

# Bath Circulator



## Refrigerated & Heating Bath Circulator



**Refrigerated & Heating Bath Circulator**  
Program type

- Programmable temperature control.
- LCD color touch screen.



**Refrigerated & Heating Bath Circulator**  
General type

- Various temperature range and capacity.
- Smart refrigerating system.

Working Temp. Range	-35 ~ 150°C -25 ~ 150°C	-35 ~ 150°C -25 ~ 150°C
Temp. Stability at -10°C	± 0.05°C	± 0.05°C
Bath Volume	5L / 10L / 20L / 30L	5L / 10L / 20L / 30L
Model	RW3-P	RW3

## Heating Bath Circulator



**Heating Bath Circulator**  
Program type

- Programmable temperature control.
- LCD color touch screen.



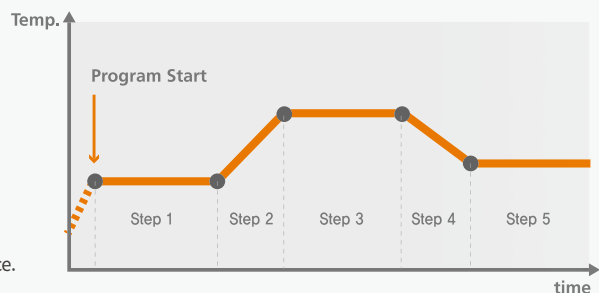
**Heating Bath Circulator**  
General type

- Suitable for precise temperature testing above ambient temperature.
- Temperature deviation alarm.

Working Temp. Range	Amb. +10-150°C	Amb. +10-150°C
Temp. Stability at 50°C	± 0.05°C	± 0.05°C
Bath Volume	5L / 10L / 20L / 30L	5L / 10L / 20L / 30L
Model	CW3-P	CW3

### Programmable Mode

- Setting and saving 10 programs.
- Up to 10 steps can be set per program.
- Set time up to 99 hours and 59 minutes per step.
- Program repetition possible up to 99 times.
- Time set for increasing / decreasing temperature.
- Pre-heating possible before starting program.
- Displays and controls the status of the device through the computer interface.



# Chiller (Recirculating Cooler)



## Ambient temp. type



### Chiller(Recirculating Cooler)

HX general type

- Representative recirculating cooler suitable for general use.
- Minimized on/off operation of compressor.

Temperature Stability	± 1.0°C
Working Temp. Range	+ 3 ~ 40°C
Max. Cooling Capacity	29 kW at 20°C
Pump Capacity	Max. 130L /min. , 6 bar
Model	HX

## Low temp. type



### Chiller (Recirculating Cooler)

HL low-temperature general type

- Recirculating cooler for low temperature range.
- Easy checking the pump status by pump pressure gauge.

Temperature Stability	± 1.0°C
Working Temp. Range	-20 ~ 40°C
Max. Cooling Capacity	7.1kW at 20°C
Pump Capacity	Max. 70 L/min. 6 bar
Model	HL

## Low / High temp. precision type



### Chiller (Recirculating Cooler)

HS low-temperature precision type

- Precise temperature control at low temperature range.
- Provide function of control via external temperature sensor.

Temperature Stability	± 0.2°C
Working Temp. Range	-20 ~ 40°C
Max. Cooling Capacity	7.1kW at 20°C
Pump Capacity	Max. 70 L/min. 6 bar
Model	HS



### Chiller (Recirculating Cooler)

HH high-temperature precision type

- Wide temperature range.
- Precise control with +0.1°C stability by PID temperature control.

Temperature Stability	± 0.1°C
Working Temp. Range	-20 ~ 80°C
Max. Cooling Capacity	6.5kW at 20°C
Pump Capacity	Max. 70 L/min. 6 bar
Model	HH



### Chiller (Recirculating Cooler)

Compact type

- Easy installation and moving with compact design.
- Optimized for use with rotary evaporators.

Temperature Stability	± 1.0°C
Working Temp. Range	-10 ~ 30°C
Max. Cooling Capacity	580W at 20°C
Pump Capacity	Max. 26 L/min. 0.7 bar
Model	RC

### Proven reliability & reproducibility

Made and tested according to international standards.

- Meets safety requirements, including electrical safety standards for chillers. (Recirculating Cooler)
- Conduction of device performance tests required as per the standards to provide reliable product performance.
- Verified test results provided as specification to allow for selection of the suitable model for the user.

### Customized Recirculating Cooler

Customized design, production and installation services with optimized performance for your application.

- Temperature range and stability.
- Cooling capacity and heat absorption ability.
- Pump capacity and configuration in/out.
- Reasonable convenient safety system.
- Controller & data processing.

# Heating Bath & Cold Trap Bath



## Heating Bath



CE

### Heating Bath

General type

- Temperature calibration & timer.
- Low solution level limiter.

Temp. Range	Amb. +7 ~ 100°C
Bath Volume	3.5L / 11.5L / 20L
Model	BW3-G



CE

### Heating Bath

Agitator type

- Circulation of solution by an agitator.
- Independent temperature control for each bath.

Temp. Range	Amb. +5 ~ 100°C
Bath Volume	3.5L / 11.5L / 20L 3.5L & 3.5L / 3.5 & 11.5L / 11.5L & 11.5L / 11.5L & 20L
Model	BW-H



CE

### Heating Bath

Economy type

- Economical water bath for easy use.
- Over temperature limiter.

Temp. Range	Amb. +7 ~ 100°C
Bath Volume	3.5L / 11.5L / 20L
Model	BW-B

## Heating Bath, Visible



CE

### Heating Bath

Visible type

- Convenient for internal observation.
- Easy to measure viscosity.

Temp. Range	Amb. +5 ~ 150°C
Bath Volume	25L / 40L
Model	VB

## Heating Bath, Shaking



CE

### Heating Bath

Shaking type

- Temperature control and shaking can be set independently.
- Spring wire Rack as standard accessory.

Temp. Range	Amb. +5 ~ 100°C
Bath Volume	17L / 25L / 37L / 55L
Model	BS

## Cold Trap Bath



### Cold Trap Bath

- Capture moisture, organic solvents etc. into vacuum pump.
- It can be used in bath that requires low temperature.

Temp. Range	Down to -40°C
Bath Volume	4.8L
Model	CTB-10



Provides optimal choice for diverse experiment needs.  
**Model series according to function classification and usage.**

# Oven & Furnace



## Forced Convection



**Forced Convection Oven**  
Program type

- Programmable temperature control.
- LCD color touch screen.

