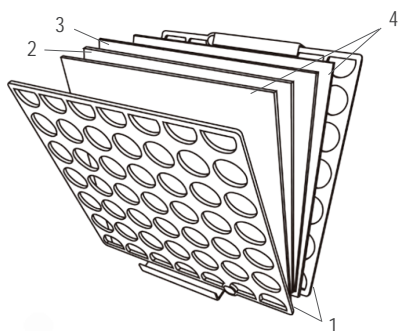
CE

MV-10CBS

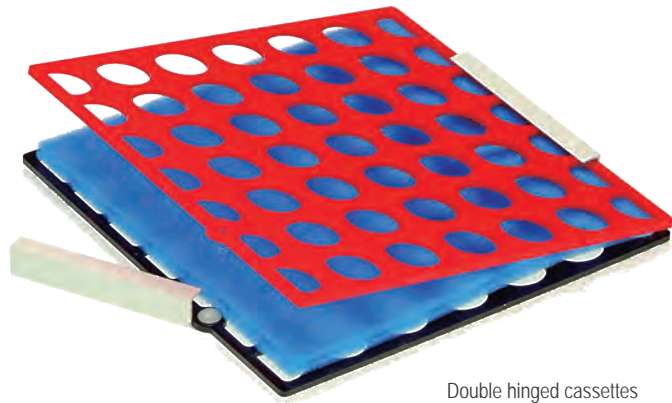


Specification

| Cat. No. | MEBM10 |
|--------------------------|-------------------------------------------------------------------|
| Dimension (WxLxH) | 7.5"x5.1"x7.5" (190x130x190mm) |
| Gel Dimension (WxL) | 3.9"x3.9" (100x100mm) |
| Maximum Sample | 5 Blots, 100x100mm |
| Accomodate Gel Thickness | 0.25 - 3mm |
| Buffer Volume | 1000 - 1500ml |
| Ice Cooling Pack | Yes |
| Construction | Durable, leak proof environment for complete safety and long life |
| Electrical Safety | Lid can only be fastened in one way |
| | On removal, power is disconnected from buffer chamber |
| Cassette Type | Hinged cassette |



1. Cassette Ends
2. Gel
3. Membrane
4. Blue Foam Pads & Papers



Double hinged cassettes
for added convenience

Ordering Information

| Cat. No. | Product Description |
|----------|------------------------------------------------------------------------------------------------------------------------------------------|
| MEBM10 | Electro Blot Mini, 100x100mm system for 5 cassettes, including 1 x tank and 1 x lid, 5 x cassettes, cooling pack and 16 extra fiber pads |
| MSB10 | Sub Blot Mini, 100x100mm system for 4 cassettes, including 1 x tank and 1 x lid, 4 x cassettes, cooling pack and 16 extra fiber pads |
| MSB10C | Blot Mini cassette |
| MSB10F | Fiber pads for Blot Mini - pack of 6 |
| MV10BI | Blot Mini Insert - including 4 cassettes and 16 fibre pads |

| | |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| MV-10CBS | Complete system for Mini Vertical Electrophoresis & Blotting, comprising: |
| | 1x Mini Vertical unit, including: |
| | 2x2mm thick notched glass plates |
| | 2x2mm thick plain plates with 1mm thick bounded spacers, 1 x dummy plate |
| | 2 x combs(1mm thick,12 samples), 1 x casting base, silicone mat, cooling pack |
| | 1 x Electroblotting module, including: |
| 1 x Internal electroblotting module | |
| 4 x Compression cassette for gel size up to 100x100mm, 16 x fiber pads | |

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Semi Dry Mini / Semi Dry Midi

MSD series

Semi Dry Mini offers rapid transfer times for DNA, RNA and protein blotting, typically 15 to 30 minutes. It can be used for all types of blotting, including Western, Southern and Northern blots. It features an uncomplicated buffer and set up procedure and is compatible with gel thickness from 0.25 up to 10mm. The unit is compatible with its respective vertical electrophoresis system. It only requires very low buffer volume, typically only a few milliliters of buffer per transfer. A screw down lid secures the blot sandwich and allows complete control of pressure ensuring even transfer. The electrodes, comprising of a platinum coated anode and stainless steel cathode, will exhibit practically no corrosion and provides many years of trouble free use. Uniform heat dispersion across the blot sandwich ensures stable transfer times and prevents heat induced sample loss or transfer distortions. It also allows viewing of the blot sandwich to ensure correct positioning and transfer is occurring correctly. Electrode plates are fully separated to prevent arcing or damage.

Features

- Low buffer consumption
- Rapid transfer time
- Western, Southern and Northern blots
- Screw down lid – Gels from 0.25 up to 10mm thick
- Uniform heat dispersion
- Long life electrodes



Semi Dry Mini and Semi Dry Midi

Specification

| Cat. No. | MSD10 | MSD20 |
|--------------------------|-------------------------------------------------------------------|------------------------------------------------------------|
| Dimension (WxLxH) | Approx. 6.3"x6.3"x2.8" (160x160x70mm) | Approx. 10.2"x10.2"x2.8" (260x260x70mm) |
| Gel Dimension (WxL) | Approx. 3.9"x3.9" (100x100mm) | Approx. 7.9"x7.9" (200x200mm) |
| Maximum Sample | 1 Blot, 80x85mm | 1 Blot, 160x175mm 2 Blots, 160x85mm 4 Blots, 80x85mm |
| Buffer Volume | 5ml | 20ml |
| Accomodate Gel Thickness | 0.25-10mm | |
| Economic Transfer | Yes | |
| Construction | Durable, leak proof environment for complete safety and long life | |

Ordering Information

| Cat. No. | Product Description |
|----------|---------------------------------|
| MSD10 | Semi Dry Mini, 100x100mm System |
| MSD20 | Semi Dry Midi, 200x200mm System |

Life Sciences Research

Liquid Handling

Major Science offers customers high-quality pipettes with a combination of accuracy, comfort, reliability and ergonomics. The cutting-edge and innovative design of MS pipettes provide a great user experience.

▣ MS Pipette

40-41

MS Pipette



MS Pipette

MSP series



MS Pipette is a reliable instrument that can perform accurate, contamination-free experiment with ease.

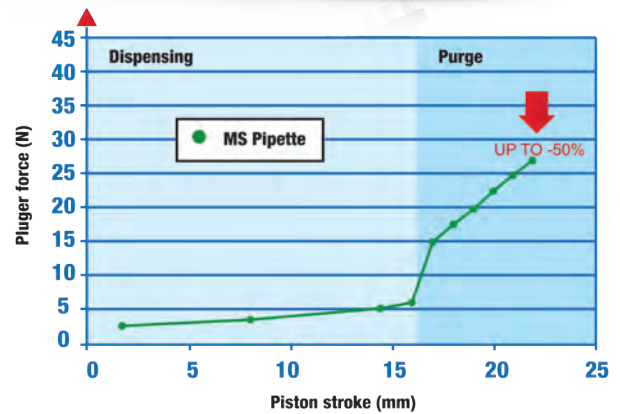
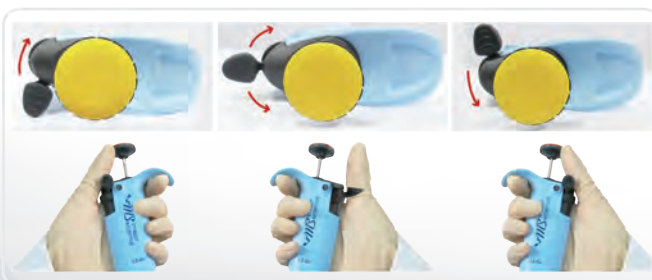
Based on the latest innovation in terms of ergonomics and comfort, the main body is designed for easy operation by either right or left hand, big or small hand. The new piston mechanism design requires low pipetting force and low maintenance frequency. The robust construction is fully autoclavable and chemical resistant, which provides user contamination-free and safe experiment environment.

On site calibration is easy to perform. In addition, MS Pipette is compatible with a majority of brands of tips on the market. With ISO certification, Major Science provides customers with the "Best Value" combination of quality, features, service and price. All accessory parts are available through Major Science service centers.



Pipette Stand

- Light weight
- Soft spring system for extremely low pipetting forces
- Controlled volume setting to prevent accidental volume changes
- Different color coded push button for different volume
- Contoured shape: fits either small or large hands
- Large pushbutton, rounded and freely rotating
- Finger hook: takes the weight, for a more relaxed grip
- 3-position tip ejector button (left/right handed users)
- Easy on site calibration (calibration key included)
- High accuracy and precision
- A unique serial number
- UV resistance even under prolonged exposure
- Fully autoclavable (121°C/0.1MPa/20 min)



- Conception of new seals and lighter springs and use of high quality lubricant:
- Reduce pipetting and purge forces by 50%
 - Have an easy glide of the piston
 - Maintain an adequate ratio (~1/3) between pipetting forces and purge forces to feel confident in results
 - Maintain quality and robustness of our pipetting system.

Ordering Information

| Cat. No | Description |
|------------|--------------------------------------------|
| MSP-2 | MS pipette, variable volume 0.2~2µl |
| MSP-10 | MS pipette, variable volume 1~10µl |
| MSP-20 | MS pipette, variable volume 2~20µl |
| MSP-100 | MS pipette, variable volume 10~100µl |
| MSP-200 | MS pipette, variable volume 20~200µl |
| MSP-1000 | MS pipette, variable volume 100~1000µl |
| MSP-5000 | MS pipette, variable volume 500~5000µl |
| MSP-10000 | MS pipette, variable volume 1000~10000µl |
| MSP-8X10 | MS 8-ch pipette, variable volume 0.5~10µl |
| MSP-8X20 | MS 8-ch pipette, variable volume 2~20µl |
| MSP-8X200 | MS 8-ch pipette, variable volume 20~200µl |
| MSP-8X300 | MS 8-ch pipette, variable volume 20~300µl |
| MSP-12X10 | MS 12-ch pipette, variable volume 0.5~10µl |
| MSP-12X20 | MS 12-ch pipette, variable volume 2~20µl |
| MSP-12X200 | MS 12-ch pipette, variable volume 20~200µl |
| MSP-12X300 | MS 12-ch pipette, variable volume 20~300µl |
| MSP-ST03 | Pipette Stand |

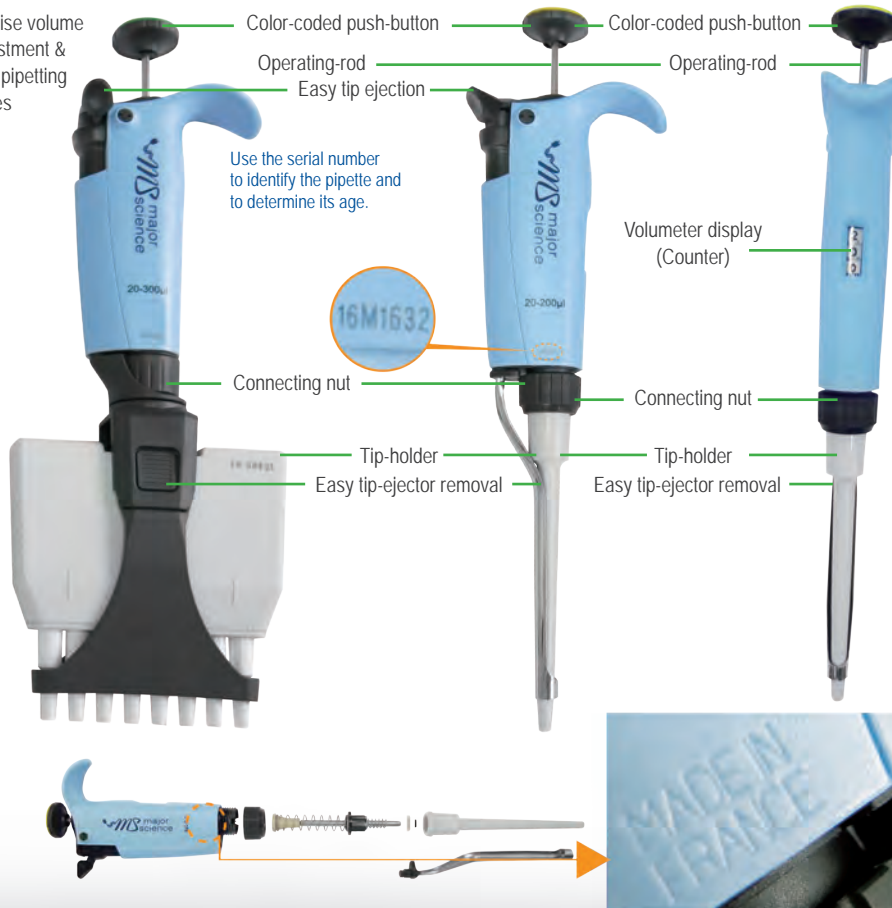
Single Channel Models

| Cat No. | Volume (µL) | SPECIFICATIONS | | | | ISO 8655 | | | |
|-----------|-------------|------------------|--------|--------------|-------|------------------|--------|--------------|-------|
| | | Systematic Error | | Random Error | | Systematic Error | | Random Error | |
| | | (µL) | (%) | (µL) | (%) | (µL) | (%) | (µL) | (%) |
| MSP-2 | 0.2 | ±0.026 | ±13.2% | MSP-2 | 0.2 | ±0.026 | ±13.2% | MSP-2 | 0.2 |
| | 2 | ±0.033 | ±1.7% | | 2 | ±0.033 | ±1.7% | | 2 |
| MSP-10 | 1 | ±0.028 | ±2.8% | MSP-10 | 1 | ±0.028 | ±2.8% | MSP-10 | 1 |
| | 10 | ±0.110 | ±1.1% | | 10 | ±0.110 | ±1.1% | | 10 |
| MSP-20 | 2 | ±0.11 | ±5.5% | MSP-20 | 2 | ±0.11 | ±5.5% | MSP-20 | 2 |
| | 20 | ±0.20 | ±1.0% | | 20 | ±0.20 | ±1.0% | | 20 |
| MSP-100 | 10 | ±0.39 | ±3.9% | MSP-100 | 10 | ±0.39 | ±3.9% | MSP-100 | 10 |
| | 100 | ±0.80 | ±0.8% | | 100 | ±0.80 | ±0.8% | | 100 |
| MSP-200 | 20 | ±0.55 | ±2.8% | MSP-200 | 20 | ±0.55 | ±2.8% | MSP-200 | 20 |
| | 200 | ±1.60 | ±0.8% | | 200 | ±1.60 | ±0.8% | | 200 |
| MSP-1000 | 100 | ±3.3 | ±3.3% | MSP-1000 | 100 | ±3.3 | ±3.3% | MSP-1000 | 100 |
| | 1000 | ±0.8 | ±8.0% | | 1000 | ±0.8 | ±8.0% | | 1000 |
| MSP-5000 | 500 | ±13 | ±2.6% | MSP-5000 | 500 | ±13 | ±2.6% | MSP-5000 | 500 |
| | 5000 | ±33 | ±0.7% | | 5000 | ±33 | ±0.7% | | 5000 |
| MSP-10000 | 1000 | ±33 | ±3.3% | MSP-10000 | 1000 | ±33 | ±3.3% | MSP-10000 | 1000 |
| | 10000 | ±60 | ±0.6% | | 10000 | ±60 | ±0.6% | | 10000 |

Multichannel Models

| | | | | | | | | | |
|------------|-----|-------|--------|------------|-----|-------|--------|------------|-----|
| MSP-8X10 | 0.5 | ±0.09 | ±17.6% | MSP-8X10 | 0.5 | ±0.09 | ±17.6% | MSP-8X10 | 0.5 |
| MSP-8X20 | 2 | ±0.11 | ±5.5% | MSP-8X20 | 2 | ±0.11 | ±5.5% | MSP-8X20 | 2 |
| MSP-8X200 | 20 | ±0.6 | ±2.8% | MSP-8X200 | 20 | ±0.6 | ±2.8% | MSP-8X200 | 20 |
| MSP-8X300 | 20 | ±1.1 | ±3.7% | MSP-8X300 | 20 | ±1.1 | ±3.7% | MSP-8X300 | 20 |
| MSP-12X10 | 10 | ±0.22 | ±2.2% | MSP-12X10 | 10 | ±0.22 | ±2.2% | MSP-12X10 | 10 |
| MSP-12X20 | 20 | ±0.40 | ±2.0% | MSP-12X20 | 20 | ±0.40 | ±2.0% | MSP-12X20 | 20 |
| MSP-12X200 | 200 | ±2.2 | ±1.1% | MSP-12X200 | 200 | ±2.2 | ±1.1% | MSP-12X200 | 200 |
| MSP-12X300 | 300 | ±3.3 | ±1.1% | MSP-12X300 | 300 | ±3.3 | ±1.1% | MSP-12X300 | 300 |

Precise volume adjustment & light pipetting forces



MS Pipette

SINGLE CHANNEL
is available in 8 models and covers the volume range from 0.2µL to 10mL

MS Pipette

MULTI CHANNEL
is available in 8 models and covers the volume range from 0.5µL to 300µL.

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Life Sciences Research

Gel Documentation System

Major Science offers a wide range of Gel Documentation System specifically designed to fit researchers' specifications and budgets. Gel Documentation System are offered for a variety of applications depending on the system and camera configurations. This product line also includes UV Transilluminators and UV / Blue light transilluminators for all your imaging needs. All products feature user-friendly operation, compact size and outstanding functions.

More blue light technology instruments are introduced to the category of blue light, [Page 54](#)

▣ Imaging System 43-49

- SmartView Pro Imager
- SmartView Pro Imager, CMOS
- SmartView Simple Imager System
- Digimage System

▣ Transilluminator 50-53

- SmartView Transilluminator
- UV Transilluminator



*Please visit our website at www.majorsci.com for more product selection and detailed information.

SmartView Pro Imager

UVCI-2300

MS UVCI-2300, the truly standalone Gel Imaging System, delivers incredible image and sharpness with the power of an exceptional close-up monochrome 2.0 mega-pixel CCD camera, and get you ready for beautifully discriminable DNA/Protein gel images in the spaciouly intuitive 10.4" interface with color touch-screen. Our innovative systems are expandable with white and blue light plates coupled with the versatility of camera filters, no matter it's an EtBr or EtBr-free operations, simply tab to view. Many post-imaging features like drawer-type platform and UV protection shield are added to your convenience for gel excision.

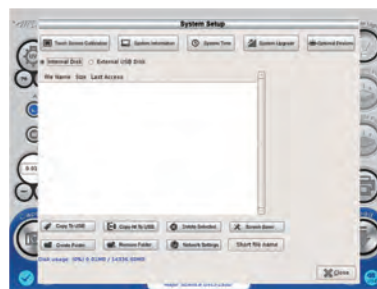


UVCI-2300

2.0 MP CCD Camera



Control Interface



System setup



Default setting

Features

- Standalone gel doc system with high-quality monochrome CCD
- Exchangeable emission Filters provide for instant visualization
- Intuitive 10.4" interface with color touch-screen
- Zoom-able lens for proper picture size
- Movable platform for gel excision with UV-protection shield
- Automatic UV shut off mechanism
- Optional trans white light and blue light plates



UV light protection warning

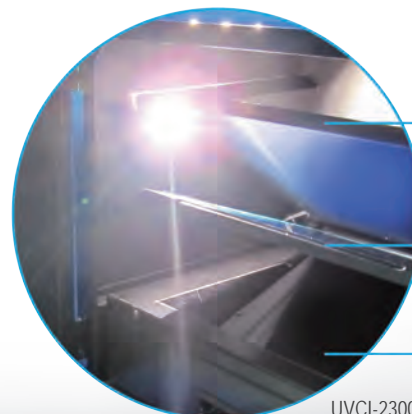


Batch file management



Blue light plate

White light plate



White Light Plate (Flip type)

Blue Light Plate (Flip type)

UV Transilluminator (Drawer type)

UVCI-2300

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Specifications



UVCI-2300-EB



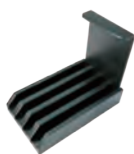
UVCI-2300-SG



UVCI-2300-F4



UVCI-2313



UVCI-2314



UVCI-2300-BL



UVCI-2300-WL



MJC-8-STYLUS-00000



CI-CL55+1

| Model | SmartView Pro 2300 |
|----------------------------------------|---------------------------------------------------------------------------------|
| Cat. No. | UVCI-2300 |
| Camera | 1/1.8" interline UXGA monochrome progressive 2.0MP CCD |
| Pixels Size | 4.4µm x 4.4µm |
| Lens (Camera) | F1.2, 12.5 – 75mm (with one +1 close-up lens), 6X zoom lens, manual |
| Camera Video Output | 12bit |
| Filter (Camera) *Ordered Separately | Optical EtBr Filter / Optical SYBR Green Filter / Orange Amber Filter |
| Image Storage | Built-in 14GB Memory (3000 tiff images storage) and USB flash |
| Cabinet | Pull out, sliding transilluminator |
| Field Of View (WxL) | Maximum field of view 10.2"x8.3" (260x210mm) |
| Dimension (WxLxH) | Approx. 16.1"x16.7"x35.8" (410x425x910mm) |
| Weight | Approx. 62.8lbs. (28.5kg) |
| Display | 10.4" color touch screen, 800x600 |
| Viewing Window | Built-in UV viewing window |
| Window Filter | Amber Filter embedded in viewing window (580nm) |
| Light Source | Built-in drawer type UV Transilluminator 312(302)nm build-in LED white light |
| Optional Accessory | White Light Plate (power built-in) Blue light plate (power built-in) 470nm |
| Saved Image | Max. 16bit |
| Grayscale | 12bit, 0-4095 gray levels |
| Safety | CE |
| Rated Voltage | 100-240V~, 50/60Hz |

*MS 1D Analysis Software (MBE-IMG-SW) is included in for image analysis only.

Ordering Information

| Cat. No. | Product Description |
|-----------|----------------------------------------------------|
| UVCI-2300 | SmartView Pro 2300 Imager System, UV light version |

*Filters are necessary part for Gel Documentation System.

*All filters have to be ordered separately and discuss with local dealer before order.

Accessories

| Cat. No. | Product Description |
|--------------------|----------------------------------------------------------------|
| UVCI-2300-EB | SmartView EtBr Filter, 610nm (for UV) |
| UVCI-2300-SG | SmartView SYBR Green Filter, 520nm (for UV) |
| UVCI-2300-F4 | SmartView Amber Filter, 580nm (for blue light) |
| UVCI-2313 | SmartView Pro UV Protection Shield |
| UVCI-2314 | SmartView Pro Lens Filter Stand, can hold up to 4 lens filters |
| UVCI-2300-BL | Blue Light Plate |
| UVCI-2300-WL | White Light Plate 210x260mm |
| MJC-8-STYLUS-00000 | Stylus Pen |
| CI-CL55+1 | 55mm Close up lens +1 for CCD Image System |



Viewing via window



Viewing via screen



Viewing window
(Amber filter, 580nm)

SmartView Pro Imager, CMOS

FC CE

UVCI-1100 series

The SmartView Pro 1100 provides the basic feature and standard operation. All important features such as safety UV door, UV safety-cut-off switch function, 1D analysis software and are included as standard. 1D analysis software can be used for DNA/RNA gels and SDS page images observation and capture. Moreover, it can be used as an image analysis software for DNA/RNA gels and dot blotting. Blue light module, white light plate and optical and amber filters are available for a variety of applications. Enjoy the most compact CMOS imaging system for all of your laboratory work.



PC is not included

UVCI-1100



5.0 MP Monochrome Camera



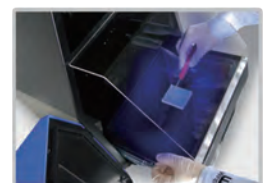
White Light Plate for protein analysis

MS 1D Analysis Software

The software interface includes several key components:

- Load image:** A window for loading and processing captured images.
- Tool bar:** A set of icons for navigating and manipulating the image.
- Dots:** A window displaying a grid of detected spots or bands.
- Analysis:** A window showing a detailed 1D gel image with a corresponding data table on the right side.

| Segment ID | Intensity | Center |
|------------|-----------|--------|
| Segment 01 | 128.0 | |
| Segment 02 | 97.29 | |
| Segment 03 | 92.84 | |
| Segment 04 | 12.766 | |
| Segment 05 | 107.62 | |
| Segment 06 | 276.59 | |
| Segment 07 | 144.53 | |
| Segment 08 | 128.87 | |
| Segment 09 | 375.15 | |
| Segment 10 | 239.72 | |
| Segment 11 | 27.645 | |
| Segment 12 | 147.2 | |



Easily gel cutting design with UV



Viewing window (Amber filter, 580nm)



Features

- High resolution 5.0 megapixel monochrome camera (UVCI-1100)
- PC integration with real time image
- Capture/Analysis software included
- Pull out UV Transilluminator for easy gel cutting
- Easy installation, ready to use right out of the box
- One touch image capture
- Variety of optional accessories available
- UV safety cut-off switch when door is open
- CE and FCC certification

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Specifications

| Model | SmartView Pro 1100 |
|-------------------------------------|---------------------------------------------------------------------------------------------|
| Cat. No. | UVCI-1100 |
| UV Light | Built-in drawer type UV Transilluminator 312(302)nm |
| Camera | 1/2.5" 5M Pixel Monochrome sensor |
| Pixels Size | 2.2µmx2.2µm |
| Lens (Camera) | 6mm, F1.2 |
| Camera Video Output | 12-bit |
| Filter (Camera) *Ordered separately | Optical EtBr Filter / Optical SYBR Green Filter / Yellow Amber Filter / Orange Amber Filter |
| Image Storage | PC |
| Software Support | Window 10 / 8 / 7 (64bit & 32bit) / XP / Vista |
| Cabinet | Pull out, sliding transilluminator |
| Field Of View (WxL) | Approx. 10.2"x8.3" (260x210mm) |
| Dimension (WxLxH) | Approx. 16.1"x15.9"x22.4" (410x405x570mm) |
| Weight | Approx. 54lbs. (24.5kg) |
| Display | LED indicator light |
| Viewing Window | Built-in UV viewing window |
| Window Filter | Built-in Viewing Window Amber Filter 560nm |
| Light | White light (standard) |
| Optional Accessory | White Light Plate (power built-in) |
| | Blue light (power built-in) 470nm |
| Safety | CE, FCC |
| PC Connection | USB port |
| 1 D Analysis Software | Cat. No. MBE-IMG-SW included |
| Saved Image | BMP/JPEG/PNG/TIFF, 8 bit; PNG/TIFF, 16 bit |
| Rated Voltage | 100-240V~, 50/60Hz, 2A |

* iPad and PC is not included.

* MS 1D Analysis Software (MBE-IMG-SW) is included in UVCI-1100 for image capture and analysis .

Ordering Information

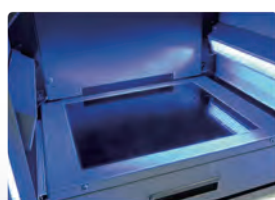
| Cat. No. | Product Description |
|-----------|-------------------------------------------------------------------------|
| UVCI-1100 | SmartView Pro 1100 Imager System, standard version |
| UVCI-1101 | SmartView Pro 1100 Imager System, standard version, high UV performance |

*Filters are necessary part for Gel Documentation System.

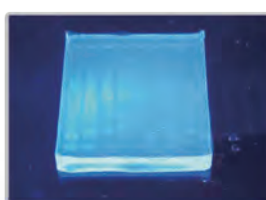
*All filters have to be ordered separately and discuss with local dealer before order.

Accessories

| Cat. No. | Product Description |
|--------------|--------------------------------------------------------------------|
| UVCI-1000-WL | White Light Plate for SmartView Pro Imager System |
| UVCI-1000-BL | Blue Light Module for SmartView Pro Imager System |
| UVCI-1100-EB | SmartView EtBr Filter, 610nm (for UV) |
| UVCI-1100-SG | SmartView SYBR Green Filter, 520nm (for UV) |
| UVCI-1100-F3 | SmartView Amber Filter 560nm |
| UVCI-1100-F4 | SmartView Amber Filter 580nm |
| UVCI-1000-F1 | Viewing window Amber filter, 560nm for SmartView Pro Imager System |
| UVCI-1003 | SmartView Pro UV Protection Shield |
| UVCI-1004 | SmartView Pro Lens Filter Stand, can hold up to 4 lens filters |
| MBE-G-Y1 | Amber Filter Viewing Glasses, 560 nm (optional) |



Epi-blue light for optional light source



Optional blue light device



Sliding transilluminator

SmartView Simple Imager System

MUV-IMG-CA

Major Science offers the SmartView Simple Imager System for your UV or blue light Transilluminator. This unit is designed extremely light in weight and compact in size.

For any lab with limited budget and lab space, the SmartView Simple Imager System is definitely the choice of selection. It is compatible with most transilluminators on the market. (for any maximum viewing size less than 260x210mm)

The digital camera model gives an impressive resolution of 24.1 megapixels, and provides you a PC-free operation environment with high mobility.

Features

- Extremely light weight and compact in size
- Effective Pixels Approx. 24.1 megapixels (Total Pixels Approx. 25.8 megapixels)
- Can be operated PC free
- Optical filters available upon ordering (EtBr, SYBR, and 580nm Amber filter)

Specifications

| Camera spec. | |
|-------------------------------|----------------------------------------------------------------------------|
| Camera Type | 24.1MP digital camera, Wi-Fi function |
| Effective Pixels | Approx. 24.2 megapixels (Total Pixels Approx. 25.8 megapixels) |
| Sensor | 22.3 x 14.9mm CMOS sensor |
| Max. Aperture | f/3.5-6.3 (IS STM Lens) |
| Shutter Speed | 1/4000 - 30sec. (available range varies by shooting mode) |
| Storage Media | SD memory card, Wi-Fi to PC, Smartphone or Tablet |
| Computer Interface | Hi Speed USB (Micro), HDMI(Micro), WiFi connection |
| Video Out | Full HD / HD / MP4 / 4K |
| Image Resolution | (3:2)6000x4000 |
| Lens | 35mm film equivalent focal length, approx. 1.6 times the lens focal length |
| File Format | Designed rule for Camera File system 2.0 |
| Data Type | JPEG, RAW(CR3 14 bit) |
| | RAW+JPEG simultaneous recording possible |
| Filter (For Camera, Optional) | "EtBr filter / SYBR Green filter / Amber Filter *ordered separately" |
| Darkroom | |
| Dimension (WxLxH) | Approx. 9.3"x12.5"x16.5" (236x317x420mm) |
| Material | Acrylonitrile Butadiene Styrene (ABS) |
| Weight | Approx. 3.1lbs. (1.4Kg) |
| Camera Adapter Material | Aluminum |

* iPad and PC not included.

Accessories

| Cat. No. | Product Description |
|------------------------------------------------|-------------------------|
| Filter (for camera) *ordered separately | |
| DI-EB49 | EtBr filter, 49mm |
| DI-SG49 | SYBR Green filter, 49mm |
| DI-AM49 | Amber filter, 49mm |

Ordering Information

| Cat. No. | Description |
|---------------|-----------------------------------------------------------------|
| MUV-IMG-CA | SmartView Simple 310 Imager system, with 24.1 MP digital camera |
| MUV-IMG-CA-01 | SmartView 310 holder kit, includes hood and camera adapter only |

*Filters are necessary part for Gel Documentation System.

*All filters have to be ordered separately and discuss with local dealer before order.



MUV-IMG-CA

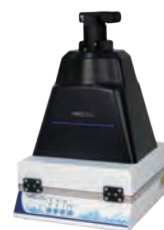


MUV-IMG-CA

MUV-IMG-CA-01



MUV-IMG-CM + MUV series



MUV-IMG-CM + MUVB series

DI series

For DI series

The Digimage System is a simple, compact gel documentation system with a rear digital control panel. It contains a digital camera with a superb resolution of 24.1 megapixels. The image is viewed from a large 8" TFT colorful screen with monitor purpose only, for a lab with limited space and low budget requirements, the Digimage System is definitely your top choice since it can be operated without computer. A variety of images can be captured including: agarose and other fluorescent gels, colorimetric gels, auto radiography film, and blotting membranes. A safety switch is equipped to turn off the UV Transilluminator automatically when the front door is opened. Files can be saved in a variety of formats, including RAW format, for transfer to a computer for storage and analysis.

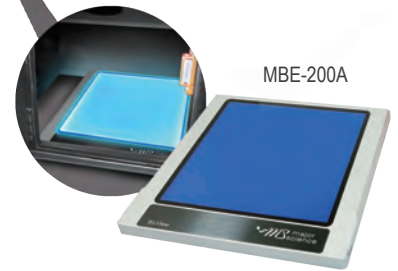


DI-01



Features

- Effective Pixels Approx. 24.1 megapixels (Total Pixels Approx. 25.8 megapixels)
- High resolution 8" TFT screen
- Digital control panel
- Compact chamber and lightweight
- Can be operated PC free
- Inner white light LED at two sides
- Safety door switch
- Optional gel analysis software package available
- Universal rated voltage: 100-240V~



MBE-200A



DI-HD

DI-01 is offered as a complete system for the user to perform image capture, including:

- 1 x Digimage System hood
- 1 x Digital camera
- 1 x DC coupler
- 1 x 8" color TFT screen
- 1 x Memory card
- 1 x Memory card reader



High resolution 8" TFT screen



Wi-Fi function

PC is not included

Specifications

| Camera Spec. | |
|-------------------------------|------------------------------------------------------------------------------------------------------------------|
| Camera Type | 24.1MP digital camera, Wi-Fi function |
| Effective Pixels | Approx. 24.1megapixels (Total Pixels Approx. 25.8 megapixels) |
| Sensor | 22.3 x 14.9mm CMOS sensor |
| Max. Aperture | f/3.5-6.3 (IS STM Lens) |
| Shutter Speed | 30 - 1/4000 sec (1/3 stop increments), Bulb (Total shutter speed range. Available range varies by shooting mode) |
| Storage Media | SD memory card, Wi-Fi to PC, Smartphone or Tablet |
| Computer Interface | Hi Speed USB (Micro), HDMI(Micro), WiFi connection |
| Video Out | Full HD / HD / MP4 / 4K |
| Image Resolution | (3:2)6000x4000 |
| Lens | 35mm film equivalent to 1.6x the focal length |
| File Format | Designed rule for Camera File system 2.0 |
| Data Type | JPEG, RAW(CR3 14 bit) RAW+JPEG simultaneous recording possible |
| Filter (For Camera, Optional) | "EtBr filter / SYBR Green filter / Amber Filter *ordered separately" |
| Monitor | |
| Type | 8" TFT LCD Monitor |
| Resolution | 1024x600 pixels |
| Brightness | 300cd / m ² |
| Constant Ratio | 700:1 |
| Display Mode | NTSC / PAL auto switch |

| DI-01 Spec. | |
|--------------------|-------------------------------------------|
| Multi-Power Source | For camera, Inner light lamp, TFT monitor |
| Inner White Light | 2 white LED, 3 watt/LED |
| Safety Device | Safety door switch |
| Dimension (WxLxH) | 11.4"x13.3"x15.9" (290x339x403mm) |
| Material | Painted metal |
| Rated Voltage | 110/220V~, 50/60Hz, 1.6A |
| Weight | Approx. 12.9lb (5.8kg) |
| Camera Adapter | Aluminum |
| DI Darkroom | |
| Dimension (WxLxH) | 11.4"x13.3"x15.7" (290x339x398mm) |
| Weight | Approx. 11.9lb (5.4kg) |

Ordering Information

| Cat. No. | Description |
|----------|-----------------------------------------------------|
| DI-01 | Digimage System with 24.1 megapixels digital camera |
| DI-HD | Digimage System without digital camera |

Accessories

| Cat. No. | Description |
|-----------------------------------------|----------------------------------------|
| DI-DR-E12 | DC coupler |
| DI-WLA3-110/220 | White Light Table 297x400mm (110/220V) |
| DI-WLA4-110/220 | White Light Table 210x297mm (110/220V) |
| DI-WLA6-110/220 | White Light Table 105x150mm (110/220V) |
| Filter (for camera) *ordered separately | |
| DI-EB49 | EtBr filter, 49mm |
| DI-SG49 | SYBR Green filter, 49mm |
| DI-AM49 | Amber filter, 49mm |

*Filters are necessary part for Gel Documentation System.

*All filters have to be ordered separately and discuss with local dealer before order.



DI-01 + MUV series



DI-01 + MUVB series



DI-DR-E12



DI-WLA3 (297x400mm)
DI-WLA4 (210x297mm)
DI-WLA6 (105x150mm)



DI-EB49



DI-SG49



DI-AM49

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

SmartView Transilluminator

MUVB series

SmartView Transilluminator is the next illuminator generation for your lab. Combining the blue and UV light, this equipment allows you to work either using blue or UV light with your samples.

The Epi-Blue light is proportionally emitted on samples to give excellent fluorescence for the examination of nucleic acid bands. As the single or dual wavelength UV light allows the induction of stronger signals.

Moreover, since blue light is within visible light spectrum, it easily provides just enough energy to induce the signals without endangering operator safety.

In addition, this two-in-one system provides you additional convenience for the work on any sample with UV light or using blue light simultaneously without moving your gel back and forth. The SmartView Transilluminator is the ultimate source for any of your lab practice.