Temp. Range	Amb. +10 ~ 250°C
Chamber Volume	60L / 102L / 151L
Model	OF-P / OF-PW



**Forced Convection Oven**  
General type

- Most representative forced convection type.
- Easy to use with computer connection.

Temp. Range	Amb. +10 ~ 250°C
Chamber Volume	50L / 100L / 153L
Model	OF-G/OF-GW



**Forced Convection Oven**  
Economy type

- Stable product that is faithful to the basics.
- Includes safety device as standard.

Temp. Range	Amb. +10 ~ 220°C
Chamber Volume	52L / 100L / 150L
Model	OF-E



**Forced Convection Oven**  
Large type

- Large capacity max. 760L as standard type.
- Max. 300°C temperature control.

Temp. Range	OF3, OF3-W, P, PW : Amb. +15 ~ 200°C	OF3-H, HP, HW, HPW : Amb. +15 ~ 300°C
Chamber Volume	314L / 450L / 760L	
Model	OF3/ OF3-W, P, PW, H, HP, HW, HPW (Large)	

## Forced Convection



**Forced Convection Oven**  
2-Chambers type

- Independent temperature control for each chamber.
- Ventilation hole side of chamber.

Temp. Range	Amb. +10 ~ 200°C
Chamber Volume	120L (60L x 2 Chamber)
Model	OF-02G-2C



**Forced Convection Oven**  
4-Chambers type

- Space saved chamber.
- Built-in casters for easy moving and installation.

Temp. Range	Amb. +10 ~ 200°C
Chamber Volume	240L (60L x 4 Chamber)
Model	OF-02G-4C

## Natural Convection



**Natural Convection Oven**  
General type

- Most representative natural convection type.
- Suitable for drying powder samples.

Temp. Range	Amb. +15 ~ 250°C
Chamber Volume	52L / 91L / 135L
Model	ON-G / ON-GW



**Natural Convection Oven**  
Economy type

- Stable product that is faithful to the basics.
- Includes safety device as standard.

Temp. Range	Amb. +15 ~ 220°C
Chamber Volume	52L / 100L / 150L
Model	ON-E

## Hybridization Oven



**Hybridization Oven**

- Rocker inside of chamber.
- Suitable for Hybridization experiments with 10 Programs & 10 steps program control.

Type	Forced Convection
Temp. Range	Amb. +5 ~ 65°C
Chamber Volume	10L
Model	HO

## Vacuum Oven



**Vacuum Oven**

- Product optimized for vacuum oven.
- Structure separating vacuum/release line.

Temp. Range	Amb. +5 ~ 250°C
Chamber Volume	28L / 65L
Model	OV4

## Muffle Furnace



**Muffle Furnace**

- Electric furnace for a high temperature experiment of 1100 /1500°C.
- Multiple safety devices for user and sample Protection.

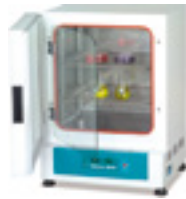
Temp. Range	Max.1100°C	Max.1500°C
Chamber Volume	3.5L / 4.5L / 12.0L	3.5L / 4.5L / 12.0L
Model	MF-GF/ MF-G	MF-HF/ MF-H



# Incubator



## Incubator



### Incubator (Air-Jacket)

General type

- Versatile air-jacketed natural convection incubators.
- Glass door for contamination prevention.

### Incubator (Film Heater)

Economy type

- Stable product that is faithful to the basics.
- Low noise with film heater-type incubator.

### Incubator (Forced Convection)

Mini type

- Compact design.
- Simple control with touch button.

Type	Air-Jacket	Natural Convection	Forced Convection
Temp. Range	Amb.+5-80°C	Amb. +3- 60°C	Amb. +5 ~ 65°C
Chamber Volume	60L / 102L / 151L	65L / 150L / 205L	10L
Model	IB-G	IB-E	IM

## Incubator



## Plant Growth Chamber



### Incubator (Forced Convection)

2-chambers type

- 60L capacity for each chamber.
- Independent temperature control for each chamber.

### Incubator (Forced Convection)

4-chambers type

- Independent temperature control for each chamber.
- Built-in casters for easy moving and installation.

### Plant Growth Chamber

- Auto-tuning for temperature/humidity.
- Lighting provided by plant-friendly lamps.

Type	Forced Convection	Forced Convection	Temp. Range	5 ~ 50°C (10-50°C: Lamp on / 20 ~ 50°C: with humidity)	
Temp. Range	Amb. +5 ~ 70°C	Amb. +5 ~ 70°C	Illumination Range	0 to 20000 lux	0 to 35000 lux
Chamber Volume	120L (60L x 2)	240L (60L x 4 Chamber)	Chamber Volume	300L / 300L	1000L
Model	IB-02G-2C	IB-02G-4C	Model	GC-300TL / 300TLH	GC-1000TLH

## Low Temperature Incubator



### Low Temperature Incubator

General type

- Provides low temperature culture environment like BOD experiment.
- Internal power outlet included as standard for easy operation of small products.

### Low Temperature Incubator

Air-Jacket type

- Minimizes medium getting dried by air-jacket type.
- Prevention of frost by automatic defrosting at all times.

### Low Temperature Incubator

Personal type

- Low temperature control by using electronic cooling element (Peltier Module).
- Convenient use by minimized vibration and power consumption.

### Low Temperature Incubator

Multi type

- 150L capacity for each chamber.
- Independent temperature control for each chamber.

Type	Forced Convection	Natural Convection (Air-Jacket)	Forced Convection	Forced Convection
Temp. Range	0 ~ 80°C	4 ~ 70°C	10 ~ 40°C (Amb. 25°C)	0 ~ 60°C
Chamber Volume	150L / 242L	156L / 254L	14L / 48L	300L (150L x 2) / 600L (150L x 4)
Model	IL3	IL3-A	ILP	IL-11-2C / IL-11-4C

# Incubated Shaker



## Incubated Shaker



### Incubated Shaker

Tabletop type

- Optimized for use on bench top.
- Convenient internal observation.



### Incubated Shaker

Stackable type

- Double-stacked for space saving.
- Also, easy to use as a general incubator.



### Incubated Shaker

Floor type

- Strong DD motor for large shaking capacity agitation.
- Large capacity up to 5ea x 6 L flasks at the same time.