Features

- Built-in blue light LED module with UV light
- Single or dual wavelength models are available for different application purposes
- Adjustable UV protection cover for better viewing angle efficiency
- Industry leading long life UV Filter
- Fast start up without flickering to instantaneous tube illumination
- High/Low intensity switch to minimize DNA degradation
- High efficiency reflector provides optimum use of UV light



MUVB



Dye Application Guide

| Cat. No. | UV Light | Blue Light |
|---------------------------|----------|------------|
| SYBR® Green I (DNA) | √ | √√ |
| SYBR® Green II (RNA) | √ | √√ |
| SYBR® Gold | √ | √√ |
| Midori Green Direct | √ | √√ |
| Hydra Green™ Safe DNA Dye | √ | √√ |
| HD Green™ DNA Stain | √ | √√ |
| SafeView DNA Stain | √√ | √ |
| SYBR® Safe | √ | √ |
| Midori Green | √ | √ |
| Midori Green Advanced | √ | √ |
| Serva DNA Stain Clear G | √√ | √ |
| GelGreen™ | √ | √ |
| GelRed™ | √√ | |
| Ethidium Bromide | √√ | |
| HealthView™ | √√ | |

√√ Excellent

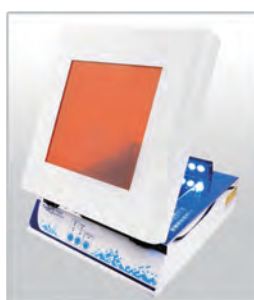
√ Good



Built-in blue LED module provides flexibility in DNA stain selection



UV light applied



Blue light applied



Removable amber Filter

Specifications

| Model | SmartView |
|-------------------------------------------|----------------------------------------------------------------------------------|
| Filter Size (WxL) | Approx. 8.3"x8.3" (210x210mm) |
| Intensity Switch | High (100%) / Low (70%) intensity switch for single wavelength model |
| Fast Response | High quality starter to light up the tubes instantaneously and cause no blinking |
| Blue Light Source | 1W x 18 lamps |
| UV Resistance Plastic Cover (WxL) | Approx. 8.9"x10.2" (225x260mm) (Transparent) |
| Blue Light Resistance Plastic Cover (WxL) | Approx. 8.9"x10.2" (225x260mm) (Orange) |
| Dimension (WxLxH) | Approx. 13.4"x11.3"x6.9" (340x286x176mm) |
| Rated Voltage | 100-230V~, 50/60Hz, 2A |
| Weight | Approx. 24.7lb (11.2kg) |

| Model | Cat. No. | Type | Wavelength | UV Light Source (1tube / 8W) |
|---------------|----------|--------|---------------------------------------|------------------------------|
| SmartView 111 | MUVB-111 | Single | 312(302)nm | 5 tubes |
| SmartView 112 | MUVB-112 | Single | 254nm | 5 tubes |
| SmartView 113 | MUVB-113 | Single | 365nm | 5 tubes |
| SmartView 114 | MUVB-114 | Single | 312(302)nm (high performance) | 5 tubes |
| SmartView 121 | MUVB-121 | Dual | 254nm / 312(302)nm | 4 tubes / 5 tubes |
| SmartView 122 | MUVB-122 | Dual | 254nm / 365nm | 5 tubes / 4 tubes |
| SmartView 123 | MUVB-123 | Dual | 254nm / 312(302)nm (high performance) | 4 tubes / 5 tubes |

Ordering Information

| Cat. No. | Product Description |
|----------|-------------------------------------------------------------------------------------------------------------------|
| MUVB-111 | SmartView 111 Transilluminator with blue light and built-in UV, single wavelength 312(302)nm |
| MUVB-112 | SmartView 112 Transilluminator with blue light and built-in UV, single wavelength 254 nm |
| MUVB-113 | SmartView 113 Transilluminator with blue light and built-in UV, single wavelength 365 nm |
| MUVB-114 | SmartView 114 Transilluminator with blue light and built-in UV, single wavelength 312(302) nm, high performance |
| MUVB-121 | SmartView 121 Transilluminator with blue light and built-in UV, dual wavelength 254/312(302)nm |
| MUVB-122 | SmartView 122 Transilluminator with blue light and built-in UV, dual wavelength 254/365nm |
| MUVB-123 | SmartView 123 Transilluminator with blue light and built-in UV, dual wavelength 254/312 (302)nm, high performance |

* For different single wavelength models. please consult with your regional manager.

Accessories

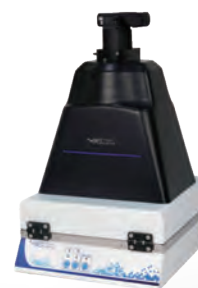
| Cat. No. | Product Description |
|----------|-------------------------------------------------|
| MBE-G-Y1 | Amber Filter Viewing Glasses, 560 nm (optional) |



MBE-G-Y1



MUVB series + DI-01



MUVB series + MUV-IMG-CA

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

UV Transilluminator

MUV series

The bench-top UV Transilluminator series offers the researcher uniform and intense sources of ultraviolet light (radiation) with a compact footprint. Their special design emits either one or dual intensity excitation UV wavelengths for back-illumination of transparent fluorescent materials. 254nm, 312 (302)nm, 365nm, 254 & 365nm, and 254 & 312 (302)nm modes are available for different applications. There are two choices of filter size viewing dimensions, 260x210mm and 210x210mm for different user requirements. The 365nm mode is offered for easy view of gels under long wave for extended periods of time avoiding photo nicking damage. The 254nm mode is used to irradiate samples. The 312 (302)nm mode is suggested for general gel operating. The single wavelength modes have a high intensity / low intensity switch equipped. All bench-top transilluminator modes are compact, lightweight and economical.

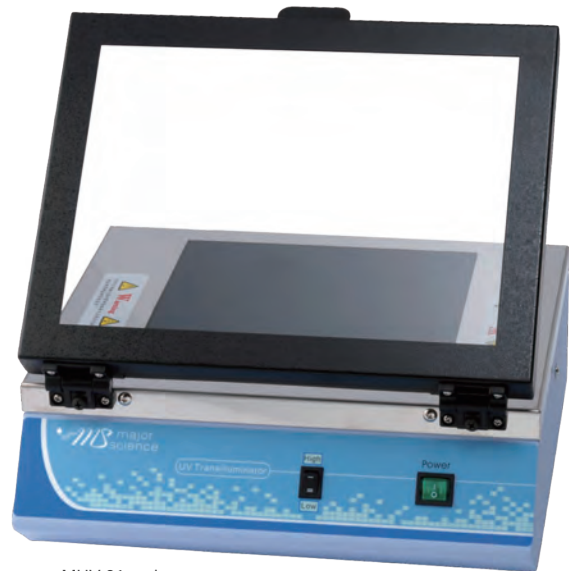
A high performance model, 312 (302)nm UV Transilluminator with a strong lighting and longer life time tubes, was introduced for demanding requirements.



FC CE



Adjustable UV protection cover



MUV-21 series



MUV-26 series

Features

- 254nm or 312 (302)nm or 365nm or 254/365nm or 254/312 (302)nm modes available
- 260x210mm or 210x210mm view dimension
- High intensity / low intensity switch for single wavelength model
- Adjustable UV protection cover for better viewing angle efficiency
- High performance models available
- Long life time filter

Specification

| Model | MUV26 series | MUV21 series |
|----------------------------------|---------------------------------------------------------------------------------------|-------------------------------|
| Wavelength | 254 / 312 (302) / 365nm | |
| Filter Size | Approx. 10.2"x8.3" (260x210mm) | Approx. 8.3"x8.3" (210x210mm) |
| Light Source | 6 tubes, 8W/tube | |
| Filter | Long life filter | |
| | High efficiency reflector | |
| Intensity Switch | High (100%)/Low (70%) intensity switch for single wavelength mode | |
| Fast Start Up | High quality starter to simultaneously illuminate tubes when switched on and no blink | |
| UV Resistant Plastic Cover (WxL) | Approx. 13"x9.8" (330x250mm) | |
| Dimension (WxLxH) | Approx. 13.4"x11.6"x3.9" (340x295x100mm) | |
| Weight | Approx. 16.5lb (7.5kg) | |
| Rated Voltage | 110V/220V~ | |

Ordering Information

| Cat. No. | Product Description |
|----------------|----------------------------------------------------------------------|
| MUV21-254 | 210x210mm Transilluminator for 254nm |
| MUV21-312 | 210x210mm Transilluminator for 312 (302)nm |
| MUV21-312H | 210x210mm Transilluminator for 312 (302)nm, high performance |
| MUV21-365 | 210x210mm Transilluminator for 365nm |
| MUV21-254/365 | 210x210mm Transilluminator for 254 and 365nm |
| MUV21-254/312 | 210x210mm Transilluminator for 254 and 312 (302)nm |
| MUV21-254/312H | 210x210mm Transilluminator for 254 and 312 (302)nm, high performance |
| MUV26-254 | 260x210mm Transilluminator for 254nm |
| MUV26-312 | 260x210mm Transilluminator for 312 (302)nm |
| MUV26-312H | 260x210mm Transilluminator for 312 (302)nm, high performance |
| MUV26-365 | 260x210mm Transilluminator for 365nm |
| MUV26-254/365 | 260x210mm Transilluminator for 254 and 365nm |
| MUV26-254/312 | 260x210mm Transilluminator for 254 and 312 (302)nm |
| MUV26-254/312H | 260x210mm Transilluminator for 254 and 312 (302)nm, high performance |

Accessories

| Cat. No. | Product Description |
|-----------------|-----------------------------------------------------------------------------------------|
| MUV-T254 | 8W 254nm UV lamp |
| MUV-T312 | 8W 312 (302)nm UV lamp |
| MUV-T365 | 8W 365nm UV lamp |
| MUV-F21-254/365 | 21x21cm Filter for built-in 254/365nm UV Transilluminator (with stainless steel frame) |
| MUV-F21-312 | 21x21cm Filter for built-in 312(302)nm UV Transilluminator (with stainless steel frame) |



MUV series + DI-01



MUV series + MUV-IMG-CM

* All images are for reference only, actual products might differ from the pictures above.
 * Technical specifications subject to change without notice.

Life Sciences Research

Blue Light Technology

Blue light technology allows you to view your DNA/RNA bands without causing photo nicking damage to your samples. The SafeBlue series and BluView Series are designed for wide range of application.

The amazing SafeBlue product series makes use of the intensity of blue light from the side, while the BluView series radiates from below. Both SafeBlue and BlueView series allow you to run your standard electrophoresis experiment with immediate and outstanding results but without compromising your safety and protection.

SafeBlue system comprises the SafeBlue Illuminator, SafeBlue Electrophoresis System and SafeBlue Imager Systems. All three products are completely compatible with each other. Different accessories are also available in case of necessary extensions or replacements. For the BluView system, packages of BluView Transilluminator, Mini Horizontal Gel Electrophoresis System, and power supply are available.



▣ SafeBlue System 55-57

SafeBlue Illuminator Electrophoresis System

▣ Blue Light Illuminator 58-59

BluView Transilluminator

*Please visit our website at www.majorsci.com for more product selection and detailed information.

SafeBlue Illuminator Electrophoresis System

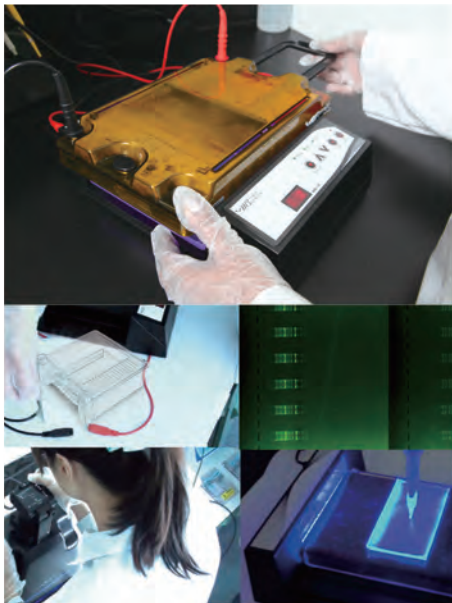
MBE-150
MBE-150-PLUS

For MBE-150

The innovative SafeBlue Illuminator is a unit which combines of a small power supply with a blue light illuminator. The system emits blue LED light which allows you to view your DNA/RNA bands without worrying about harmful UV damage samples. SafeBlue Illuminator could also be used as a simple blue light illuminator to cut your samples from gels.

For MBE-150-PLUS

The SafeBlue Electrophoresis System also uses blue LED light to allow for immediate visualization of DNA/RNA bands while running agarose electrophoresis gel. The complete system comes with three different sizes of gel trays for your convenience of use, 150x70mm, 150x100mm and 150x150mm. The system is RoHS and CE compliant for environmental and safety concerns. Different accessories are also available for user to select.



4 in 1 feature allows you to run as you see in real-time motion

Features

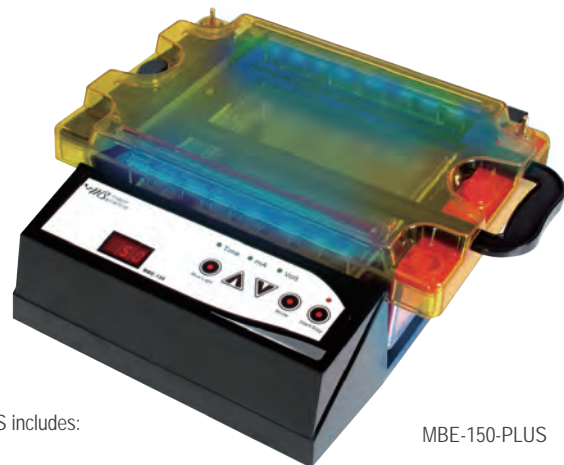
- Innovative - a complete 4-in-1 system (run, view, capture and cut gel) with simple and easy set up on the image capture/analysis software.
- Convenient - run as you see, real time visualization on your DNA/RNA band migration
- Compact - footprint smaller than most UV transilluminator, easy to move and ideal for limited bench top space
- Economical - an inexpensive imager system with digital camera. Multiple accessories are also available to increase experimental efficiency
- Safe - 470nm blue light less invasive than UV light
- Flexible - UV tray adaptors available, compatible with MJ-105A.
- Versatile - support gel trays 150x150mm or smaller
- Optimized performance - SYBR series DNA/RNA stains, Novel Juice and Midori Green series
- Simple - DNA/RNA recovery method



MBE-150

MBE-150 includes:

- 1 x SafeBlue Illuminator
- 1 x Power adaptor
- 1 x Power cord



MBE-150-PLUS

MBE-150-PLUS includes:

- 1 x SafeBlue Illuminator
- 1 x SafeBlue Electrophoresis Tank
- 1 x Filter lid
- 1 x Threaded Black and Red Electrophoresis Cable
- 1 x 150x70mm UV tray
- 1 x 150x100mm UV tray
- 1 x 150x150mm UV tray
- 2 x 20 sample combs (1mm thick)
- 2 x UV tray casting dams
- 1 x SafeBlue electrophoresis gel tank image enhancer film

FC CE

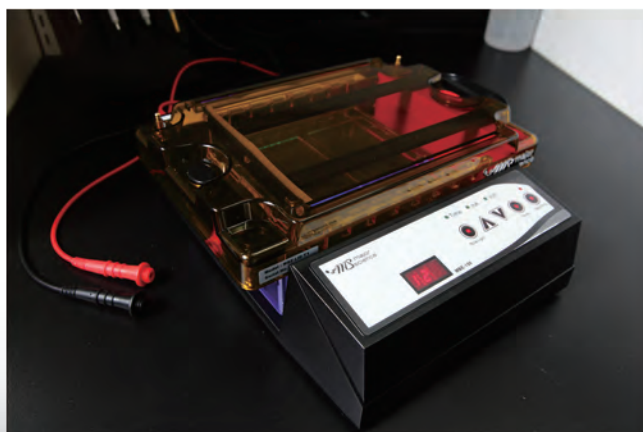


Specification

| | |
|-------------------------|------------------------------------------------------------------------------------------------------------------------|
| Cat. No. | MBE-150 |
| Output Voltage / Inc. | 10-150V / 1V |
| Output Current / Inc. | 10-300mA / 1mA |
| Max. Power | 30W |
| Operating Mode | Constant Voltage or Current |
| Timer | 999 (min) with alarm / Continuous |
| Safety Device | No load detection |
| Crossover | Yes |
| Blue Light Wavelength | 470nm |
| Operating Temperature | Ambient to 40°C |
| Dimension (WxLxH) | Approx. 11.5"x7.9"x3.2" (293x200x80mm) |
| Weight | Approx. 2.4lb (1.1kg) |
| Material | Polycarbonate housing and aluminum base plate |
| Power Adaptor | Input: 100-240VAC, 50/60Hz, 1.4A Output: 15VDC, 4.0A, 60W max. |
| Cat. No. | MBE-TANK |
| Dimension (WxLxH) | Approx. 10.4"x6.9"x3.5" (265x175x90mm) |
| Gel Dimension (WxL) | Approx. 5.9"x2.8" (150x70mm), 5.9"x3.9" (150x100mm), 5.9"x5.9" (150x150mm) |
| Maximum Sample | 70 for 5.9"x2.8" (150x70mm) Tray (2x35 sample combs) |
| | 140 for 5.9"x3.9" (150x100mm) Tray (4x35 sample combs) |
| | 210 for 5.9"x5.9" (150x150mm) Tray (6x35 sample combs) |
| Buffer Volume | 500ml |
| Construction | Acrylic (Injection molded construction) |
| | Durable, leak proof environment for complete safety and long life |
| Cassette Type Electrode | Inexpensive, easy to replace |
| Electrical Safety | Lid can only be fastened in one way |
| | Upon lid removal, power is disconnected from buffer chamber |
| Rapid Casting Gel | Use casting dams |
| Cat. No. | MBE-LID-Y1 |
| Dimension (WxLxH) | Approx. 6.9"x10.6"x1.4" (176x268x35mm) |
| Filter Type | Amber filter (for dyes selection please refer to comparison table for various nucleic acid stain performance)(Page 57) |
| Lid Filter Wiper | Used to remove condensation |
| Material | Polycarbonate |

Ordering Information

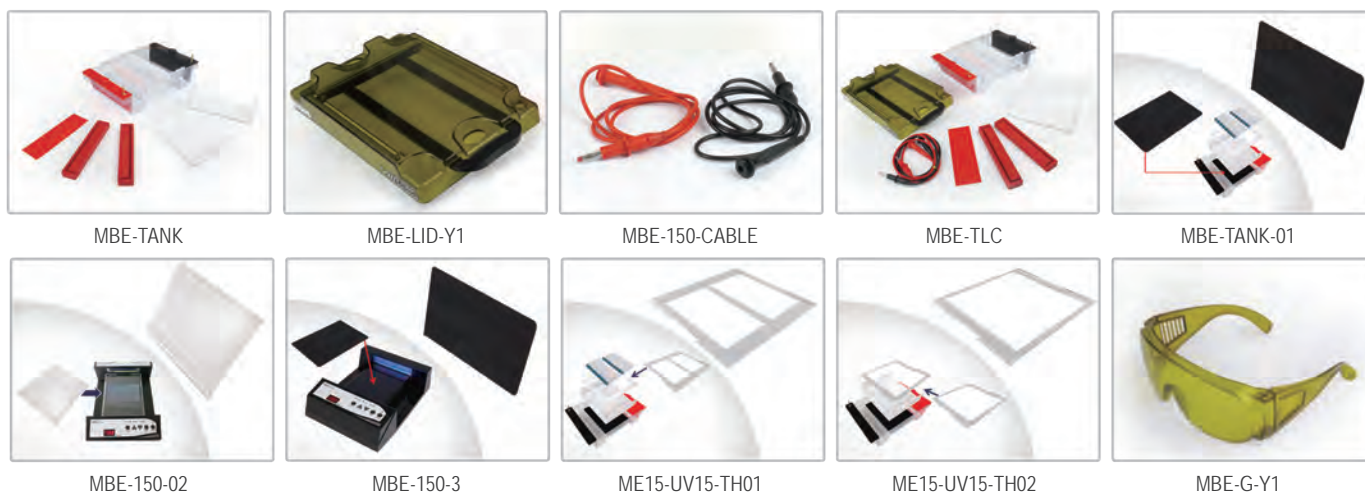
| Cat. No. | Product Description |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| MBE-150 | SafeBlue Illuminator |
| MBE-150-PLUS | SafeBlue Electrophoresis System, including SafeBlue Illuminator, electrophoresis gel tank, amber filter lid, image enhancer film and red/black cable |
| MBE-TLC | Package of MBE-TANK, MBE-LID-Y1, MBE-150-CABLE |



Accessories

| Cat. No. | Product Description |
|----------------|------------------------------------------------------------------------|
| MBE-TANK | ME15 Tank for SafeBlue without Lid and Red/Black Cable |
| MBE-LID-Y1 | MBE-150 Lid,yellow |
| MBE-150-CABLE | Threaded Black and Red Electrophoresis Cable |
| MBE-TANK-01 | 120x155mm, shiny black protective film |
| MBE-150-02 | 165x140x19mm, Acrylics, cutting platform |
| MBE-150-3 | Base unit platform protective film |
| ME15-UV15-TH01 | ME15-UV15 Tray Holder, 2 cuts, cut size 109.5x60.5mm(For MJ-105 Trays) |
| ME15-UV15-TH02 | ME15-UV15 Tray Holder, 1 cuts, cut size 130.5x122.5mm |
| MBE-G-Y1 | Amber filter viewing glasses, 560nm |

* For more information of MBE-IMG-CA, please refer to SafeBlue Imager System.