Temp. Range	Amb. +5 ~ 80°C	Amb. -15 ~ 80°C (min. 15°C)	Amb. +5 ~ 80°C	Amb. -20 ~ 80°C (min. 4°C)	Amb. +5 ~ 80°C	R: Amb. -20 ~ 80°C
Max. Speed	20 ~ 500 rpm	20 ~ 500 rpm	20 ~ 500 rpm	20 ~ 500 rpm	30 ~ 300 / 500 rpm	30 ~ 300 / 500 rpm
Motion Type	Orbital	Orbital	Orbital	Orbital	Orbital	Orbital
Max. 250ml Flask	~ 20 ea	~ 20 ea	~ 24 ea	~ 24 ea	~ 39 ea	~ 39 ea
Model	IST	IST-R	ISS	ISS-R	ISF	ISF-R

## Incubated Shaker

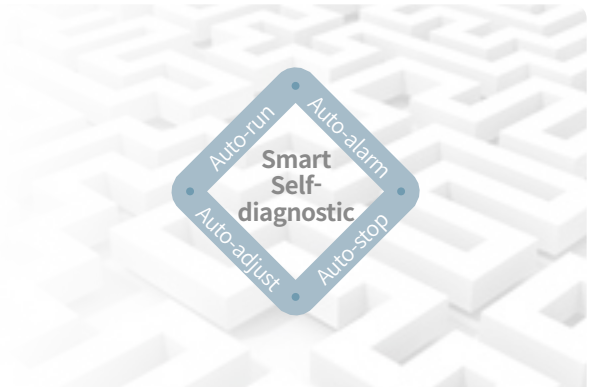


### Incubated Shaker

Multi-stackable type

- Maximum triple-stacked for space saving.
- Strong DD motor for large-capacity.

Temp. Range	Amb. +10 ~ 80°C	Amb. -20 ~ 80°C (min. 4°C)
Max. Speed	30 ~ 300 / 400 rpm	30 ~ 300 / 400 rpm
Motion Type	Orbital	Orbital
Model	ISS	ISS



- Alarm is generated by monitoring difference between actual rpm/temperature and set rpm/temperature.
- Automatic rpm adjustment when device instability occurs. (high rpm, overload, weight imbalance, etc.)
- Detects abnormal conditions relating to the platform on which the sample is placed and stops the operation.
- Automatic restart as it was operated after power recovery.

**Experience reliable precise temperature control up to 80°C.**  
Advanced temperature control system by Lab Companion's technology.

# Shaker



## Open Shaker



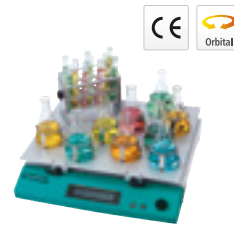
**Shaker**  
Dual Action type

- Provides powerful shaking.
- Orbital/Reciprocal motion selection.



**Shaker**  
General type

- Stable shaking even with high load samples.
- Structure prevents the sample from flowing into inside.



**Shaker**  
Program type

- Program control mode.
- Mounts the large capacity of samples.



**Shaker**  
Compact type

- Easy to use as a small shaker.
- It can be used inside of another chamber. (Amb. 2-60°C)

Motion Type	Orbital / Reciprocating			Orbital		Orbital		Orbital	
Speed Range	20 ~ 500 rpm			30 ~ 500 rpm	30 ~ 300 rpm	30 ~ 500 rpm		50 ~ 300 rpm	
Max. 250ml Flask Capacity	~8 ea	~14 ea	~24 ea	~39 ea	~39 ea	~51 ea	~9 ea		~9 ea
Model	OS-2000	OS-3000	OS-4000	OS-7100	OS-7200	SKC	CMS		CMS

## Shaker



**Microplate Shaker**

- Suitable for sample mixing for microplates, tubes etc.
- Tube rack as optional accessory.



**Rocking Shaker**

- Easy to adjust angle of motion from 7° to 13°.
- Up to 99 hours timer function.



**Waving Shaker**

- Easy to adjust angle of motion from 0° to 13°.
- It can be used inside of another chamber. (Amb. 2-60°C)



**Rotator**

- Easily adjustable angle up to 90°.
- Large quantities sample could be mixed at once when loading 2-stage disk.

Motion Type	Orbital	Rocking	Waving	Rotating
Speed Range	150 ~ 1200 rpm	5 ~ 100 rpm	8 ~ 100 rpm	2 ~ 70 rpm
Capacity	Microplate x 4 ea	276 x 276 mm	276 x 276 mm	1.5ml Tube x 120 ea (when 2-stage disk loading)
Model	CPS	CRS	CWS	CRT

## Funnel Shaker



**Funnel Shaker**

- Powerful up and down reciprocal motion.
- 3 quantities on each side (standard), mountable max 5 quantities flask.

Motion Type	Vertical Reciprocating
Speed Range	50 ~ 300 rpm
Capacity	Separated Funnel 500ml x 6 ea (max. 10 ea)
Model	RS

## Heating Shaker



**Heating Shaker**

- Rapid and accurate control of temperature.
- Optional block according to kinds of sample.

Temp. Range	Amb. +5-100°C
Motion Type	Orbital
Max. Speed Range	150 ~ 1500 rpm
Model	CBS

# Hotplate & Magnetic Stirrer



## Hotplate & Magnetic Stirrer



CE

### Hotplate & Magnetic Stirrer

Digital type

- Precise temperature control by external temperature sensor.
- Multiple overheating protection devices.

Max. Temp. Range	Top Plate, Max. 350°C	
Max. Speed Range	30 ~ 2000 rpm	
Timer	Heating	<input type="radio"/>
	Stirring	<input type="radio"/>
Model	TS	



CE

### Hotplate & Magnetic Stirrer

Analog type

- Structure prevents the sample from flowing into inside.
- Fast stirring speed control with real time response.

Max. Temp. Range	Top Plate, Max. 350°C	
Max. Speed Range	Max. 2000 rpm	
Timer	Heating	<input type="radio"/>
	Stirring	<input type="radio"/>
Model	TM	



CE

### Hotplate

Digital type

- Top plate coated with white ceramic for excellent corrosion resistance.
- Warning displayed when top plate is 50°C or more.

Max. Temp. Range	Top Plate, Max. 350°C	
Max. Speed Range	-	
Timer	Heating	<input type="radio"/>
	Stirring	-
Model	T	

## Magnetic Stirrer



CE

### Magnetic Stirrer

Digital type

- Maintains accurate speed with feedback control even when sample viscosity and amount change.
- Timer & Program operation function.