Comparison table for various nucleic acid stain performance

| Nucleic Acid Stain | Performance | Experimental Protocol | | |
|---------------------------|-------------|-----------------------|---------------|-----------------|
| | | Pre-staining | Post Staining | Sample Staining |
| SYBR® Green I (DNA) | Excellent | √ | √ | √ |
| SYBR® Green II (RNA) | Excellent | | √ | √ |
| SYBR® Gold | Excellent | √ | √ | |
| Midori Green Direct | Excellent | | | √ |
| Hydra Green™ Safe DNA Dye | Excellent | √ | √ | |
| HD Green™ DNA Stain | Excellent | √ | √ | |
| SafeView DNA Stain | Good | √ | | |
| SYBR® Safe | Good | √ | √ | |
| Midori Green | Good | √ | √ | |
| Midori Green Advanced | Good | √ | √ | |
| Serva DNA Stain Clear G | Good | √ | √ | |
| GelGreen™ | Good | √ | √ | |
| GelRed™ | NR | √ | √ | |
| Ethidium Bromide | NR | √ | √ | |
| HealthView™ | NR | √ | | |

NR= Not recommended

MBE-150-PLUS Innovative Electrophoresis System

1. Early detection of running error (run as you see)
2. Prevention for breaking gel- no more gel transferring (no more gloves!!)
3. Time saving gel staining & de-staining
4. Compact in size (no large lab area required)

SafeBlue System

SafeBlue Electrophoresis System

+

SafeBlue Imager System

2 for all

Gel and Sample Preparation

Electrophoresis Running

Sample Observation Image Capture

5 for all

Traditional Method

Gel Electrophoresis System + Power Supply + Shaker + UV Transilluminator + Gel Documentation System

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

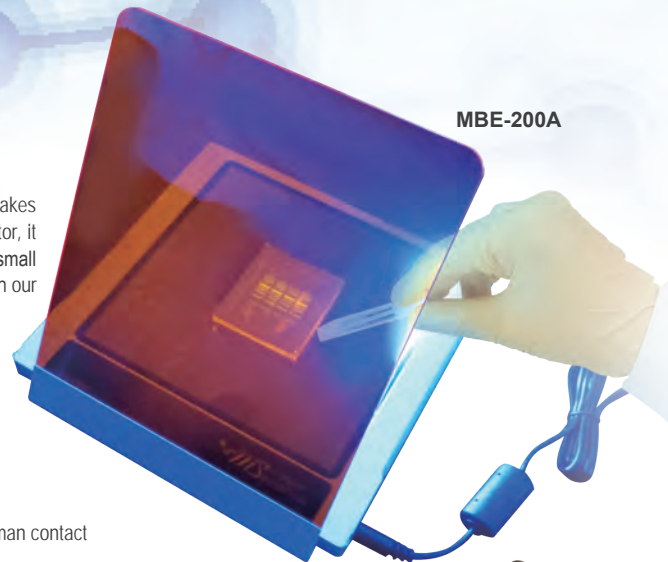
BluView Transilluminator

MBE-200A

The advanced BluView Transilluminator separates its 580nm amber lid from the body, and makes the illuminator thinner and more lightweight. Like the last generation of BluView Transilluminator, it is packed with safe 470nm blue LED light. With imaging size of 153x153mm, you could fit any small midi size gel on top of the transilluminator. The BluView Transilluminator is also compatible with our imaging system such as Digimage System and Smartview Simple System.

Features

- Thinner and more lightweight body
- Easy to carry in between labs
- Aluminum alloy casing design
- Low heat dispersion
- Energy saving product
- 470nm harmless blue light for direct human contact



CE

BluView Transilluminator

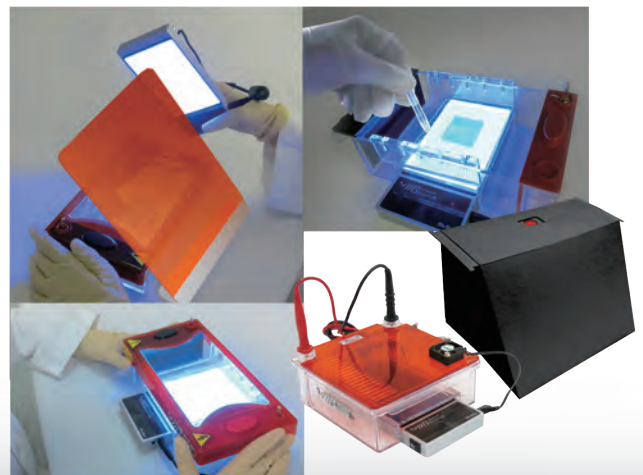
MBE-300

Major Science BluView Transilluminator uses the harmless blue LED instead of aggressive UV lights, and allows you to directly view the experiment result without wearing any UV protection equipment. With its compact size and light weight, the transilluminator occupies little of your lab bench and is easy to be moved from lab to lab.

Package with our Mini Horizontal Gel Electrophoresis System is available to perform real time observation and early mistake detection.

Features

- Portable size and light weight
- Safe 470nm blue light wavelength
- Slim design fits in most of electrophoresis tanks
- Real time observation
- Efficient and early mistake detection
- Ultra high light uniformity



Specification

| Cat. No. | MBE-200A | MBE-300 |
|-------------------------|-----------------------------------------|------------------------------------|
| Dimension (WxLxH) | Approx. 7.9"x7.9"x0.6" (200x200x13.9mm) | Approx. 3.4"x6.7"x1" (86x170x25mm) |
| Viewing Area (WxL) | 6"x6" (153x153mm) | Approx. 4.4"x2.9" (112x74.6mm) |
| Blue Light Source | 15W | 20W |
| Illuminator Base Design | | Flat Bed |
| Blue Light Wavelength | | 470nm |
| Automatic Shutdown | | Approx. 6 min |
| Material | | Aluminum Alloy |
| Power | | DC 12V, 2A |
| Weight | Approx. 1.68lb (760g) | Approx. 0.75lb (338g) |

Ordering Information

| Cat. No. | Product Description |
|----------|-----------------------------------------------------------------------------------------------------------------------------------|
| MBE-200A | Advanced BluView Transilluminator, 470nm, viewing area 153x153 mm, amber filter(MBE-LID-AM580), synthetic paper hood are included |
| MBE-300 | BluView Transilluminator, 470nm, viewing area 112x74.6 mm, amber filter(MBE-LID-AM580) is included |



MBA-300 + MJ-105A + MP-100



MBA-300 + MJ-105A + MINI-300



MBA-300 + MJ-105A

Accessories

| Cat. No. | Product Description |
|---------------|------------------------------------------------------------------------|
| MJ-105A | Transparent Mini Horizontal Electrophoresis System |
| MBE-102 | Lid with 580nm amber filter and evaporation fan for ME10-7-10 |
| MBE-103 | Lid with 580nm amber filter and evaporation fan for ME7-7-10 |
| MBE7-TANK | ME7-7-10 Electrophoresis tank only, without Lid and Red / Black Cable |
| MBE10-TANK | ME10-7-10 Electrophoresis tank only, without Lid and Red / Black Cable |
| MBE-150-CABLE | Threaded Black and Red Electrophoresis Cable |
| MJ-LID-AM580 | 580nm amber filter lid with fan, suitable for MJ-105A |
| MBE-LID-AM580 | An inclined 580nm amber filter, suitable for MBE-200A and MBE-300 |
| MBE-HOOD | Synthetic paper hood |



MJ-105A



MJ-LID-AM580



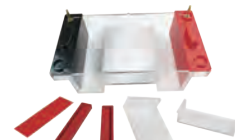
MBE-102



MBE-103



MBE7-TANK



MBE10-TANK



MBE-150-CABLE



MBE-LID-AM580



MBE-HOOD

Life Sciences Research

Mixer/Temperature Control

Dry Bath, Incubator, Shaker, Stirring Water Bath

Major Science designs and manufactures a comprehensive range of mixing and temperature control equipment for use in the fields of analytical, diagnostic, and research laboratories. Designed with the user's needs in mind, our full product portfolio includes dry bath incubators, ovens, shakers, and water baths.

This inter-related line features consistent performance, long durability, and outstanding stability.

*Please visit our website at www.majorsci.com for more product selection and detailed information.



with water

with block

with beads



▣ Dry Bath Incubator 61-74

- Mini Heating Dry Bath Incubator
- Mini Cooling Dry Bath Incubator
- Genius Dry Bath Incubator
- Elite Dry Bath Incubator
- Ultimate Dry Bath Incubator
- Thermostirrer
- Dry Bath Block & Beads

▣ Incubator 75-77

- MS Mini Incubator
- MS Oven
- MS Hybridization Oven

▣ Shaker 78-79

- MS Orbital Shaker
- MS Reciprocal Shaker
- MS Rocking Shaker

▣ Stirring Water Bath 80-81

- 10L Stirring Water Bath
- 20L Stirring Water Bath

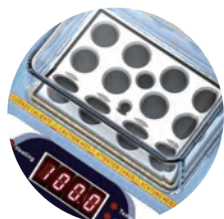
Mini Heating Dry Bath Incubator

MD-MINI

The Mini Heating Dry Bath Incubator incorporates innovative ideas of compactness, performance and versatility. This palm-sized yet powerful device is designed to maximize benchtop space and enhance research productivity with ultra-precise temperature control. The interchangeable ability of heating blocks in various size permits accommodation of versatile tube sizes. Moreover, turn it into a water bath or bead bath with optional metallic thermal beads.



MD-MINI



Clear block cover ensures temperature uniformity



MD-MINI-LID



MD-MINI-CAR-ADAPTER



with block



with water



with beads

Features

- Small size, fits in your palm
- User temperature calibration
- Single molded chamber, no cracks or welds
- PTFE coated chamber resists stains
- Can be used as a mini water bath or bead bath
- Outstanding heating rate
- Different sizes of heating block available for selection
- Clear cover to ensure temperature uniformity
- Optional in-car power adaptor provides portability on the road

Specification

| Cat. No. | MD-MINI |
|---------------------------|----------------------------------------------------------------------------|
| Display | LED |
| Power | 50W |
| Dimension (WxLxH) | Approx. 6"x4.9"x3.8" (153x125x97mm)(Lid included) |
| Controller | Digital microprocess controller |
| Heating Chamber | Molded waterproof aluminum alloy coated with PTFE |
| Temperature Control Range | 5°C above ambient to 100°C |
| Temperature Increment | 0.1°C |
| Temperature Uniformity | ± 0.20°C at 37°C |
| Temperature Accuracy | ± 0.25°C at 37°C |
| Temperature Calibration | Yes |
| Timer | 9999 (min) / Continuous |
| Safety | Leak proof heating chamber |
| | Over temperature protection |
| Operating Temperature | Ambient to 40°C |
| Special Feature | Used as water bath or bead bath |
| Block Material | Aluminum alloy |
| Block Type | Standard and customized type are available |
| Rated Voltage | 100V-240V~ |
| Weight | Approx. 1.3lb (0.6kg) |
| Blocks | |
| Block Material | Aluminum alloy |
| Dimension (WxLxH) | Approx. 1.9"x2.8"x1.3" (47x71x32mm) / Approx. 1.9"x2.8"x3" (47x71x75mm) |
| Block Lifter Well | Yes |
| Thermometer Well | Yes |

Ordering Information

| Cat. No. | Product Description |
|----------|------------------------------------------------|
| MD-MINI | Mini Heating Dry Bath Incubator; without block |

Accessories

| Cat. No. | Product Description |
|---------------------|------------------------------------------------------------------------------------|
| MD-MINI-B01 | For 0.2ml tube (PCR strip tube), 32 wells, φ6.35mm, depth 19mm, (WxLxH) 47x71x32mm |
| MD-MINI-B02 | For 1.5ml tube, 12 wells, φ10.8mm, depth 28.5mm, (WxLxH) 47x71x32mm |
| MD-MINI-B03 | For 15ml tube, 6 wells, φ17.3mm, depth 70mm, (WxLxH) 47x71x75mm |
| MD-MINI-B04 | For 50ml tube, 2 wells, φ29.2mm, depth 72mm, (WxLxH) 47x71x75mm |
| MD-MINI-B05 | For 0.5ml tube, 12 wells, φ8.0mm, depth 25mm, (WxLxH) 47x71x32mm |
| MD-MINI-B06 | For 2.0ml or 1.5ml tube, 12 wells, φ11.0mm, depth 30mm, (WxLxH) 47x71x32mm |
| MD-MINI-B07 | For 1.5ml tube, 12 wells, φ10.9mm, depth 30mm, (WxLxH) 47x71x32mm |
| MS-BL95-E | Block Lifter, 95mm length, with E-type retaining rings |
| MD-MINI-LID | MD-MINI lid, (WxLxH) 83x58.5x31.5mm |
| MD-MINI-CAR-ADAPTER | Car adapter for MD-MINI and MC-0203, 1.5M |

* For a complete list of accessories, please refer to Page 71-74

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Mini Cooling Dry Bath Incubator

MC-0203

The product line Mini Cooling Dry Bath Incubator is the mini-series of our ultimate dry bath. It is designed to meet the requirement of accurate temperature control, ease of data transferring and programming, small foot print and ease of use. Experience the exceptional heating/cooling rate with quick start feature and the portability to work your sample on the road! Perfect instrument can be used in QC process such as in food industry.



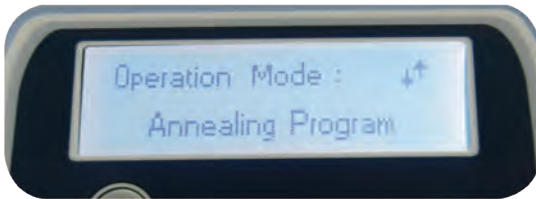
MC-0203



Can be used as a bead bath

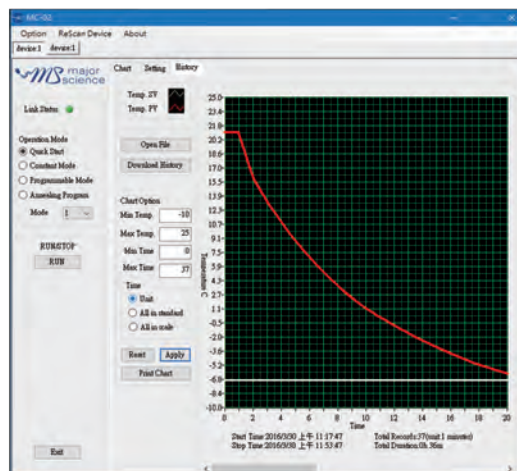


Quick start program



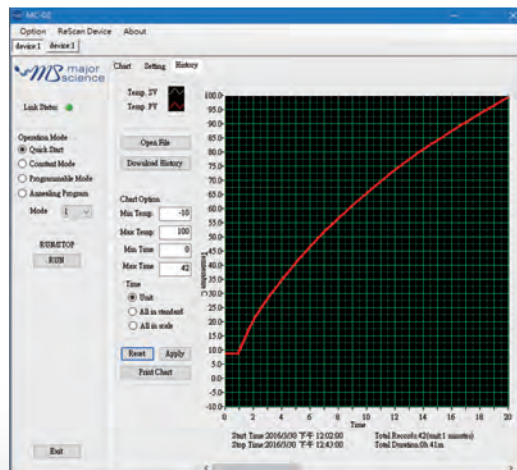
Annealing program

Functional control software



- Temp. set value: -6°C
- Initial temp. value: 20.6°C
- Block type: MD-MINI-B02
- Process time: Approx. 20mins

Functional control software for cooling and heating models



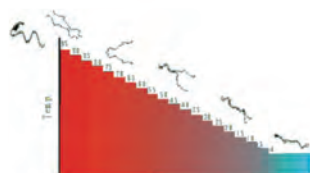
- Temp. set value: 100°C
- Initial temp. value: 9°C
- Block type: MD-MINI-B02
- Process time: Approx. 20mins

Features

- Small size, fits in your palm
- User temperature calibration
- Single molded chamber, no cracks or welds
- PTFE coated chamber resists stains
- Can be used as a mini water bath or bead bath
- Outstanding heating and cooling rate
- Different sizes of aluminum alloy block available for selection
- Clear cover to ensure temperature uniformity
- Quick start / Constant mode / programmable mode / Annealing program operation mode
- Optional in car power adaptor provides portability on the road

Specification

| Cat. No. | MC-0203 |
|---------------------------|-----------------------------------------------------------|
| Display | LCD |
| Power | max. 60W |
| Dimension (WxLxH) | Approx. 5.3"x6"x7.3" (135x152x185mm) (excluding lid) |
| Controller | High performance 32 bits microprocessor |
| Heating /Cooling Chamber | Molded waterproof aluminum alloy coated with PTFE |
| Temperature Control Range | 30°C below ambient temperature (minimum -10°C) to 100°C |
| Temperature Increment | 0.1°C |
| Temperature Uniformity | ± 0.2°C at 37°C |
| Temperature Accuracy | ± 0.25°C at 37°C |
| Temperature Calibration | Yes |
| Heating Rate | Max. 5°C per min |
| Cooling Rate | Max. 4°C per min |
| Timer | 9999 (min) |
| Cooling/ Heating Parts | Peltier / Heating element |
| Operation Mode | Constant operation: constant temperature (-10°C to 100°C) |
| | Program operation: 1-4 steps and up to 9 cycles |
| | Annealing program |
| | Quick start program: 4°C, 16°C, 37°C, 56°C, 95°C pre-set |
| Safety | Leak proof heating chamber |
| Operating Temperature | Ambient to 40°C |
| Special Feature | Can be used as water bath or bead bath incubator |
| Block Material | Aluminum alloy |
| Block Type | Standard and customized type are available |
| PC Connection | USB |
| Weight | Approx. 2.9lb (1.3kg) |



Annealing Program

| | |
|------------------|------|
| Initial Temp. | 95.0 |
| Descending Temp. | 5.0 |
| Holding Time. | 5 |
| Final Temp. | 4.0 |



As a water bath

Ordering Information

| Cat. No. | Product Description |
|----------|----------------------------------------------------------------------------------|
| MC-0203 | Mini Cooling Dry Bath Incubator, programmable cooling and heating; without block |

Accessories

| Cat. No. | Product Description |
|---------------------|------------------------------------------------------------------------------------|
| MC-0200-SW | Functional control software for Mini Cooling Incubator including a USB cable |
| MD-MINI-B01 | For 0.2ml tube (PCR strip tube), 32 wells, φ6.35mm, depth 19mm, (WxLxH) 47x71x32mm |
| MD-MINI-B02 | For 1.5ml tube, 12 wells, φ10.8mm, depth 28.5mm, (WxLxH) 47x71x32mm |
| MD-MINI-B03 | For 15ml tube, 6 wells, φ17.3mm, depth 70mm, (WxLxH) 47x71x75mm |
| MD-MINI-B04 | For 50ml tube, 2 wells, φ29.2mm, depth 72mm, (WxLxH) 47x71x75mm |
| MD-MINI-B05 | For 0.5ml tube, 12 wells, φ8.0mm, depth 25mm, (WxLxH) 47x71x32mm |
| MD-MINI-B06 | For 2.0ml or 1.5ml tube, 12 wells, φ11.0mm, depth 30mm, (WxLxH) 47x71x32mm |
| MD-MINI-B07 | For 1.5ml tube, 12 wells, φ10.9mm, depth 30mm, (WxLxH) 47x71x32mm |
| MS-BL95-E | Block Lifter, 95mm length, with E-type retaining rings |
| MD-MINI-LID | MD-MINI lid, (WxLxH) 83x58.5x31.5mm |
| MD-MINI-CAR-ADAPTER | Car adapter for MD-MINI and MC-0203, 1.5M |

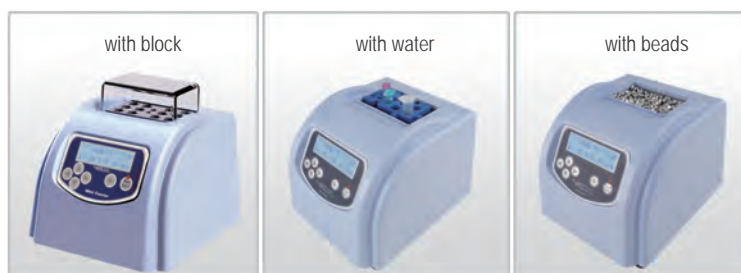
* For a complete list of accessories, please refer to [Page 71-74](#)



MD-MINI-LID



MD-MINI-CAR-ADAPTER



Genius Dry Bath Incubator

MD series

The Genius Dry Bath Incubators come in either single or dual block models, along with a complete set of interchangeable blocks. It is designed for a variety of applications, including restriction digest, denaturing DNA melting agar, coagulation studies, hybridization and hot start thermo-cycled reaction. The microprocessor controller offers highly accurate temperature control, rapid heating and excellent stability. The temperature can be set in increments of 0.1°C from 5°C above ambient to 150°C. An optional temperature probe is available to place directly in samples. A timer can be set from 1- 999mins. The MD series can be used as a mini water bath or bead bath. Optional function control software allows the dry bath incubator to perform real-time data recording through a PC.