Control Type	Digital
Speed Range	30 ~ 2000 rpm
Timer & Program	<input type="radio"/>
Model	MS-G



CE

### Magnetic Stirrer

Analog type-Round

- Quick control of stirring with real time response.
- Provides Silicon-based top plate cover.

Control Type	Analog
Speed Range	150 ~ 2500 rpm
Timer & Program	-
Model	MS-B



CE

### Magnetic Stirrer

Analog type-Triangle

- Stable structure even with fast stirring.
- Polypropylene (PP) material with excellent chemical resistance.

Control Type	Analog
Speed Range	150 ~ 2500 rpm
Timer & Program	-
Model	MS-T

## Multi Position Type



CE

### Magnetic Stirrer

Multi Position type

- 6 models provided with max. 15 positions.
- 4 kinds of stirring control mode. (All, Column, Row, Point)

Control Type	Digital
Temp. Range	-
Speed Range	30 ~ 2000 rpm
Model	MS-M



CE

### Hotplate & Magnetic Stirrer

Multi Position type

- 4 kinds of stirring control mode and timer. (All, Column, Row, Point)
- 2 model provided with 9/15 portion.

Control Type	Digital
Temp. Range	Top Plate, Max. 120°C
Speed Range	30 ~ 2000 rpm
Model	MS-MH



# Overhead Stirrer & Vortex Mixer



## Overhead Stirrer



### Specialized external controller

- Device is controlled conveniently apart from fume hood.
- Checking control status in real time and controls start/stop or stirring speed changes.
- Color LCD touch display for intuitive and easy control.



### Overhead Stirrer

Prestige touch type

- BLDC motor and color LCD display.
- External controller and PC control for remote operation.

Display	LCD Touch	LCD Touch
Speed Range	50 ~ 1200 rpm	50 ~ 2000 rpm
Viscosity, Max. (cP)	30000 (~1200 rpm) 50000 (~700 rpm)	5000 (~2000 rpm) 50000 (~300 rpm)
Timer	<input type="checkbox"/>	<input type="checkbox"/>
Program	<input type="checkbox"/>	<input type="checkbox"/>
Model	MSH-0512	MSH-0520

## Overhead Stirrer



### Overhead Stirrer

High performance type

- Safety function for over temperature and overload protection.
- Convenient use through the computer interface.

Display	Digital
Speed Range	80 ~ 2000 rpm
Viscosity, Max. (cP)	5000 (~2000 rpm) 50000 (~200 rpm)
Timer	-
Program	<input type="checkbox"/>
Model	MSD



### Overhead Stirrer

Easy control type

- Easy control model optimized for simple use.
- Safety function for over temperature and overload protection.

Display	Digital
Speed Range	80 ~ 2000 rpm
Viscosity, Max. (cP)	5000 (~2000 rpm) 50000 (~200 rpm)
Timer	-
Program	-
Model	MSA



### Magnetic Drives

- Full sealing of reaction container.
- Cooling line as standard.

- Max. Torque: 6 kgf.cm
- Driving Pressure: 1 x 10<sup>4</sup> mmHg to 5 kg/cm<sup>2</sup>
- Driving Temp. (with Cooling): Max. 300°C

MD

## Vortex Mixer



### Vortex Mixer

- Convenient use with easily interchangeable accessories.
- Intuitive and convenient operation.

Motion Type	Orbital
Speed Range	Max. 3000 rpm
Operating Mode	Touch, Run
Model	VM-96T



### Vortex Mixer

- Stable motion by its low-profile with small foot print.
- 3 operation mode according to use.

Motion Type	Orbital
Speed Range	Max. 3000 rpm
Operating Mode	Touch, Run-L, Run-H
Model	VM-96A

# Life Science Equipment



## Heating Block



### Heating Block

- Precise temperature control which can be set in units of 0.1°C.
- Optional block depend on tube size.

- Temp. Range: Amb. + 5 ~ 130°C
- Uniformity at 80°C: ± 0.5°C

Model: CHB



### Heating & Cooling Block

- Timer & program operation function.
- Precise and stable temperature control.

- Temp. Range: Amb. - 20 ~ 95°C
- Uniformity at 37°C: ± 0.5°C

Model: CCB



### Heating Shaker

- Rapid and accurate control of temperature.
- Optional block depend on tube size.

- Temp. Range: Amb. + 5 ~ 100°C
- Orbital Type, Max. 1500 rpm

Model: CBS

## Hybridization



### Hybridization Oven

- Rocker inside of chamber.
- Suitable for hybridization experiments with 10 programs & 10 steps program control.

- Temp. range: Amb. + 5 ~ 65°C
- Speed range: 5 ~ 50 rpm

Model: HO

## Electrophoresis



### Electrophoresis System

- Integral structure of transparent polycarbonate material.
- Excellent durability and convenient sample identification.

- Buffer capacity (L) : 0.5 / 1 / 1.8

Model: EP



### Power Supply

- Power supply for electrophoresis system.
- 4 of output terminal can be used simultaneously
- Exact output by Microprocessor.

- Output Range: 5~250V, 0.01~3A, Max. 300W
- Type of output: Constant Voltage, Constant Current

Model: EPS



Comb 27/40 well



Comb 20/31 well



Comb 25/34 well



Comb 16/20 well



### PCR Workstation

- High-performance HEPA filter provides a clean environment.
- Suitable for sensitive experiment like PCR.

- 3 model provided according to size.
- UV timer function

Model: PW



### Ice Pan

- Foamed urethane material with excellent thermal insulation.
- Strong structure without damage or transformed.

- Temp range : -196°C ~ 80°C
- Easy movement with top rim structure.

Model: IBS



### On-Ice Rack

- Aluminum with excellent thermal conductivity.
- Keeps temperature of the sample constant on ice.

- On-Ice Rack: Micro Tube (1.5 ml, 0.2 ml)
- On-Ice Rack (96W): 96 Wellplate, Micro Tube (1.5 ml)



### Storage Box & Cryo Box

- Material without deformation at low temperature.
- No needs for any labeling when using.

- Storage Box (SRB-100): 1.2 ~ 2.0 ml, 100 ea
- Cryo Box (CRB): 3 models according to size : 1.2~2.0 ml (25 ea), 1.2~2.0 ml (81 ea), 5 ml (91 ea)

# Autoclave & Others



### Autoclave



#### Autoclave

- Convenient use with various operation mode for each usage.
- Sterilization process monitoring ensures reliable sterilization.

- Sterilization Temperature: 110 ~ 123°C
- Melting Temperature: 60 ~ 100°C
- Sterilization Pressure at 121°C: 1.1 ~1.2 kg/cm<sup>2</sup>
- Volume: 50L / 65L / 85L / 105L

Model: ST

### Pump



#### Electrical Aspirator

- Fast formation of low vacuum state via two aspirators.
- Use PP having good chemical-resistance for contact parts of organic solvent.

- Free-air Capacity: 18L /min x 2 ea
- Max. Vacuum Range: 0.0998 Mpa
- Motor Capacity: 150 W
- Bath Volume: 9.5 L

Model: VE



#### Rotary Vacuum Pump

- Oil vacuum pump for formation of high vacuum state.
- Prevents air reflux, essentially used with vacuum ovens to achieve a higher level of vacuum pressure

- Pump Speed: 100 / 200 / 400 / 600 L/min
- Ultimate Pressure: 1.3 x 10<sup>-1</sup> / 6.7x10<sup>-2</sup> Pa

Model: W2V

### Ultrasonic Cleaner

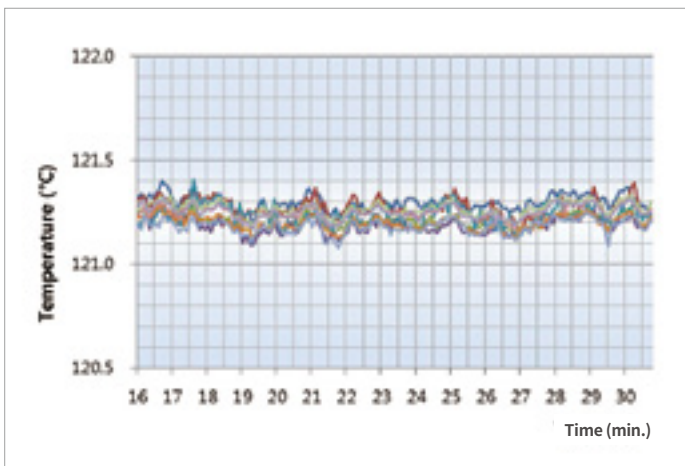


#### Ultrasonic Cleaner

- Strong cleaning power by high-energy BLT Type vibrator.
- Easy drain of cleansing solution through drain valve.

- Frequency: 40 kHz
- Ultrasonic Power: Max. 500 W

Model: UCP / UCS



Model: ST- 85G (measured with 10 of temperature sensors )

### Aspiration



#### Filter Adapter

- It can be used between the filtering funnel and the filtering flask during vacuum filtration.
- Excellent sealing and adhesion with silicone material.

# Hood & Clean Bench



## Clean Bench



### Clean Bench

Advanced type

- Convenient dual controller (outside and inside of chamber).
- Fully compliant with validation requirements.

### Clean Bench

Basic type

- Pressure gauge at front as standard accessory.
- Easy replacement of HEPA filter.

### PCR Workstation

- UV blocking about 99.9% with transparent acrylic material.
- Essential for sensitive experiment such as PCR.

### UV Sterilization Cabinet

- Sterilization using UV lamp.
- Count-down timer.

Filter	HEPA Filter	HEPA Filter	HEPA Filter	-
UV Lamp	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fluorescent Lamp	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Airflow	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-
Model	BC-H	BC-B	PW	UVC

## Fume Hood



External Fume Extraction System



Filter Box (Movable Extraction Filter System)



### Ductless Fume Hood

- Remove and circulate fume via built-in filter.
- No need duct. Convenient moving and installation.

### Extraction Arm Hood

- Filter box type.
- Various hood and arms.

### Molded Fume Hood

- Table top type with compact design.
- Easy use with connecting duct system.

### Molded Observation Fume Hood

- Easy use with connecting dust system.
- Design by transparent windows at the front and the rear, making it easy to observe the experiment process from the both side.

Filter	Selectable Activated Carbon, Acid, Formaldehyde, Ammonia/Amines and HEPA Filter.	Selectable Activated Carbon, Acid, Formaldehyde, Ammonia/Amines and HEPA Filter.	Selectable Activated Carbon, Acid, Formaldehyde, Ammonia/Amines and HEPA Filter.(EM-33)	Selectable Activated Carbon, Acid, Formaldehyde, Ammonia/Amines and HEPA Filter.(EM-33)
Model	DLH	EFS-33 (Dual), EFS-33 (Single)	PMH-720 + EM-33	POH-720 + EM-33



Lab Companion's compose Hood and Clean Bench in optimized products protecting **experimenters, environments and samples.**





## Safety



### Fire Safety Storage Cabinet

- Safe storage of flammable / combustible materials in the event of a surrounding fire.
- Designed according to the strictest European standards EN 14470-1
- Fire proof performance : 30 min / 60 min / 90 min



### Acid Corrosive Cabinet

- Acid/Base reagents can be safely stored for a long period of time.
- Solid steel structure with corrosion-resistant interior finish.



### Molded Acid Corrosive Cabinet

- Durable chemical resistant plastic storage cabinets for Acid/Base materials reagents.
- Easy use with connecting filter or fan modules.

Internal Volume	Stand (90min type) : 763L / 357L Stand (30min type) : 802L / 375L Under (90min type) : drawer-244L / 110L Under (60min type) : 89L / 76L Under (30min type) : 252L / 116L	Stand Type : 894L / 852L / 445L / 426L Under Type : 314L / 227L / 146L / 115L	122L Exterior Dimension : 720 x 450 x 560 mm
Model	SC2-F / SC3-F + EM-33	SC-C + EM-33	PCC-720

## General



### Multipurpose Cabinet

Window

- Window door type for easy figures out stored samples.
- Drawer shelves with PP having good chemical -resistance, makes easy store.
- Fume extraction module & filters. (option)



### Multipurpose Cabinet

Drawer

- Drawer structure with PP having good chemical-resistance.
- Suitable for storage in long time with no sunlight
- Fume extraction module & filters. (option)



### Multipurpose Cabinet

Tabletop & Under Table

- Good storage efficiency with various drawer sizes.
- Available placing at top of testing bench and under of hood.