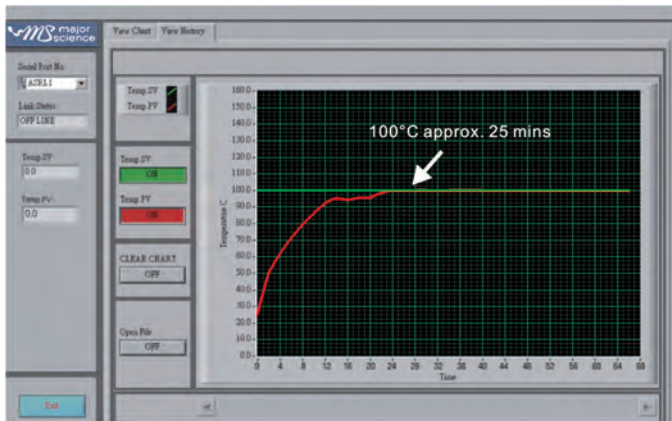


MD-01N



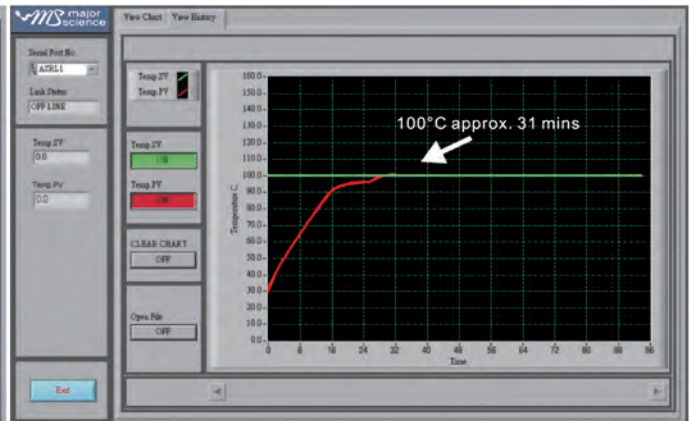
MD-02N

MD-01N



- Temp. set value: 100°C
- Initial temp. value: 25°C
- Block model: MD-B1.5
- Process time: Approx. 25mins

MD-02N



- Temp. set value: 100°C
- Initial temp. value: 30°C
- Block model: MD-B1.5
- Process time: Approx. 31mins

Features

- Digital microprocessor offers precise performance control
- Highly accurate temperature control and broad control range
- Rapid heating rate
- Digital LED display & timer
- User temperature calibration
- Molded aluminum alloy chamber
- Function control software available



Can be used as a water bath

Specification



with beads



with water



with block

| Cat. No. | MD-01N (Single Block) | MD-02N (Dual Block) |
|---------------------------|------------------------------------------------------|-----------------------|
| Display | LED | |
| Power | 125W | 200W |
| Dimension (WxLxH) | Approx. 7.9"x11.7"x3.2" (200x298x80mm) | |
| Controller | Digital microprocess controller | |
| Heating Chamber | Molded Waterproof aluminum alloy coated with PTFE | |
| Temperature Control Range | 5°C above ambient to 150°C** | |
| Temperature Increment | 0.1°C | |
| Temperature Uniformity | ±0.2°C at 37°C | |
| Temperature Accuracy | ±0.2°C at 37°C | |
| Temperature Calibration | Yes | |
| Timer | 999 (min) / Continuous | |
| Safety | Leak proof heating chamber | |
| | Over temperature protection | |
| | SSR failure detection | |
| Operating Temperature | Ambient to 40°C | |
| Special Feature | Can be used as water bath or bead bath incubator | |
| Block Material | Aluminum alloy | |
| Block Type | Standard and customized types are available | |
| PC Connection | RS232 | |
| Rated Voltage | 110V / 220V~ | |
| Weight | Approx. 4.6lb (2.1kg) | Approx. 6.2lb (2.8kg) |
| Blocks | | |
| Block Material | Aluminum alloy | |
| Dimension (WxLxH) | Approx. 3.1"x4.1"x2" (79x104x50mm) for standard type | |
| Block Lifter Well | Yes | |
| Thermometer Well | Yes (except microplate blocks) | |

Ordering Information

| Cat. No. | Product Description |
|----------------|------------------------------------------------------------|
| MD-01N-110/220 | Genius Dry Bath Incubator (One block unit); without block |
| MD-02N-110/220 | Genius Dry Bath Incubator (Dual block unit); without block |

Accessories

| Cat. No. | Product Description |
|-------------|-----------------------------------------------------------------------------------------------------------|
| MD-RS232 | RS 232 cable |
| MD-PCSW | Data record and function control software package |
| MD-PCSW-R | Data record and function control software package, including a RS232 cable |
| MD-MP01-S | For microplate; titerplate (Plain Block for Single Block unit only) |
| MD-MP01-D | For microplate; titerplate (Dual Block unit only) |
| MD-MP02-S | For 96 wells deep microplate or PCR plate (for Single Block unit only) |
| MD-MP02-D | For 96 wells deep microplate or PCR plate (for Dual Block unit only) |
| MD-B0.2 | For 0.2ml tube, 64 wells (or 0.2ml PCR strip tube for 8 wells x 8) |
| MD-B0.5 | For 0.5ml tube, 20 wells |
| MD-B1.5 | For 1.5ml tube, 20 wells |
| MD-B0.5+1.5 | Combination: for 0.5ml tube, 12 wells; and for 1.5ml tube, 12 wells (on the same side) |
| MD-B0.5/1.5 | One side for 1.5 or 2.0ml tube, 20 wells and another side for 0.5ml tube, 30 wells (on the opposite side) |
| MD-B13 | Well size 13mm, 20 wells |
| MD-B17 | For 15ml centrifuge tube, 12 wells |
| MD-B20 | Well size 20mm, 12 wells |
| MD-B25 | Well size 25mm, 6 wells |
| MD-B29 | For 50ml centrifuge tube, 4 wells |

* For a complete list of accessories, please refer to Page 71-74

**For prevent temperature difference effect and keep temperature stable, PQ is required in high temperature control mode(>=140 °C) or contact the local dealer before ordering.

***For the thermoblock requirement of dual block unit, please discuss with local dealer before order.

Elite Dry Bath Incubator

EL series

The Elite Dry Bath Incubator comes in single or dual block modes along with a comprehensive set of interchangeable blocks. It is designed for a variety of applications, including restriction digest, denaturing DNA, BUN, melting agar, coagulation studies, hybridization and hot start thermo-cycled reaction. Elite Dry Bath is recognized as the finest, fastest heating and smallest foot print dry bath incubator. In addition, the aluminum blocks can be removed for the use of a mini water bath or a bead bath. The temperature setpoint can be set in increments of 0.1°C from 5°C above ambient to 150°C. Optional PC control software allows the dry bath incubator to perform real time data recording through a PC.

FCCE

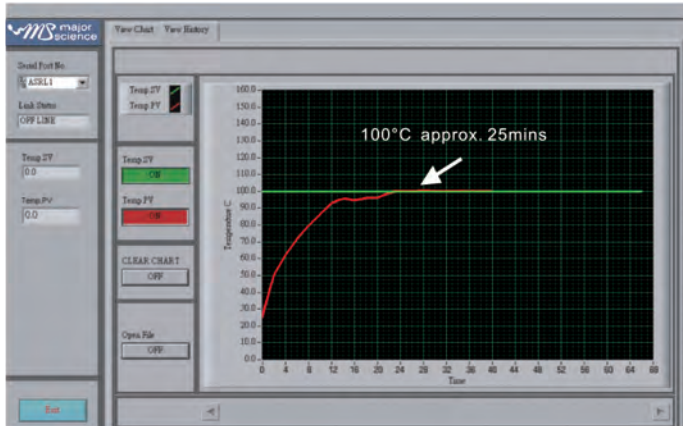


EL-01



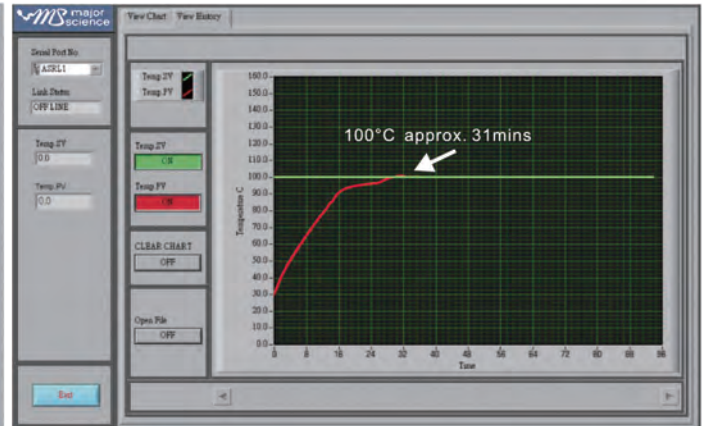
EL-02

EL-01



- Temp. set value: 100°C
- Initial temp. value: 25°C
- Block model: MD-B1.5
- Process time: Approx. 25mins

EL-02



- Temp. set value: 100°C
- Initial temp. value: 30°C
- Block model: MD-B1.5
- Process time: Approx. 31mins

Features

- Digital microprocessor controller confers performance and precise control
- Broad temperature control range & guaranteed uniformity
- Excellent heating rate
- Large LCD screen for instant observation
- User temperature calibration
- Can be used as a water bath or bead bath
- Molded aluminum alloy chamber
- Optional PC control software available



Can be used as a bead bath

Specification



with beads



with water



with block

| Cat. No. | EL-01 (Single Block) | EL-02 (Dual Block) |
|---------------------------|------------------------------------------------------|--------------------------------------|
| Display | LCD | |
| Power | 125W | 200W |
| Dimension (WxLxH) | Approx. 6"x5.9"x5.3" (152x150x135mm) | Approx. 6"x9.1"x5.3" (152x230x135mm) |
| Controller | Digital microprocess controller | |
| Heating Chamber | Molded Waterproof aluminum alloy coated with PTFE | |
| Temperature Control Range | 5°C above ambient to 150°C** | |
| Temperature Increment | 0.1°C | |
| Temperature Uniformity | ± 0.2°C at 37°C | |
| Temperature Accuracy | ± 0.2°C at 37°C | |
| Temperature Calibration | Yes | |
| Timer | 99 (hr): 59 (min) / Continuous | |
| Safety | Leak proof heating chamber | |
| | Over temperature protection | |
| | SSR failure detection | |
| Operating Temperature | Ambient to 40°C | |
| Special Feature | Used as water bath or bead bath incubator | |
| Block Material | Aluminum alloy | |
| Block Type | Standard and customized type are available | |
| PC Connection | RS232 | |
| Rated Voltage | 110V / 220V- | |
| Weight | Approx. 4.6lb (2.1kg) | Approx. 6.1lb (2.8kg) |
| Blocks | | |
| Block Material | Aluminum alloy | |
| Dimension (WxLxH) | Approx. 3.1"x4.1"x2" (79x104x50mm) for standard type | |
| Block Lifter Well | Yes | |
| Thermometer Well | Yes (except microplate blocks) | |

Ordering Information

| Cat. No. | Product Description |
|---------------|-------------------------------------------------------------|
| EL-01-110/220 | Elite Dry Bath Incubator (One block unit); without block |
| EL-02-110/220 | Elite Dry Bath Incubator (Dual block unit); without block |

Accessories

| Cat. No. | Product Description |
|-------------|-----------------------------------------------------------------------------------------------------------|
| MD-RS232 | RS 232 cable |
| MD-PCSW | Function control software package |
| MD-PCSW-R | Function control software package; including a RS232 cable |
| MD-MP01-S | For microplate; titerplate (Plain Block for Single Block unit only) |
| MD-MP01-D | For microplate; titerplate (Dual Block unit only) |
| MD-MP02-S | For 96 wells deep microplate or PCR plate (for Single Block unit only) |
| MD-MP02-D | For 96 wells deep microplate or PCR plate (for Dual Block unit only) |
| MD-B0.2 | For 0.2ml tube, 64 wells (or 0.2ml PCR strip tube for 8 wells x 8) |
| MD-B0.5 | For 0.5ml tube, 20 wells |
| MD-B1.5 | For 1.5ml tube, 20 wells |
| MD-B0.5+1.5 | Combination: for 0.5ml tube, 12 wells; and for 1.5ml tube, 12 wells (on the same side) |
| MD-B0.5/1.5 | One side for 1.5 or 2.0ml tube, 20 wells and another side for 0.5ml tube, 30 wells (on the opposite side) |
| MD-B13 | Well size 13mm, 20 wells |
| MD-B17 | For 15ml centrifuge tube, 12 wells |
| MD-B20 | Well size 20mm, 12 wells |
| MD-B25 | Well size 25mm, 6 wells |
| MD-B29 | For 50ml centrifuge tube, 4 wells |

* For a complete list of accessories, please refer to [Page 71-74](#)

**For prevent temperature difference effect and keep temperature stable, PQ is required in high temperature control mode(>=140 °C) or contact the local dealer before ordering.

***For the thermoblock requirement of dual block unit, please discuss with local dealer before order.

Ultimate Dry Bath Incubator

MC-01N

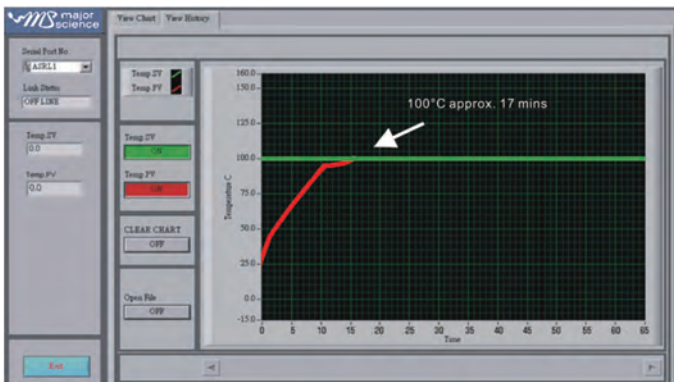
Ultimate Dry Bath Incubator is available with different heating and cooling profiles, along with a broad selection of interchangeable blocks. The model is designed for a variety of applications including ligation, restriction digest, denaturing DNA, BUN, melting agar, coagulation studies, hybridization and hot start thermo-cycled reaction. The built-in 2.6" LCD screen permit instant viewing and selection of operation modes: constant, programmable and annealing. The microprocessor controller offers performance, precise control as well as rapid heating and cooling efficiency with excellent stability. The temperature can be set in 0.1°C increments, from -10°C to 100°C. Optional PC control software is available for real time data logging.