Model	DS-OW / DS-TW	DS-S / DS-C	DS-TT / DS-UT
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## Functional



### Filtering Storage Cabinet

- Filter installed inside, internal air circulation.
- Easy moving and installation, safety warning alarm.

### Filtering Storage Refrigerator

- Optimized air flow for removing fume gas.
- Stable uniformity of temperature in upper and lower chamber.

### Gas Cylinder Cabinet

- Safe protection from external shock.
- Convenient folding ramp structure for replacing heavy cylinders.

Feature	• Internal Volume: 604 L / 1317 L • Capacity (L or 1L Bottle): 140 / 280 • Optional Filter : HEPA Filter, Complex Carbon Filter (Aldehyde, acid and amines are available.)	• Internal Volume: 660 L, 1451 L • Capacity (L or 1L Bottle): 100 • Optional Filter : HEPA Filter, Complex Carbon Filter (Aldehyde, acid and amines are available.)	Gas Cylinder Max. storage capacity (Ø230 mm) : 2 ea / 3 ea
Model	FSC	FSR	DS-GC

# Dry cabinet & Desiccator



## Dry Cabinet



### Dry Cabinet

Auto desiccator

- Convenient maintenance with automatic electronic desiccator unit
- Easy humidity set by 1%RH unit

Internal Volume	150 L / 300 L (Vertical, Horizontal type) / 600 L
Control Range	20 ~ 60%RH (1% Scale) / 1 ~ 10%RH (1% Scale)
Model	DC / DCL

- 1) Above (internal) humidity and temperature may temporarily increase when drying the device of the dehumidifying unit.
- 2) Above DCL humidity range is only maintained when 25°C and 60%RH condition.

## Desiccator



### Desiccator

- Built-in hygrometer at front.
- Stackable structure for space saving.

Internal Volume	35L / 50L
Control Range	-
Model	SDC

- 1) Hygrometer deviation : 10%~20%

## Vacuum Desiccator



### Vacuum Desiccator

Cubic type

- Keep vacuum of 1 Torr for 72hours.
- Standard vacuum gauge at front.

Internal Volume	11L / 23L / 35L / 45L
Material	Body, Shelf: PC / Desiccant Tray, Latch: PP
Model	VDC, VDC-U

### Vacuum Desiccator

Round type

- Durable one-mold design makes no leak.
- UV block models are available.

Internal Volume	6L / 10L / 20L
Material	Lid, Bottom: PC / Desiccant Tray, Locker: PP
Model	VDR, VDR-U

### Vacuum Desiccator

Cylinder type

- Standard 3-way stopcock valve.
- Transparent for easy observation.

Internal Volume	16L / 25L
Material	Body, Bottom: PC / Locker: PP
Model	VDP, VDP-U



We have intensified the user convenience of Lab Companion Dry Cabinets and Desiccator through configuring outstanding durability and various product lines considering purpose of use.

# Refrigerator & Freezer for Laboratory



## Laboratory Refrigerator

### Laboratory Refrigerator

- Automatic defrosting function.
- Controller lock & built-in key lock system.
- Safety warning such as temperature deviation, door open and so on.
- 2 kinds of door type (glass/solid), various volume.
- Satisfied required condition of cold storage for pharmaceuticals stability.
- Voice alarm system (option)
- LC Connected system (option, only for CLG3 model)



Temp. Range	2 ~ 10°C
Internal Volume	74L / 156L / 303L / 603L / 805L / 1327L
Model	CLG / CLG3

## Laboratory Freezer

### Laboratory Freezer

- Excellent thermal insulation and sealing to make keep stable temperature.
- Dual defrost systems (automatic/manual).
- Controller lock & built-in key lock system.
- Safety warning such as temperature deviation, door open and so on.
- Simultaneously displays set temperature and actual temperature.



Temp. Range	-15 ~ 0°C	-25 ~ -15°C	-35 ~ -25°C	-50 ~ -30°C
Internal Volume	154L / 303L / 647L	154L / 303L / 647L	154L / 303L / 647L	303L / 647L
Model	FHG	FMG	FCG	FDG

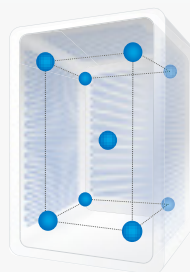
## Filtering Storage Refrigerator



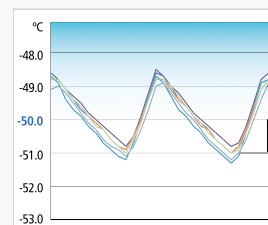
### Filtering Storage Refrigerator

- Optimized air flow for removing fume gas.
- Good uniformity of temperature in upper and lower chamber.

Feature	<ul style="list-style-type: none"> <li>• Internal Volume: 660 L, 1451 L</li> <li>• Capacity (L or 1L Bottle): 100</li> <li>• Optional Filter : HEPA Filter, Complex Carbon Filter (Aldehyde, acid and amines are available.)</li> </ul>
Model	FSR



Reliable temperature control



- 9-point temperature distribution test.
- Direct Cooling-type Refrigeration System.

# Refrigerator & Freezer for Medical



## Medical Refrigerator

### Blood Bank Refrigerator

- Meets blood and pharmaceuticals storage standards (KS P 6108).
- Authorized for manufacturing medical devices.
- Maintain average temperature  $4^{\circ}\text{C} \pm 1.5\text{K}$  at temperature balance state.
- Maintain  $4^{\circ}\text{C} \pm 1.5\text{K}$  temperature in case door is closed after opened for 60sec.
- Temperature is not reached to  $10^{\circ}\text{C}$  within 90min in case power failure.



### Pharmaceutical Refrigerator



- Meets blood and pharmaceuticals storage standards (KS P 6108).
- Authorized for manufacturing medical devices.
- Temperature Range:  $2 \sim 10^{\circ}\text{C}$ .
- Satisfied required condition of cold storage for pharmaceuticals should maintain  $5 \pm 3^{\circ}\text{C}$  regardless of quantities of stored pharmacies.