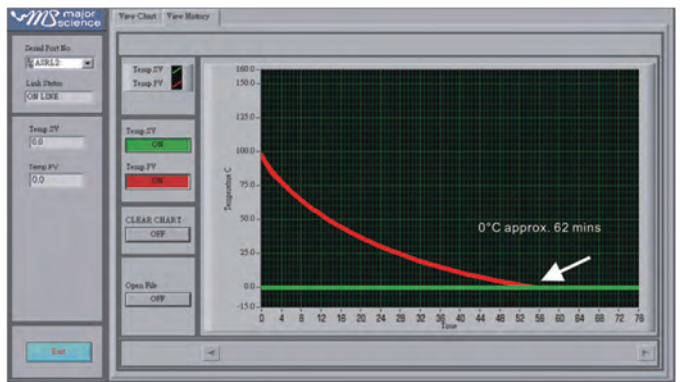
CE



MC-01N



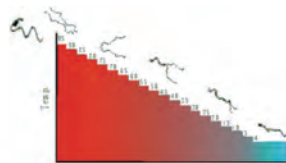
■ Temp. set value: 100°C
 ■ Initial temp. value: 25°C
 Block model: MC-B0.2+0.5+1.5
 Process time: Approx. 17mins



■ Temp. set value: 0°C
 ■ Initial temp. value: 100°C
 Block model: MC-B0.2+0.5+1.5
 Process time: Approx. 62mins

Features

- Digital microprocessor offers performance and precise control
- Broad temperature control range & guaranteed uniformity
- Highly efficient heating & cooling rates
- Large LCD screen for easy selection of operation modes and setting inputs
- User temperature calibration
- Also a mini water bath and bead bath
- Optional PC recording software available



Annealing Program

| | |
|------------------|------|
| Initial Temp. | 95.0 |
| Descending Temp. | 5.0 |
| Holding Time. | 5 |
| Final Temp. | 4.0 |

Specification



with water



with beads



with block

| Cat. No. | MC-01N |
|---------------------------|--------------------------------------------------------------------------------|
| Chamber Dimension (WxLxH) | Approx. 5.1"x3.5"x2" (130x90x50mm) |
| Display | 2.6" LCD |
| Power | 400W |
| Dimension (WxLxH) | Approx. 7.9"x11.6"x5.5" (200x295x140mm) |
| Controller | Digital microprocess controller |
| Heating Chamber | Molded Waterproof aluminum alloy coated with PTFE |
| Temperature Control Range | 30°C below ambient temperature (minimum -10°C) to 100°C |
| Temperature Increment | 0.1°C |
| Temperature Uniformity | ± 0.2°C at 37°C |
| Temperature Accuracy | ± 0.2°C at 37°C |
| Temperature Calibration | Yes |
| Operation Mode | Constant operation: constant temperature (-10°C to 100°C); Timer: 9999 (min) |
| | Program operation: 1-4 steps and up to 9 cycles; timer: 9999 (min) |
| | Annealing program |
| Safety Device | Leak proof heating chamber |
| Operating Temperature | Ambient to 40°C |
| Special Feature | Can be used as water bath or bead bath incubator |
| Block Material | Aluminum alloy |
| Block Type | Standard and customized type are available |
| PC Connection | RS232 |
| Rated Voltage | 110V / 220V~, selectable |
| Weight | Approx. 17.6lb (8kg) |
| Blocks | Ultimate MC Block |
| Dimension (WxLxH) | Approx. 3.5"x5.1"x1.8" (89x129x46mm) |
| Block Material | Aluminum alloy |
| Block Lifter Well | Yes |
| Thermometer Well | Yes (except microplate blocks) |

Ordering Information

| Cat. No. | Product Description |
|----------|--------------------------------------------|
| MC-01 | Ultimate Dry Bath Incubator; without block |

Accessories

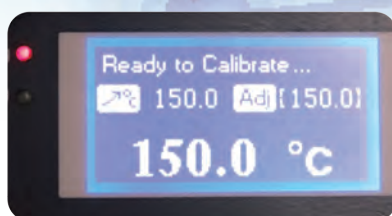
| Cat. No. | Product Description |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| MC-RS232 | RS 232 cable |
| MC-PCSW | Function control software package |
| MC-PCSW-R | Function control software package; including a RS232 cable |
| MC-MP01 | For microplate; titerplate (Plain Block) |
| MC-MP02 | For 96 wells deep microplate or PCR plate |
| MC-B0.5 | For 0.5ml, 30 wells |
| MC-B1.5 | For 1.5 or 2.0ml, 30 wells |
| MC-B0.5+1.5 | Combination: for 1.5ml or 2.0ml tube, 15 wells and 0.5ml tube, 15 wells (on the same side) |
| MC-B0.2+0.5+1.5 | Combination: 0.2ml tube (or strip tube for 8 wells), 24 wells; 1.5ml or 2.0ml tube, 10 wells and 0.5ml tube, 10 wells (on the same side) |
| MC-B13 | Well size 13mm, 30 wells |
| MC-B17 | For 15ml centrifuge tube, 15 wells |
| MC-B20 | Well size 20mm, 15 wells |
| MC-B25 | Well size 25mm, 6 wells |
| MC-B29 | For 50ml centrifuge tube, 6 wells |
| MC-B0.2H | (1/2) half block for 0.2ml tube, 40 wells (or 0.2ml PCR strip tube for 8 wells x 5) One Ultimate Dry Bath Incubator can insert 2ea of half block |
| MC-B0.5H | (1/2) half block for 0.5ml tube, 15 wells One Ultimate Dry Bath Incubator can insert 2ea of half block |
| MC-B1.5H | (1/2) half block for 1.5 or 2ml tube, 15 wells One Ultimate Dry Bath Incubator can insert 2ea of half block |

* For a complete list of accessories, please refer to [Page 71-74](#)

Thermostirrer

TS-8W

Major Science Thermostirrers feature leading-edge speed performance and the broadest temperature control range to cover a variety of chemical and biological applications including synthesis of organic compounds, derivatization, drug solubility, protein crystallization and process optimization. Mixing efficiency is maintained uniformly across the sample wells due to independent magnets under each well and thus ensures consistency of experimental results. Furthermore, Major Science designed a remote thermostirrer module for studies that require a thermostatic mixer to function as a part of an automated process such as a polymer viscometers.



User temperature calibration



TS-8W

Features:

- Microprocessor control with digital performance
- Brushless motor for individual well agitation
- Outstanding temp. control performance up to 200°C
- User temperature calibration
- Customization available
- Well-insulation around casework
- Over temperature protection
- LCD screen & timer (standalone model only)
- Highest stirring speed, 3500rpm in the market



Cooling System Connection Port

Specifications

| Cat. No. | TS-8W-110 | TS-8W-220 |
|---------------------------|--------------------------------------------------------------|-----------------------|
| Controller | Digital microprocessor controller | |
| Display | 2.6" LCD monochrome display | |
| Motor | Brushless motor | |
| Number Of Position | 8 wells (2x4) with individual magnetic stirrer or customized | |
| Well Diameter | Ø29.5mm, 62mm depth or customized | |
| Stirring Speed | 500 - 3500rpm | |
| Temperature Control Range | 5°C above ambient to 200°C | |
| Temperature Increment | ± 0.1°C | |
| Temperature Uniformity | ± 0.7°C @ 150°C | |
| Temperature Accuracy | ± 0.2°C @ 150°C | |
| Temperature Calibration | Yes | |
| Operating Temperature | Ambient to 40°C | |
| Timer | 99 (hr): 59 (min) / Continuous | |
| Block Material | PTFE coating with individual magnetic | |
| Data Logging | RS 232 (Max. 2.5 meter long) | |
| Safety | Well-insulation around casework | |
| | Leakage proof for heating chamber | |
| | Over temperature protection | |
| Rated Voltage | 110V~; 50/60Hz, 6.3A | 220V~; 50/60Hz, 3.15A |
| Dimension (WxLxH) | Approx. 9.1"x11.8"x6.3" (230x300x160mm) | |
| Weight | Approx. 18.7lb (8.5kg) | |
| Power | 600W | |
| Vessel Diameter | Max. 28.5mm or customized | |
| Communication Port | RS-232 | |

* Temperature uniformity would be dependent on the integration to your automation system.

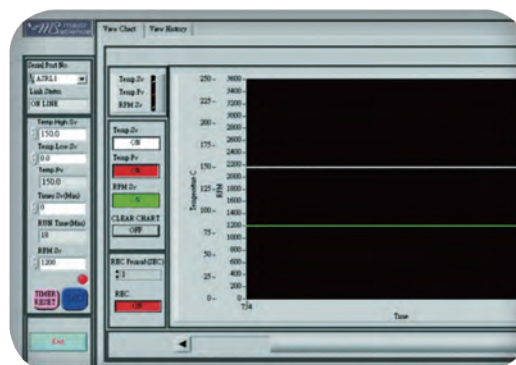
*** Cooling below ambient temperature is feasible to connect with an external chiller.

Ordering Information

| Cat. No. | Product Description |
|-----------|------------------------------|
| TS-8W-110 | Thermostirrer 8 wells, 110V~ |
| TS-8W-220 | Thermostirrer 8 wells, 220V~ |

Accessories

| Cat. No. | Product Description |
|----------|---------------------------------------------------------------------------------------------------------|
| TS-8W-SW | Functional control and data logging software for Thermostirrer series. Including software CD and cable. |



Functional control software package available

Dry Bath Block & Beads

Metallic Thermal Beads
Mini Dry Bath Blocks
Dry Bath Blocks
Ultimate Dry Bath Blocks

For Beads

Major Science offers you the Metallic Thermal Beads as an alternative to the dry bath aluminum blocks. The beads are dry metallic thermal alloy designed to replace water in a water bath and ice in an ice bucket. Compared to a water bath, using the metallic thermal beads could reduce the risk of contamination and allow you to get rid of antibiotics usage. In addition, the beads are also recyclable and energy efficient. The metallic thermal beads also help to reduce maintenance works such as emptying, cleaning, monitoring, and refilling the water bath to give you a more hassle-free environment in the lab. We specifically supply the beads in a standard pack for you.

For Blocks

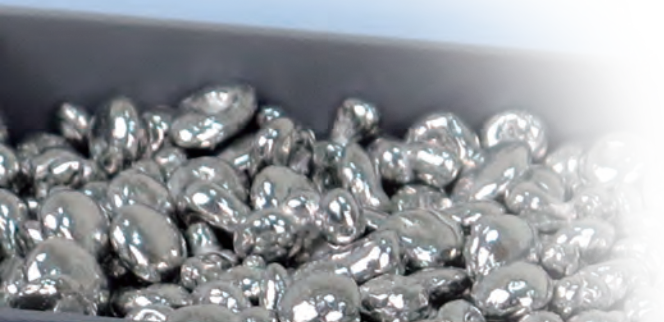
The Dry Bath Blocks are designed for the MS Thermoblock Dry Bath Incubator. The precisely machined aluminum alloy blocks deliver efficient heat transfer and are suitable for microplate and various sizes of test tubes and centrifuge tubes ranging from 0.2ml to 50ml. In addition to the standard blocks, customized blocks are also available according to user's requirements.



beads

Thermal Beads Specifications

| Cat. No. | Beads |
|---------------------------|----------------------------------------------------------------|
| Properties | Metal composition |
| | Moisture and gas impermeable |
| | High thermal conductivity |
| | Smooth, rounded surface |
| Working Temperature Range | -80°C to 180°C |
| Size | Diameter 5-8mm, Height 1-2mm |
| Weight | 3.6lbs per liter |
| Environment | Recyclable |
| | Non-toxic, non-vaporizing material |
| | No daily requirement for biocide use – no gray water |
| | Improves energy efficiency of standard water baths by over 50% |



Product may be used up to 300°C without loss in thermal performance, but product fluidity may be reduced.

Features (for beads)

- Fully compatible with MS Dry Bath Incubators
- Keeps your equipment dry and protected from water-borne microbial contaminants
- 50% more energy efficient than water bath
- High efficiency to warm, thaw, incubate and chill samples at constant temperatures
- Eliminates the hassle of emptying, cleaning and refilling water baths or changing blocks
- Support all shapes of labwares
- Stays clean easily

Features (for blocks)

- Precisely CNC machined aluminum alloy blocks
- R -curve edged block design
- Through Sand Blast Anodizing Surface treatment, it ensure a nice & smooth surface block with a longer durability
- Laser marked on the selected blocks



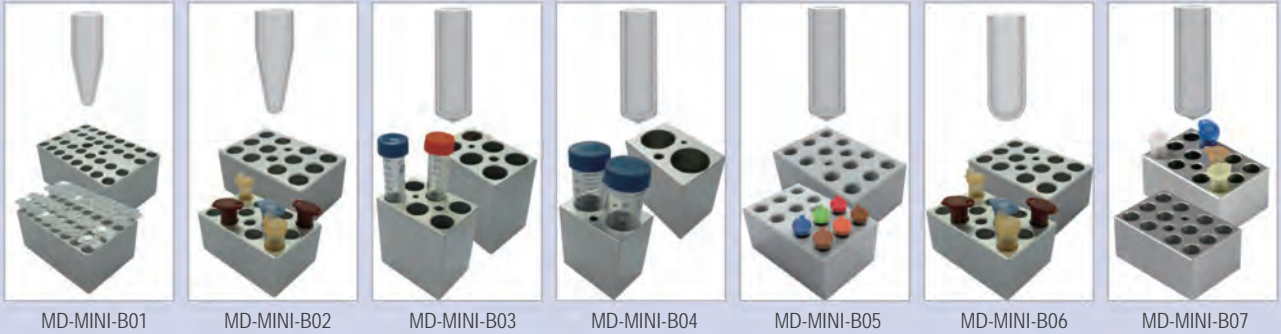
Ordering Information

| Cat. No. | Product Description |
|--------------|---------------------------------------------------------------------------------------------------------|
| MD-MINI-BD00 | Metallic thermal beads for Mini dry bath incubator, for MD-MINI & MC-0203, 170g (Beads only) |
| MD-BD00 | Metallic thermal beads for Genius and Elite dry bath incubator, for MD-01N and EL-01, 700g (Beads only) |
| MC-BD00 | Metallic thermal beads for Ultimate dry bath incubator, for MC-01N, 900g (Beads only) |