Chamber Volume	303L / 614L
Temp. Range	0 ~ 20°C (4°C set point)
Model	BSR

Chamber Volume	74L / 303L / 614L
Temp. Range	2 ~ 10°C (4°C set point)
Model	PSR / PSR3

## Medical Freezer

### Blood Plasma Freezer

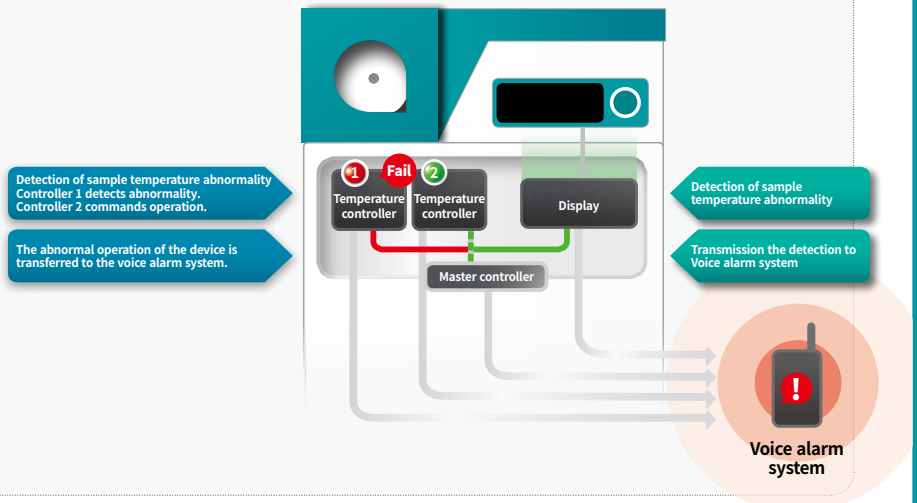
- Satisfied standard condition of freezer for storing frozen plasma under  $-30^{\circ}\text{C}$  temperature.
- Under progressing authorized for manufacturing medical devices.
- Maintain temperature  $-30 \pm 3^{\circ}\text{C}$  at temperature balance state, also each measured point is not over  $-27^{\circ}\text{C}$ .
- Plasma pack is not over  $27^{\circ}\text{C}$  in case door is closed after opened for 60sec.



Chamber Volume	303L / 647L
Temp. Range	$-35 \sim -25^{\circ}\text{C}$
Model	BSF

### Dual Management System Patent

- When the main controller fails, the sub controller automatically operates and remains at the normal temperature until the user recognizes the failure and acts, allowing the sample to be safely stored.
- Separate temperature sensors connected to the display monitor the internal temperature independently.
- Voice alarm system transmits voice messages to designated phone if there is an abnormality in operation. (option)

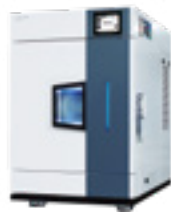




# Temperature & Humidity Chamber



## Tabletop



**Temperature & Humidity Chamber**  
Tabletop type

- Provides maximized performance in limited space.
- Suitable for development step of small samples.

Temperature Range	-40 ~ 150°C	-20 ~ 150°C	0 ~ 120°C
Humidity Range	20 ~ 95 %RH	20 ~ 95 %RH	30 ~ 95 %RH
Airflow type	Vertical airflow	Vertical airflow	Vertical airflow
Chamber Volume	25L / 65L / 100L		
Model	TH3-KE	TH3-ME	TH3-PE

## Floor Standing



**Temperature & Humidity Chamber**  
Ultra low temperature (-70°C) type

- Extended temperature range from -70 to 150°C.
- Stable temp and humid control up to 95%RH.

Temperature Range	-70 ~ 150°C
Humidity Range	25 ~ 95 %RH
Airflow type	Vertical airflow
Chamber Volume	189L / 302L / 408L / 800L / 1000L
Model	TH-KH



**Temperature & Humidity Chamber**  
Low temperature (-40°C) type

- Representative model with proven reliability.
- Minimized water consumption & maintenance.

Temperature Range	-40 ~ 150°C
Humidity Range	25 ~ 95 %RH
Airflow type	Vertical airflow
Chamber Volume	189L / 302L / 408L / 800L / 1000L / 1450L
Model	TH-G

## Floor Standing



**Temperature & Humidity Chamber**  
Low temp. & Low humid. (-40°C) type

- Stable controls for low temperature and humidity range.

Temperature Range	-40 ~ 150°C
Humidity Range	15 ~ 95 %RH
Airflow Type	Vertical airflow
Chamber Volume	189L / 302L / 408L
Model	TH-I



**Temperature & Humidity Chamber**  
General (-5°C) type

- Stable temperature and humidity control for even during long-term continuous use over 1 year.
- Convenient internal observation with LED lamp and looking glass window.

Temperature Range	-5 ~ 100°C	-5 ~ 100°C
Humidity Range	10 ~ 95 %RH	25 ~ 95 %RH
Airflow type	Vertical airflow	Vertical airflow
Chamber Volume	180L / 314L / 419L	770L / 997L / 1540L
Model	TH-TG	



**Temperature & Humidity Chamber**  
Dual type

- Space efficiency model that controls two upper and lower chambers individually.
- Provide optimized experiment environment with precise temp & humid controls.

Temperature Range	-5 ~ 100°C
Humidity Range	15 ~ 90 %RH
Airflow type	Vertical airflow
Chamber Volume	150L x 2 Chamber / 288L x 2 Chamber / 384L x 2 Chamber
Model	TH-DG

## Floor Standing



**Temp. & Humid. Chamber**  
Basic type

- Convenient operation with multifunctional 5.6 inch color touch controller.
- Possible to check the operation status with graphs.

Temperature Range	0~90 °C
Humidity Range	35~85%
Airflow Type	Vertical airflow
Chamber Volume	201L / 398L
Model	TH3-E

## Pharmaceutical



**Pharmaceutical Stability Test Chamber**

- Satisfies ICH Guideline Q1A (R2) & Q1B (Option 2) Stability Test.
- Dedicated controller for light cumulative dose setting/control.

Temperature Range	-5 ~ 85°C
Humidity Range	20 ~ 85 %RH
Airflow type	Vertical airflow
Chamber Volume	300L / 760L
Model	TH-ICH

### Walk-in Chamber

- Excellent thermal insulation and sealing to ensure reproducibility even for long-term use.
- Stable temp. & humid. controls with optimized inner air circulation.
- Durable door system.
- Convenience multiple safety system.



# Heating & Cooling Chamber



## Tabletop



## Floor Standing



### Heating & Cooling Chamber

Tabletop type

- Provides maximized performance in limited space.
- Suitable for development step of small samples.

### Heating & Cooling Chamber

General type

- Suitable for temperature characteristic test of samples.
- Space-saving vertical structure of dual chamber model.