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

MS Thermoblock Dry Bath Incubator

Mini Dry Bath Blocks



MD-MINI-B01

MD-MINI-B02

MD-MINI-B03

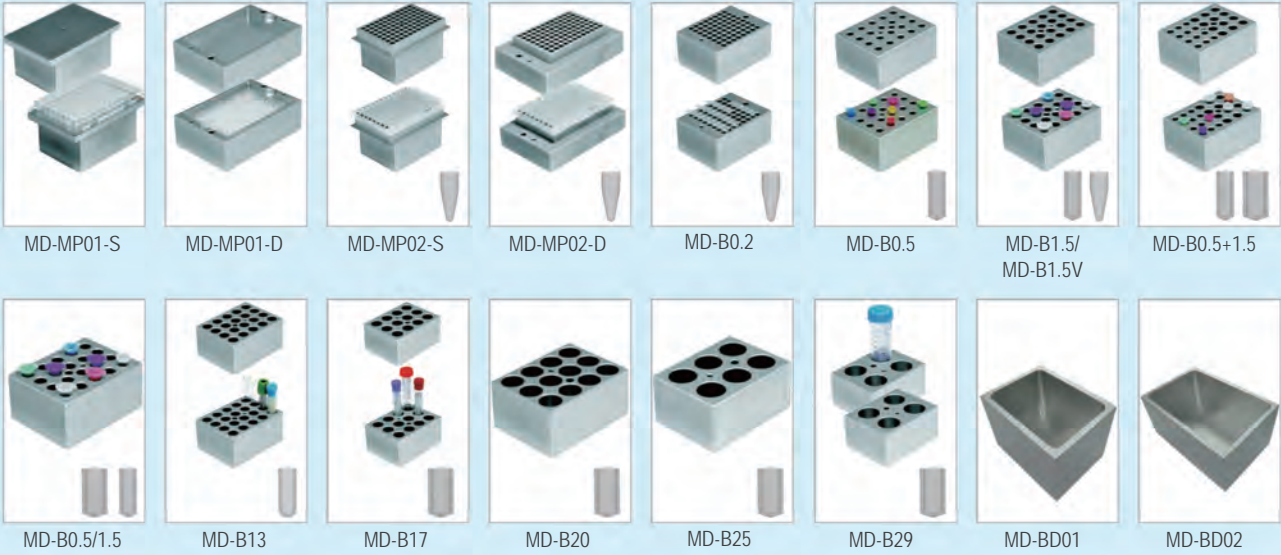
MD-MINI-B04

MD-MINI-B05

MD-MINI-B06

MD-MINI-B07

Dry Bath Blocks



MD-MP01-S

MD-MP01-D

MD-MP02-S

MD-MP02-D

MD-B0.2

MD-B0.5

MD-B1.5/
MD-B1.5V

MD-B0.5+1.5

MD-B0.5/1.5

MD-B13

MD-B17

MD-B20

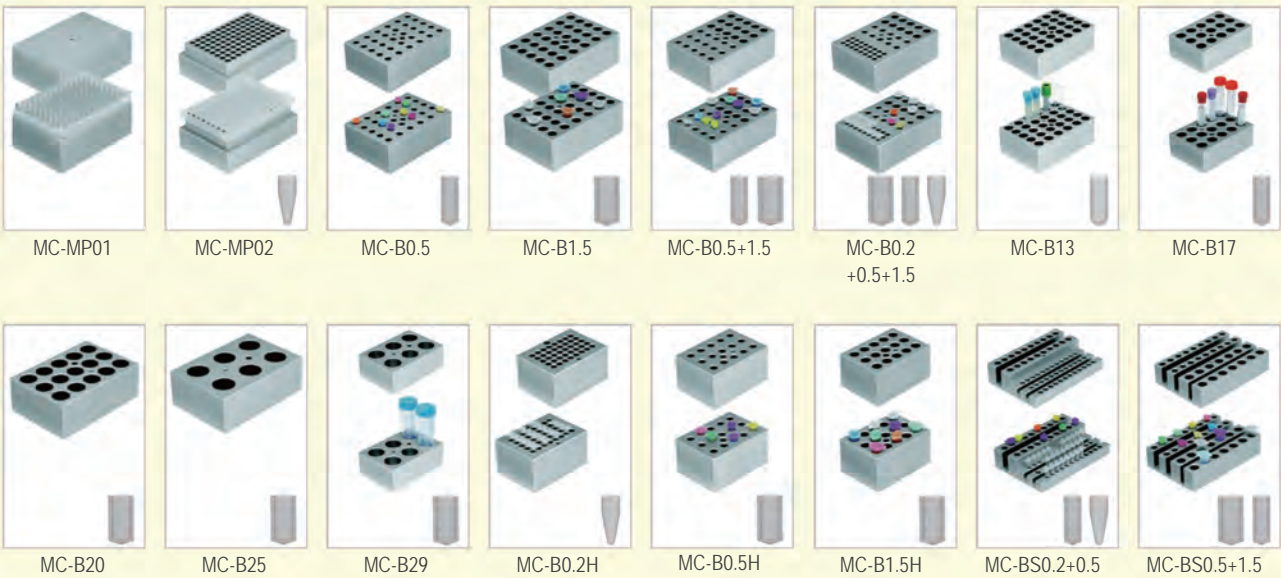
MD-B25

MD-B29

MD-BD01

MD-BD02

Ultimate Dry Bath Blocks



MC-MP01

MC-MP02

MC-B0.5

MC-B1.5

MC-B0.5+1.5

MC-B0.2
+0.5+1.5

MC-B13

MC-B17

MC-B20

MC-B25

MC-B29

MC-B0.2H

MC-B0.5H

MC-B1.5H

MC-BS0.2+0.5

MC-BS0.5+1.5



MC-BD



MS-BL95-E




Ordering Information**

| Cat. No. | Product Description | |
|--------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mini Dry Bath Blocks | MD-MINI-B01 | For 0.2ml tube (PCR strip tube), 32 wells, Ø6.35mm, depth 17mm, (WxLxH) 47x71x32mm |
| | MD-MINI-B02 | For 1.5ml tube, 12 wells, Ø10.88mm, depth 30mm, (WxLxH) 47x71x32mm |
| | MD-MINI-B03 | For 15ml tube, 6 wells, Ø17.3mm, depth 70mm, (WxLxH) 47x71x75mm |
| | MD-MINI-B04 | For 50ml tube, 2 wells, Ø29.0mm, depth 70mm, (WxLxH) 47x71x75mm |
| | MD-MINI-B05 | For 0.5ml tube, 12 wells, Ø7.9mm, depth 25mm,(WxLxH) 47x71x32mm |
| | MD-MINI-B06 | For 2.0ml or 1.5ml tube, 12 wells, Ø11.0mm, depth 30mm, (WxLxH) 47x71x32mm |
| | MD-MINI-B07 | For 2.0ml or 1.5ml tube, 12 wells, Ø11.0mm, depth 30mm, (WxLxH) 47x71x32mm |
| | MS-BL95-E | Block Lifter, 95mm length with E-type retaining rings |
| Dry Bath Blocks | MD-MP01-S | For microplate; titerplate (Plain Block for Single Block unit only) |
| | MD-MP01-D | For microplate; titerplate (Dual Block unit only) |
| | MD-MP02-S | For 96 wells deep microplate or PCR plate (for Single Block unit only) |
| | MD-MP02-D | For 96 wells deep microplate or PCR plate (for Dual Block unit only) |
| | MD-B0.2 | For 0.2ml tube, 64 wells (or 0.2ml PCR strip tube for 8 wells x 8) |
| | MD-B0.5 | For 0.5ml tube, 20 wells |
| | MD-B1.5 | For 1.5ml or 2.0ml tube, 20 wells |
| | MD-B1.5V | For 1.5ml or 2.0ml V-shaped tube, 20 wells |
| | MD-B0.5+1.5 | Combination: for 0.5ml tube, 12 wells; and for 1.5ml tube, 12 wells (on the same side) |
| | MD-B0.5/1.5 | One side for 1.5 or 2.0ml tube, 20 wells and another side for 0.5ml tube, 30 wells (on the opposite side) |
| | MD-B13 | Well size 13mm, 20 wells |
| | MD-B17 | For 15ml centrifuge tube, 12 wells |
| | MD-B20 | Well size 20mm, 12 wells |
| | MD-B25 | Well size 25mm, 6 wells |
| | MD-B29 | For 50ml centrifuge tube, 4 wells |
| | MD-BD01 | Single bead MD dry bath block, (WxLxH) 79x104x76mm |
| MD-BD02 | Dual bead MD dry bath block, (WxLxH) 104x158x76mm | |
| MS-BL95-E | Block Lifter, 95mm length with E-type retaining rings | |
| Ultimate Dry Bath Blocks | MC-MP01 | For Microplate; titerplate (Plain Block) |
| | MC-MP02 | For 96 wells deep microplate or PCR plate |
| | MC-B0.5 | For 0.5ml, 30 wells |
| | MC-B1.5 | For 1.5 or 2.0ml, 30 wells |
| | MC-B0.5+1.5 | Combination: for 1.5ml or 2.0ml tube, 15 wells and 0.5ml tube, 15 wells (on the same side) |
| | MC-B0.2+0.5+1.5 | Combination: 0.2ml tube (or strip tube for 8 wells), 24 wells; 1.5ml or 2.0ml tube, 10 wells and 0.5ml tube, 10 wells (on the same side) |
| | MC-B13 | Well size 13mm, 30 wells |
| | MC-B17 | For 15ml centrifuge tube, 15 wells |
| | MC-B20 | Well size 20mm, 15 wells |
| | MC-B25 | Well size 25mm, 6 wells |
| | MC-B29 | For 50ml centrifuge tube, 6 wells |
| | MC-B0.2H | (1/2) half block for 0.2ml tube, 40 wells (or 0.2ml PCR strip tube for 8 wells x 5) One Ultimate Dry Bath Incubator can insert 2ea of half block |
| | MC-B0.5H | (1/2) half block for 0.5ml tube, 15 wells One Ultimate Dry Bath Incubator can insert 2ea of half block |
| | MC-B1.5H | (1/2) half block for 1.5 or 2ml tube, 15 wells One Ultimate Dry Bath Incubator can insert 2ea of half block |
| | MC-BS0.2+0.5 | Combination: 0.2ml tube, 36 wells; 0.5ml, 20 wells |
| | MC-BS0.5+1.5 | Combination: 0.5ml tube, 18 wells; 1.5ml, 14 wells |
| | MC-BD | Ultimate bead bath block, (WxLxH) 90x127x76mm |
| | MS-BL95-E | Block Lifter, 95mm length with E-type retaining rings |

* For the tube bottom type (round, conical or flat), please refer to the pictures on page 72.

**Customized block is available and contact the local dealer before order.

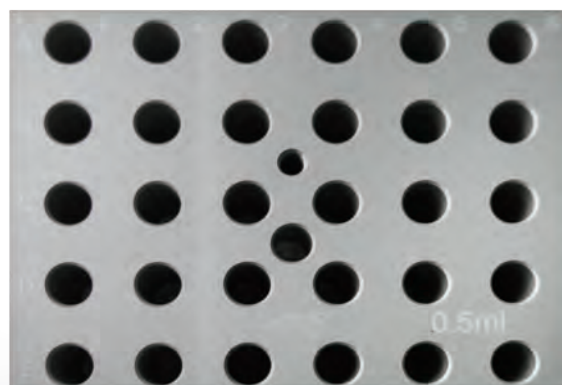
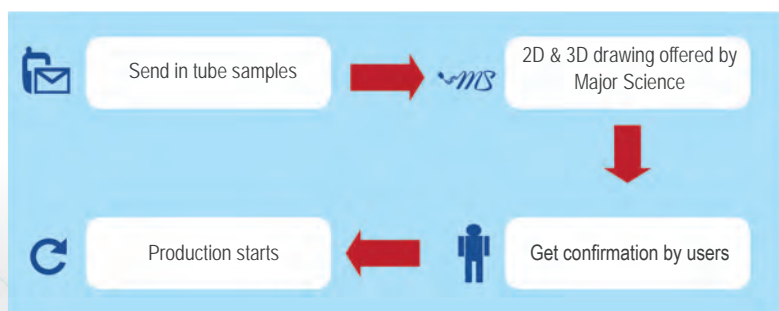
Aluminum alloy blocks Specifications

| Cat. No. | Mini Dry Bath Blocks | Dry Bath Blocks | Ultimate Dry Bath Blocks |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Photo |  |  |  |
| Used For | MD Mini Page 61 , MC-0203 Page 62 | EL series Page 66 , MD series Page 64 | MC-01 series Page 68 |
| Block Lifter | included | | |
| Product Description | The Mini Dry Bath Blocks are designed for both mini heating or cooling dry bath incubators. The precisely machined aluminum alloy blocks deliver efficient heat transfer and are suitable for PCR tubes in strip and various size of test tubes and centrifuge tubes ranging from 0.2ml to 50ml. | The Dry Bath Blocks are designed for the Elite Dry Bath Incubator and the Genius Dry Bath Incubator. The precisely machined aluminum alloy blocks deliver efficient heat transfer and are suitable for microplate and various size of test tubes and centrifuge tubes ranging from 0.2ml to 50ml. | The Ultimate Dry Bath Blocks are designed for the Ultimate Dry Bath Incubators. The precisely-machined aluminum alloy blocks, which are suitable for microplate and different sizes of test tubes and centrifuge tubes ranging from 0.2ml to 50ml, deliver efficient heating and cooling performance. In addition to the standard blocks, customized blocks are also available requirements. MC Blocks are designed for Ultimate plus Dry Bath Incubator to provide more efficient heating and cooling speed. Two standard block modes and customized blocks are available. |
| Block Material | Aluminum alloy | | |
| Dimension (WxLxH) | Approx. 1.9"x2.8"x1.3" (47x71x32mm) for MD-MINI-B01/02/05/06/07 Approx. 1.9"x2.8"x3" (47x71x75mm) for MD-MINI-B03/04 | Approx. 3.4"x5"x2.5" (87x128x62.3mm) for MD-MP01-S Approx. 4.1"x6.2"x2" (104x158x50mm) for MD-MP01-D/ MD-MP02-D Approx. 3.4"x5"x2.7" (87x128x69.5mm) for MD-MP02-S Approx. 3.1"x4.1"x2" (79x104x50mm) for standard blocks | Approx. 3.5"x5.1"x1.8" (89x129x46mm) for standard blocks Approx. 2.5"x3.5"x1.8" (64.5x89x46mm) for MC-B0.2H/0.5H/1.5H Approx. 3.5"x5.1"x1.2" (89x129x30mm) for MC-BS0.2+0.5/0.5+1.5 |
| Weight | Approx. 0.5lb (0.24kg) for MD-MINI-B01/02/05/06/07 Approx. 1.0lb (0.46kg) for MD-MINI-B03/04 | N/A | |
| Block Lifter Well | Yes | | |
| Thermometer Well | Yes | Yes (except microplate blocks) | |

*Customized blocks available.

Laser marked on the selected blocks

Flow chart for customization process:



MS Mini Incubator

MO-MINI

Major Science's Mini Incubator is designed for personal use and small laboratories, saving much of space. The unit features a broad temperature range to meet a variety of microbiology or hematology applications. It is compact and economical, featuring unique features. The housing is all corrosion resistant metal. The glass window of the door offers full visibility to the interior. One stainless steel shelf is included, and can be adjusted to two different levels - additional shelves can be purchased to increase storage capacity. The colorful touch panel presents vivid and intuitive user interface and the backlit LED ensures enough brightness even in dark environment.

The heating structure incorporated in MS Mini Incubator performs evenly heating and precise temperature control. The microprocessor ensures temperature stability within the chamber. A thermometer port on the top of the unit allows the users to monitor temperatures.

In addition, a designed spare port is on the rear of the chamber which allows an electrical cord to be routed out if needed. Optional function control software provides real-time data recording through a PC.



Specification

| Cat. No. | MO-MINI |
|----------------------------|---------------------------------------|
| Display | LCD |
| Temperature Range | Ambient +5° to 70°C |
| Temperature Accuracy | ± 0.2°C @ 37°C in center point |
| Capacity | 17L |
| Exterior Dimension (WxLxH) | Approx. 12.2"x12"x15" (310x306x380mm) |
| Interior Dimension(WxLxH) | Approx. 10.3"x10"x10" (261x255x255mm) |
| Weight | Approx. 28.7 (13kg) |
| Power | 100-240V~, 50/60Hz, 2A |
| Material | Corrosion resistant metal |
| PC Connection | USB |

Ordering Information

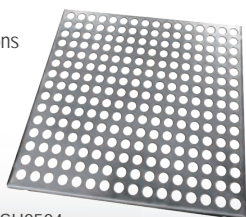
| Cat. No | Product Description |
|---------|--------------------------------------------------|
| MO-MINI | MS Mini Incubator with one stainless steel shelf |

Accessories

| Cat. No | Product Description |
|------------|--------------------------------------------------------------------------|
| MO-SH2524 | 250x240mm stainless steel shelf for MS Mini Incubator |
| MO-MINI-SW | Functional control software for MS Mini Incubator, including a USB cable |

Features

- Ideal for microbiology or hematology applications
- Corrosion resistant metal housing
- Door with large viewing area
- Backlit colored touched panel
- One stainless steel shelf is included
- Function control software available



MO-SH2524



* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

MS Oven

MO-A01

Major Science's Oven incubator features a broad thermostatic control range and precise temperature uniformity to fulfill a variety of cell culturing and hematology applications. The compact size and stackable design save valuable lab space and maximize productivity. The built-in color touch screen provides hassle-free system operation and instance glance over experiments. With implemented safety features, the powerful MS Oven incubators assure a safe environment to the user as well as samples.

Features

- Large touch screen: 3.5" color display
- Temperature uniformity and accuracy: $\pm 0.2^{\circ}\text{C}$ at 37°C
- Broad temperature control range: ambient $+5^{\circ}\text{C}$ to 85°C
- User temperature calibration
- Safety door switch
- Timer with alarm function
- Power failure auto recovery
- Sturdy, stackable construction



MO-A01

MS Hybridization Oven

MO-AOR

MS Hybridization Oven series is the advanced version of MS Oven and is designed to equip with built-in rotisserie function. MO-AOR is embedded with orbital shaking platform and is ideal for nucleic acid hybridization and incubation such as Southern, Northern, and Western blot. Full accessories are also available upon request to meet different applications.

Features

- Built-in rotisserie function
- Orbital shaking motion
- Large touch screen: 3.5" color display
- Temperature uniformity and accuracy: $\pm 0.2^{\circ}\text{C}$ at 37°C
- Broad temperature control range: ambient $+5^{\circ}\text{C}$ to 85°C
- User temperature calibration
- Safety door switch
- Timer with alarm function
- Power failure auto recovery
- Sturdy, stackable construction



MO-AOR



Model Selection Guide



Orbital

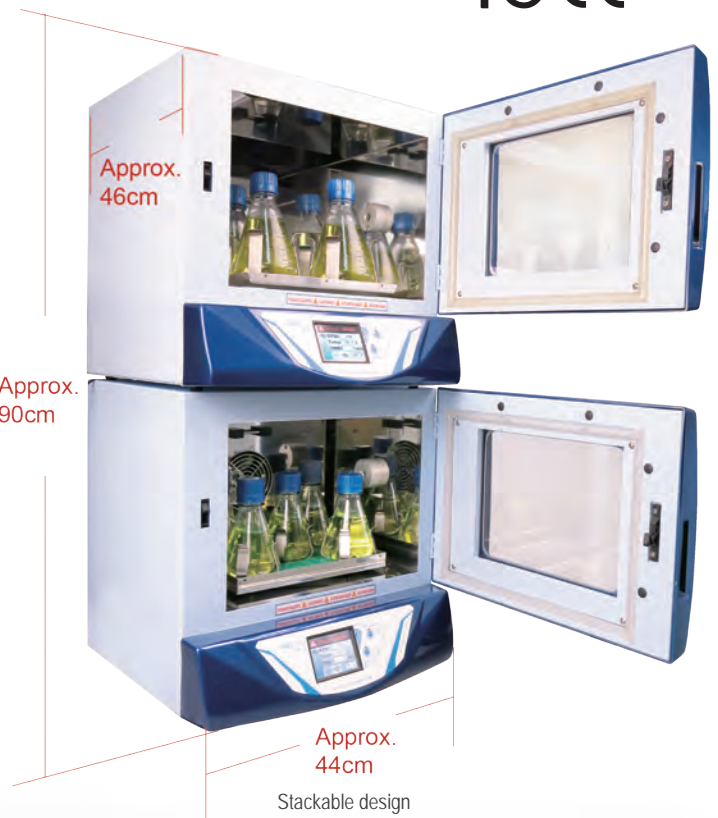
Rotation

Heating

| Cat. No. | MO-A01 | MO-AOR |
|-------------------------|--------|--------------------------------------|
| Rotisserie Function | N/A | Yes |
| Rotisserie Speed / Inc. | N/A | 5-100rpm / 1rpm |
| Shaker Motion | N/A | Orbital clockwise / counterclockwise |
| Shaker Speed | N/A | 0-200rpm |

Max. set of flask holder

| Flask | MO-AOR |
|-------|--------|
| 50ml | 8 |
| 125ml | 8 |
| 250ml | 5 |
| 500ml | 2 |



Specification

| Cat. No. | MO-A01 | MO-AOR |
|----------------------------------|-------------------------------------------|--------------------------------------|
| Display | 3.5" 64K color TFT display | |
| Controller | 32-bits Microprocessor | |
| Control Interface | Touch screen & graphical interface | |
| Rotisserie Function | N/A | Yes |
| Rotisserie Speed / Inc. | N/A | 5 - 100rpm / 1rpm |
| Timer | 9999 (min) with alarm / Continuous | |
| Shaker Motion | N/A | Orbital clockwise / counterclockwise |
| Shaker Speed | N/A | 0 - 200rpm |
| Temperature Control Range | Ambient +5°C to 85°C | |
| Temperature Increment | 0.1°C | |
| Temperature Uniformity | ± 0.2°C at 37°C | |
| Temperature Accuracy | ± 0.2°C at 37°C | |
| User Temperature Calibration | Yes | |
| Inner Chamber Dimensions (WxLxH) | Approx. 13.4"x8.9"x10.2" (340x225x260mm) | |
| Inner Chamber Volume | Approx. 5.28gal (20L) | |
| Dimension (WxLxH) | Approx. 17.4"x18.2"x17.8" (442x462x452mm) | |
| Platform (WxL) | N/A | Approx. 10.6"x7.9" (270x200mm) |
| Data Logging | RS-232 | |
| Weight | Approx. 52.9lb (24kg) | Approx. 63.9lb (29kg) |
| Rated Voltage | 110 / 220V~ 50 / 60Hz (Selectable) | |
| Construction | Painted iron metal with ABS front door | |
| Safety Device | Safety door switch | |
| | Thermal safety switch | |
| | Auto shut off upon fan failure | |
| | Power failure auto recovery | |

Ordering Information

| Cat. No | Product Description |
|---------|--------------------------------------------------------------------------|
| MO-A01 | MS Oven with 2 layers of stainless steel mesh plates and 8 plate holders |
| MO-AOR | MS Hybridization/Orbital Shaking Oven (without rotisserie), 110 / 220V~ |

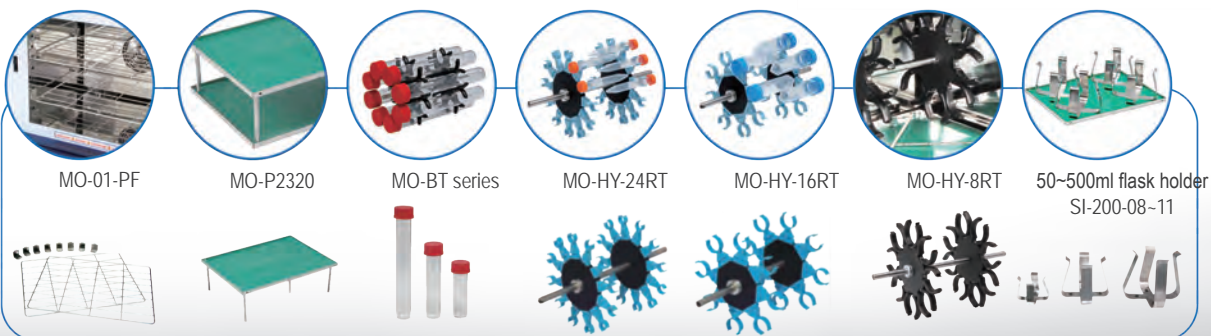
Accessories

| Cat. No | Product Description |
|-------------|-------------------------------------------------------------------------------------------|
| MO-01-PF | 1 layer of stainless steel mesh plate with 4 plate holders |
| MO-HY-8RT | 40mm tube rotisserie for 8 tubes |
| MO-HY-16RT | 50ml conical tube rotisserie for 16 tubes |
| MO-HY-24RT | 15ml conical tube rotisserie for 24 tubes |
| MO-P2320 | Additional 230x200mm platform for orbital and reciprocal shaker (with 4 of 100mm pillars) |
| SI-200-08 | Flask Holder, 50ml |
| SI-200-09 | Flask Holder, 125ml |
| SI-200-10 | Flask Holder, 250ml |
| SI-200-11 | Flask Holder, 500ml |
| MO-BT40x150 | Glass tube 40x150mm (diameter x length) |
| MO-BT40x200 | Glass tube 40x200mm (diameter x length) |
| MO-BT40x300 | Glass tube 40x300mm (diameter x length) |

- Various accessories available
- Note each accessory do not apply to all the models of MS oven. Please visit our website at www.majorsci.com for more details.



Touch screen & graphical control interface



MS Orbital Shaker

MS-NOR-30
MS-NOR-3001

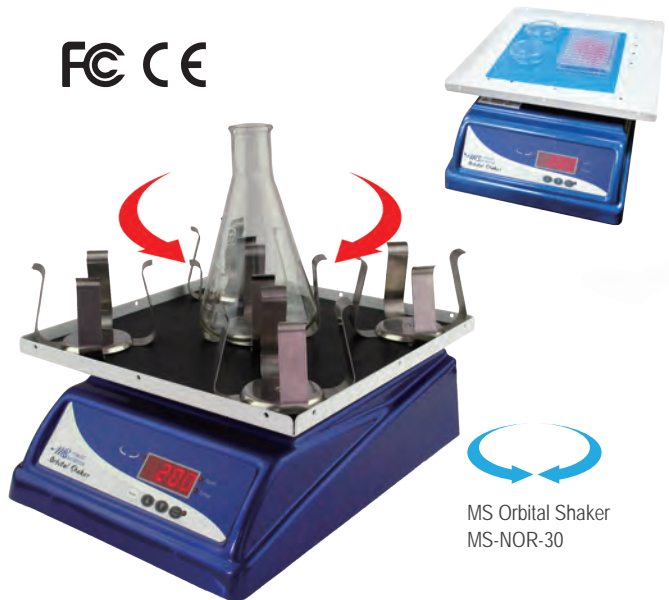
Three different shaking motions of MS Shaker series is provided for many purposes in chemical and life sciences laboratories. The Orbital Shaker digitally controls clockwise and/or counter-clockwise orbits to create superb mixing efficiency. MS Shaker provides continuous or timed operation with integral electronic timer, LED display, audible signal for automatic switch-off timed control, interchangeable/stacking platforms. Reciprocal shaker can hold up to 15kg of weight.

For Anti-moisture model

The MS Anti-moisture Shaker series offers the same capabilities as our original MS shaker series with moisture protection coating. The moisture protection allows you to operate the shaker in cold-room or low temperature environment. An anti-moisture coating is applied on the electrical structure to minimize and prevent the forming of condensation when operating in & out of the cold room. Standard features and accessories from the MS shaker series apply to all three different models.



FC CE



MS Orbital Shaker
MS-NOR-30



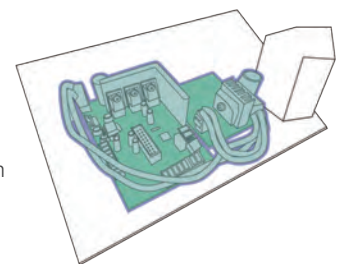
max. 10Kg

10Kg

Heavy loading capacity

MS-NOR-3001

Special coating allows anti-moisture for cold room operation



Platform capability of Flask Holders

| Flask | Max. set of flask holder | |
|--------|--------------------------|----|
| | MS-NOR-30 | |
| 50ml | | 13 |
| 125ml | | 12 |
| 250ml | | 9 |
| 500ml | | 5 |
| 1000ml | | 4 |
| 2000ml | | 1 |

*When operating with second-tier platform, max. loading capacity may change.

Features

- Continuous one way orbital shaking or two ways clockwise/ counter-clockwise orbital shaking
- Continuous or timed operation with auto shut-off
- Variable shaking speed up to 200rpm for MS-NOR-30
- Variety of accessories available
- Max. 22.0lb (10kg) loading capacity for MS-NOR-30
- Special anti-moisture coating allows smooth operation in cold room environment or CO₂ incubation
- Optional 300x300mm platform available for your selection.

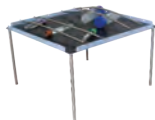
Specification



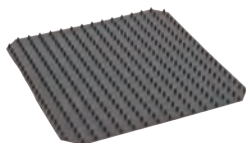
MW-SP



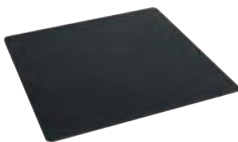
MS-P3030



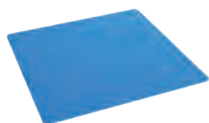
MS-DIMPLED-30



MS-FLAT-30



MS-UP-30



PPL-04-SI-SI-200-3



50~2000ml flask holder
SI-200-08-13

| Cat. No. | MS-NOR-30 (MS-NOR-3001**) |
|--------------------------|---------------------------------------------------|
| Motion | Orbital |
| Moving Feature | Orbital action in one direction or two directions |
| Bi-directional Shaking | 0.1 - 10 circle / 0.1 circular increment |
| Maximum Tilt Angle | N / A |
| Maximum Stroke Length | 20mm |
| Controller | Digital microprocessor controller |
| Speed/Inc. | 0 - 200rpm / 1rpm |
| Timer | 9999 (min) with alarm / Continuous |
| Loading Capacity | 22.0lb (10kg) |
| Motor | Stepping motor |
| Operating Temperature | Ambient to 40°C |
| Platform Dimension (WxL) | Approx. 1.2"x1.2" (300x300mm) |
| Platform Material | Painted iron metal |
| Stacking Platform | Yes |
| Dimension (WxLxH) | Approx. 11.8"x12.2"x5.1" (300x310x130mm) |
| Material | ABS and Painted iron metal |
| Weight | Approx. 15.4lb (7.0kg) |
| Rated Voltage | 110V / 220V~ selectable; 50/60Hz; 0.63A |

** Anti-moisture coating

Ordering Information

| Cat. No. | Product Description |
|-------------|---------------------------------------------------------------------------------------------------|
| MS-NOR-30 | MS Orbital Shaker with 300x300mm platform and flat non-slip rubber mat, 110V/ 220V~ |
| MS-NOR-3001 | MS Orbital anti-moistured shaker with 300x300mm platform and flat non-slip rubber mat, 110V/220V~ |

Accessories

| Cat. No. | Product Description |
|--------------------|-----------------------------------------------------------------------------------------------|
| MW-SP | Strip springs (pack of 2), 265mm |
| MS-P3030 | Additional 300x300mm platform with attachable 100mm pillars 8pcs and flat non-slip rubber mat |
| MS-DIMPLED-30 | 300x300mm dimpled mat |
| MS-FLAT-30 | Non-slip rubber mat 300x300mm |
| MS-UP-30 | Universal adjustable platform, 300x300mm (Maximum capacity: 2x2L flasks) |
| PPL-04-SI-SI-200-3 | Sticky Pad 200x200mm |
| SI-200-08 | Flask Holder, 50ml |
| SI-200-09 | Flask Holder, 125ml |
| SI-200-10 | Flask Holder, 250ml |
| SI-200-11 | Flask Holder, 500ml |
| SI-200-12 | Flask Holder, 1000ml |
| SI-200-13 | Flask Holder, 2000ml |

10L / 20L Stirring Water Bath

SWB series

The MS Stirring Water Bath series packed with built-in thermostatic baths are innovative product line to provide precise temperature control and excellent mixing performance for a wide range of laboratory applications. The built-in stirring mechanism not only provides outstanding temperature uniformity, but also applies a stirring mixture function. The 10L or 20L stainless steel tank can operate flask(s) containing a moderate amount of solution simultaneously. Single stirring mechanism model and multi-stirring models are available for your preference.



SWB-10L






Built-in magnetic stirring mechanism



Max. chamber capability
(no using stirring mixture function):
6 sets of 250ml flasks
4 sets of 500ml flasks



Compatible Bottle of SWB -20L -3

| | ≤500ml | 1L | 2L |
|------------------------------------------------------------------------------------|--------|--------------------------------|---------------------------------|
|  | 3 | 3 | 2 (position 1 & position 3) |
|  | 3 | 2 (position 1 & position 3) | 2 (position 1 & position 3)* |
|  | 3 | 3 | 2 (position 1 & position 3) |

**Teflon Stir Bar, Cylindrical, L≤60 mm.

*When 2L Erlenmeyer Flask is applied, it may be too high for the lid of water bath to put on.

Features

- Microprocessor control with digital performance for precise, accurate control
- Built-in magnetic stirring mechanism for water agitation, water temperature uniformity and medium solution mixing
- Stirring speed control
- LCD screen shows temperature and timer simultaneously
- User temperature calibration
- Safety device: warning indication on screen to avoid overheating and automatic shut down
- Multiple stirring mechanism capability
- Data Logging software available



SWB-20L

The size of different brand bottle may vary slightly. Please refer the following table as reference only.



Max. chamber capability
(no using stirring mixture function):
15 sets of 250ml flasks
8 sets of 500ml flasks



*Using as a water bath and the picture is only for reference.




Concave lid design allows condensation flow back to the tank.



Side opening of the lid to allow minimum evaporation while maintaining water bath temperature.



Water circulation function

-  Magnetic agitator
-  Stir bar

Specifications

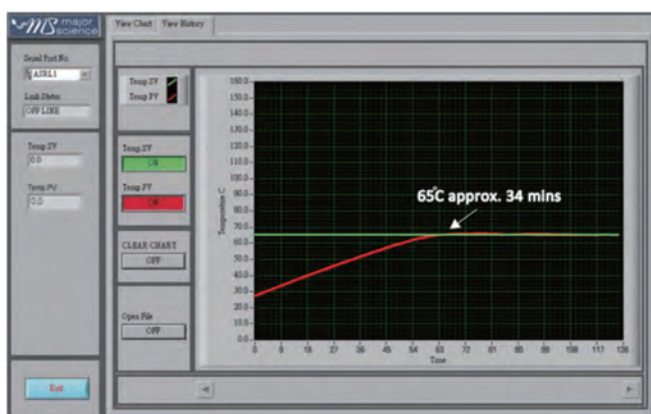
| Cat. No. | SWB-10L-1 | SWB-10L-2 | SWB-20L-1 | SWB-20L-3 |
|---------------------------------|-----------------------------------------------------------------|-----------|------------------------------------------|-----------|
| Number Of Stirring Mechanisms | 1 | 2 | 1 | 3 |
| Stirring Speed | 400-1500rpm (measured by percentage, nonlinearity) | | | |
| Bath Capacity | Approx. 2.64gal (10L) | | Approx. 5.28gal (20L) | |
| Water Circulation Function | Yes | | | |
| Display | LCD | | | |
| Heating Power | 600W | | 800W | |
| Controller | Digital microprocessor controller | | | |
| Bath Temperature | 5 °C above ambient to 99 °C | | | |
| Temperature Increment | 0.1°C | | | |
| Temperature Accuracy | ±0.2 °C at 37 °C | | | |
| Temperature Calibration | Yes | | | |
| Timer | 99 (hr): 59 (min) / Continuous | | | |
| Safety Device | Warning indication on screen with alarm and automatic shut down | | | |
| Operating Temperature | Ambient to 40 °C | | | |
| Bath Tank Material | 304 stainless steel | | | |
| Bath Inner Dimension (WxLxH) | Approx. 9.5"x11.8"x5.9" (240x300x150mm) | | Approx. 11.8"x19.7"x5.9" (300x500x150mm) | |
| Dimension (WxLxH) (without lid) | Approx. 10"x14"x9.5" (255x355x240mm) | | Approx. 13"x21.3"x9.5" (330x540x240mm) | |
| Rear Drainage Port | N / A | | Yes | |
| Material | Painted iron metal | | | |
| Lid Material | Polycarbonate with stainless steel handle | | | |
| Communication Port | RS232 | | | |
| Weight | Approx. 19.8lb (9kg) | | Approx. 30.9lb (14kg) | |
| Rated Voltage | 110V / 220V~ | | | |

Ordering Information



| Cat. No. | Product Description |
|---------------------|--------------------------------------------------------------------------|
| SWB-10L-1-110 / 220 | 10L Stirring Water Bath with 1 built-in stirring mechanism, lid included |
| SWB-10L-2-110 / 220 | 10L Stirring Water Bath with 2 built-in stirring mechanism, lid included |
| SWB-20L-1-110 / 220 | 20L Stirring Water Bath with 1 built-in stirring mechanism, lid included |
| SWB-20L-3-110 / 220 | 20L Stirring Water Bath with 3 built-in stirring mechanism, lid included |

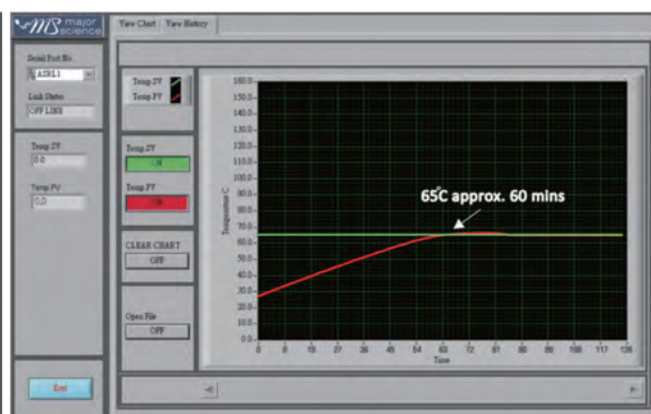
Accessories

| Cat. No. | Product Description |
|------------|-------------------------------------------------------|
| SWB-LID10 | Transparent lid for 10L Stirring Water Bath |
| SWB-LID20 | Transparent lid for 20L Stirring Water Bath |
| SWB-RS232 | RS 232 cable for data logging |
| SWB-DLSW | Data Logging software package |
| SWB-DLSW-R | Data Logging software package, include a RS 232 cable |



SWB-10L series

-  Temp. set value : 65 °C
-  Initial temp. value : 17 °C
- Water volume : 5 liters
- Process time : Approx. 34mins



SWB-20L series

-  Temp. set value : 65 °C
-  Initial temp. value : 27 °C
- Water volume : 12 liters
- Process time : Approx. 60mins

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Life Sciences Research

Peristaltic Pump

MS Peristaltic Pump series offers several digitally-controlled versions of the peristaltic pump for a variety of applications, which provide high accuracy of rpm performance. The MU-D series is the single pump head version, controlled by a microprocessor. An expandable pump head is available to perfectly fulfill high-volume demands with multi-tubing purposes.

▣ Peristaltic Pump

83-84

Digital Peristaltic Pump

*Please visit our website at www.majorsci.com for more product selection and detailed information.



Digital Peristaltic Pump Dual and Tetrad Peristaltic Pump

CE

MU-D series

MU-D Peristaltic Pump series is ideal for a variety of applications, which include filtration, circulation, sampling, chemical spraying, dispensing, transferring, feeding and filling. The easy-to-use pump head design accommodate several different silicon tubing sizes. This provides a great flexibility for a wide range of flow rates to be utilized when connecting with different sizes of tubings.

The MU-D series is also reversible providing better convenience and flexibility to the user. The digital control provides high accurate rpm performance.

MU-D01 pump is a digital controlled mode with a solid 50W brushless motor, and MU-D02 is designed with a higher horsepower, 100W for higher volume demands required.

MU-D03 pump is the most powerful pump in this series which packs with powerful pump head, allows the flow rate to up to 3,272ml/min with thicker tubing (1.6mm). Select the appropriate model for your lab with economical yet powerful enough peristaltic pump.



MU-D01/MU-D02



Easy load pump head



Second expandable pump head is optional (MU-D01 & MU-D02 only)

Features:(for MU-D series)

- Digital microprocessor control for precise speed control
- Compact size provides high portability
- High quality Masterflex and Watson Marlow easy load pump head
- Reversible for purging purposes
- Flow rate range from 1.2 to 1,140ml/min for MU-D01
- Flow rate range from 0.3 to 2,280ml/min for MU-D02
- Flow rate range from 8 to 3,272ml/min for MU-D03
- 2-step programmable operation mode available



MU-D03

* All images are for reference only, actual products might differ from the pictures above.
* Technical specifications subject to change without notice.

Specifications

| Cat. No | MU-D01 | MU-D02 | MU-D03 |
|-----------------------------|----------------------------------------------------------------------------------|-------------------|---------------------------------------------|
| Controller | Digital microprocessor controller | | |
| Motor | Brushless motor | | |
| Power | 50W | 100W | |
| Pump Speed / Increment | 20 - 300rpm / 1rpm | 5 - 600rpm / 1rpm | 20 - 300rpm / 1rpm |
| Max. Pump Speed | 300rpm | 600rpm | 300rpm |
| Flow Range ** | 1.2 - 1,140ml/min | 0.3 - 2,280ml/min | 8 - 3,272ml/min |
| Number Of Rollers | 4 | | 2 |
| Number Of Peristaltic Pumps | 1(Max is 2, the second pump head is optional and need the confirm before order.) | | 1 |
| Operating Temperature | Ambient to 40 °C | | |
| Dimension (WxLxH) | Approx. 7.9"x13.4"x5.1" (200x340x130mm) | | Approx. 9.5"x13.3"x 6.6" (240x338x167mm) |
| Material | Painted iron metal | | |
| Weight | Approx. 12.5lb (5.7kg) | | Approx. 13.4lb (6.2kg) |
| Rated Voltage | 110V/220V, Selectable | 100V-240V- | 100V-240V- |
| Program | 2-step Program (running & ceasing); Max. of timer: 99 (hr) : 59 (min) : 59 (sec) | | |
| Auto Resume Function | Yes | | |

**The flow range is subject to the silicone tube that used. Please see Silicon tubing specifications table for reference.







Ordering Information

| Cat. No | Product Description |
|--------------------|------------------------------------------------------------|
| MU-D01 | Digital Peristaltic Pump, 110 / 220V- |
| MU-D02 | Superior Digital Peristaltic Pump, 100V-240V- |
| MU-D03 | Supreme Digital Peristaltic Pump, 100V-240V- |
| PWI-FS-05-00000000 | Digital Peristaltic Pump connection cable for FS-05 |
| PWI-FS-06-00000000 | Digital Peristaltic Pump connection cable for FS-06, FS-07 |

Accessories

| Cat. No | Product Description |
|---------|--------------------------------------------------------------|
| MU-PU1 | Easy Load pump head for MU-D01 / MU-D02 |
| MU-S13 | Silicon tube I.D. 0.03 inch (0.8mm), 25ft |
| MU-S14 | Silicon tube I.D. 0.06 inch (1.6mm), 25ft |
| MU-S16 | Silicon tube I.D. 0.12 inch (3.1mm), 25ft |
| MU-S25 | Silicon tube I.D. 0.19 inch (4.8mm), 25ft |
| MU-S17 | Silicon tube I.D. 0.25 inch (6.4mm), 25ft |
| MU-S18 | Silicon tube I.D. 0.31 inch (7.9mm), 25ft (MU-D series only) |

Tubing Information

| Silicon Tubing Specifications |  |  |  |  |  |  |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Cat. No. | MU-S13 | MU-S14 | MU-S16 | MU-S25 | MU-S17 | MU-S18 |
| Inner Diameter Inches. (mm) | 0.03(0.8) | 0.06(1.6) | 0.12(3.1) | 0.19(4.8) | 0.25(6.4) | 0.31(7.9) |
| Hose Barb Size Inches. (mm) | 1/16(1.6) | 1/16(1.6) | 1/8(3.2) | 3/16(4.8) | 1/4(6.4) | 3/8(9.5) |
| Flow Range With 6 To 600rpm Drive (ml/min) | 0.36 to 36 | 1.3 to 130 | 4.8 to 480 | 10 to 1000 | 17 to 1700 | 23 to 2300 |
| | *The flow range is subject to the motor drive of the pump. Please see Peristaltic Pump specifications for reference. | | | | | |
| Maximum Pressure, Continuous | 25psig (1.7bar) | | 20psig (1.4bar) | | 15psig (1.0bar) | 10psig (0.7bar) |
| Maximum Pressure, Intermittent | 40psig (2.7bar) | | 35psig (2.4bar) | | 20psig (1.4bar) | 15psig (1.0bar) |
| Maximum Vacuum | 26" Hg (660mm Hg) | | | | 20" Hg (510mm Hg) | |
| Suction Lift | 29ft H ₂ O (8.8m H ₂ O) | | | | 22ft H ₂ O (6.7m H ₂ O) | |

* MU-S18 is not compatible with MFU series.



*Dual Pump Head available accommodate two silicon tubings with the same pump speed at the same time.



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