### Heating & Cooling Chamber

Ultra low (-70°C) / Low temp.(-35°C) type

- Wide range from low to high temperature.
- Provided reliability specification of fluctuation and gradient.

Temperature Range	-40 ~ 150°C	-20 ~ 150°C	-20 ~ 100°C	0 ~ 100°C	-70 ~ 180°C	-35 ~ 180°C
Airflow Type	Vertical airflow	Vertical airflow	Horizontal airflow	Horizontal airflow	Horizontal airflow	Horizontal airflow
Chamber Volume	25L / 65L / 100L	25L / 65L / 100L	150L / 255L / 485L / 150 x 2 Chamber	150L / 255L / 485L / 150 x 2 Chamber	125L / 253L / 420L / 720L / 1000L	125L / 253L / 420L / 720L / 1000L
Model	TC3-KE	TC3-ME	LCH	LCH-G	KBD	KMV

## Floor Standing



### Heating & Cooling Chamber

Low temp.(-35°C) type

- Vertical airflow and temperature range from -35 to 180°C.
- Electronic over temperature protection system.

### Heating & Cooling Chamber

Low temp.(-25°C) / Ambient temp.(-5°C) type

- Wide range from low to high temperature.
- Provided reliability specification of fluctuation and gradient.

Temperature Range	-35 ~ 180°C	-25 ~ 100°C	-5 ~ 100°C
Airflow Type	Vertical airflow	Horizontal airflow	Horizontal airflow
Chamber Volume	125L / 253L / 420L / 720L / 990L	125L / 253L / 420L / 720L / 1000L	125L / 253L / 420L / 720L / 1000L
Model	JMV	PBV	PMV

## Industrial Oven



### Heating Chamber

- Verified 27 point fluctuation and gradient.
- Excellent insulation, sealing and durable structure.

### Clean Oven

- Built-in class 100 HEPA filter-high temperature testing under clean conditions.

Temperature Range	Amb. +45 ~ 250°C	Amb. +45 ~ 350°C	Amb. +15 ~ 200°C	Amb. +15 ~ 300°C
Airflow Type	Horizontal airflow	Horizontal airflow	Vertical airflow	Vertical airflow
Chamber Volume	125L / 253L / 420L / 720L / 1000L	125L / 253L / 420L / 720L / 1000L	200L / 400L	200L / 400L
Model	LBV	LTV	OFC / OFC-P	OFC-H / OFC-HP

# Lab Essentials

We research and provide a selection of lab essentials steadily suitable for the customer's experiment.



## Wash Bottle

- Easily sprayed solution even when lightly pressed for convenience.
- Vapor pressure self-discharge structure inside the container eliminates the inconvenience of liquid flowing out.
- Double helical structure increases tightness of both container and cap.
- Replaceable nozzle tip for effective maintenance.
- Engraved markings for convenient capacity checking.
- 250ml / 500ml



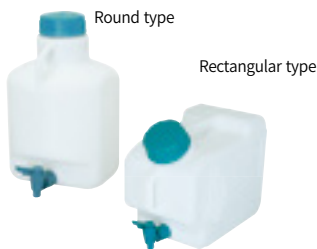
## Economical Beaker

- The unique triangular spout structure allows even highly viscous solutions to be poured precisely without any dripping.
- 50ml / 100ml / 250ml / 500ml



## Plastic Beaker

- Transparent (PMP), Translucent (PP)
- 500ml / 1000ml / 2000ml



## Carboy

- Excellent chemical resistance, suitable for storage and dispensing of various solutions.
- No leakage even when using for a long time due to spigot.



## Tubing Connector

- Structure prevents tubes from dropping.
- Excellent chemical resistance due to PP material.
- Available up to 120°C.



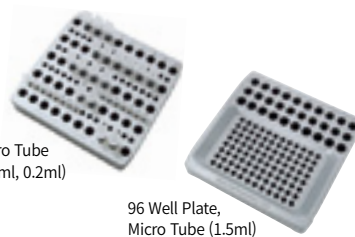
## Handle Beaker

- Transparent (PMP), Translucent (PP)
- 500ml / 1000ml / 2000ml



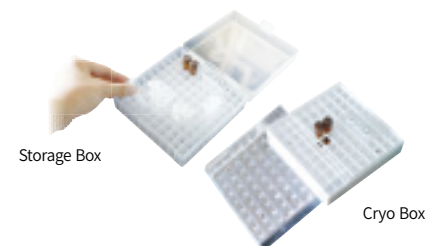
## Ice Pan

- Bucket made of foamed urethane material with excellent thermal insulation.
- Durable structure prevents damage and transformed.



## On-Ice Rack

- Block made of aluminum with excellent thermal conductivity.
- Keeps the temperature of the sample constant when using on ice.



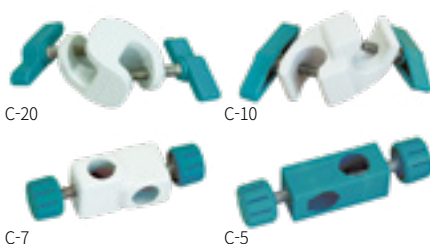
## Handle Beaker

- No transform even at low temperature.
- No need labeling additionally.



### Filter Adapter

- Can be used between the filtering funnel and the filtering flask during vacuum filtration.
- Excellent sealing and adhesion with silicone material.



### Clamp Holders

- Clamp holders are ideal for use with overhead stirrers and hotplate stirrers.
- Adjustable to fit support rods up to 5/8 inch diameter.



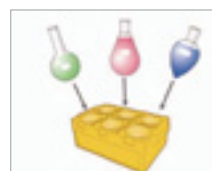
### Tube Rack

- Available stored various sizes for centrifuge tube / Conical Tube / Micro Tube.
- PC material.



### Flask Support

- Safe storage and handling of round flasks.
- Excellent chemical resistance and heat resistance. (-30 to 120°C)



Easy simultaneous handling of several flasks.



Using for multi-purpose.



Convenient movement with side handles.



Easy to distinguish samples by name tags and numbers.



### Safety Waste Disposal System

- Easy to collect and store various chemicals and waste liquids generated in the lab.



Waste liquid level notification function.



It is possible to configure a container together with flammable cabinets.

Model	SF-14C	SF-14P	WT-20C	WT-20P
Description	Anti-static safety funnel	General use safety funnel	Anti-static liquid waste container	General-purpose liquid waste container
Volume	1L	1L	22L	22L