

# Clean room & Laboratory Equipments CATALOG



# ■Clean Room Equipment Business

By improving the flexible functionality of clean room equipment such as clean booths, we aim to become a company which supports world manufacturing through environmental improvement.

# ■ Laboratory Equipment Business

With the goal of solving various problems faced by cutting-edge science, we contribute to the advancement of science and technology by developing products which support technical development and research.

#### ■Manufacturing of various parts and tools

Universal manufacturing of various plastic and metal parts and tools is performed using our company's large machining tools



#### **Efforts to Ensure Product Quality**

ISO9001:2008 certified

Shin-ei Sangyou Co., Ltd. has acquired ISO9001:2008 certification.

In our business activities, meeting the demands of the customer while conforming to all laws and regulations is our priority. To do so, we have established an in-house product quality management system in conformance with ISO9001:2008, and continuously seek to improve its efficiency.

#### Efforts for the Environment

ISO14001:2004 certification

Shin-ei Sangyou Co., Ltd. (head office/plant) has acquired ISO14001:2004 for its environmental management system.

In business development, environmental conservation is positioned as a top priority, with the business theme of "Creating an Environment." All our employees are involved in environmental conservation activities, both in the surrounding districts and on the global scale, and work toward the improvement and betterment of the environment based on our environment policy.

Certification No. QC03J0188 Certification No. EC02J0033

Certification Date December 18, 2003 Certification Date April 24, 2002

Testing Facility Japan Audit and Certification Organization for Environment and Quality (JACO)

Certification Range

Laboratory instruments, clean environment related equipment and devices,

Purified water/activated water manufacturing related devices, design/development,

manufacturing, sales and maintenance services of production equipment, resin/metal

processed products

#### Company profile

Company name Representative's name

Tadao Imanishi

Location

Foundation

Establishment

Capital

Number of employees Contents of business Head office and factory

Shin-ei Sangyo Co., Ltd.

Χ

1-10, Shinden-nishimachi, Daito-city, Osaka-pre, 574-0057, JAPAN

+81-72-806-7800 Ε

+81-72-806-7801

September 1, 1967

March 1, 1975

40 million yen

45

■ Clean room equipment business Development, manufacturing, and sales of clean room equipment, clean booths, air showers, etc.

■ Laboratory equipment business Development, manufacturing, and sales of desiccators, storage cabinets, glove boxes, fume hoods, carts/wagons

■ Machining of various parts Machining, manufacturing, and sales of various plastics and metals

·Osaka Chamber of Commerce and Industry

·Osaka Scientific Instruments Association

·Osaka Prefectural Manufacturing & Industrial Association

•The Daito Chamber of Commerce & Industry

Kanto office

Yamamoto Bld.2F, 2-5-23, Buzo, Minami-ku, Saitama-city, Saitama-pre,

336-0025, JAPAN

TEL: +81-48-747-7300

FAX: +81-48-747-7880

Shin-ei Japan Co., Ltd.

Affiliated organizations

Branch office

Affiliated company



# Clean room equipments

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# Laboratory equipments

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#### Description of illustration

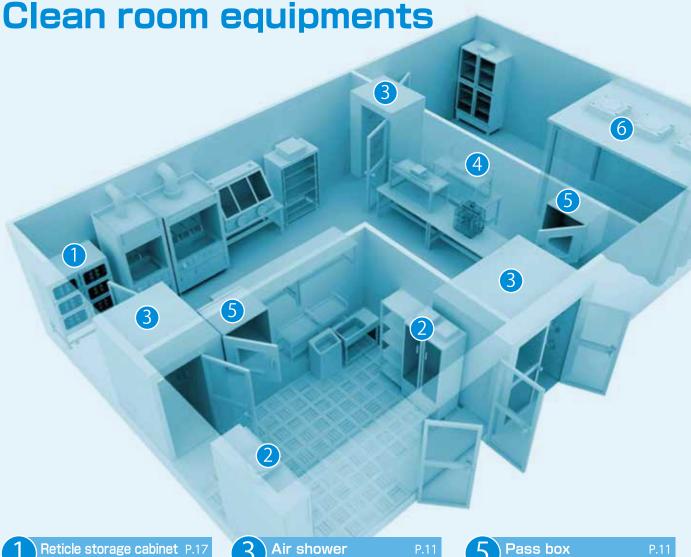




Special order available







# Clean booth

Clean locker

The clean booth is used to create a local clean space by separating a section of the general environment and the clean room by a curtain or panel, and providing clean air in which particles and bacteria are removed by HEPA filter.

For product quality maintenance/yield improvement, preventing adhesion of particles is important. This is can also be used to ensure a stable environment. Issues described on the below can be resolved by installing a clean booth.



Clean booth

P.05

#### Difference between a clean booth and a clean room

#### Easy to install!

Construction of a clean room requires major equipment construction and considerable time to complete. On the other hand, clean booth needs only minimum assembly operation. Construction of a small sized booth can be finished within the day if needed.

#### Saves space!

Simplified clean bench P.13

For a clean room, the floor and the entire room must be clean. This is best suited for large factories, but detailed operations cannot be performed. On the other hand, a clean booth with an aluminum frame construction can be freely designed, and can even be installed inside a clean room. Maintaining clean standards specifically in the needed space is possible.

- Defective products
   Yield
   Foreign material contamination
   Device calibration
- Effect of hazardous material on the workers and the environment

# **Curtain booth**

# CR-1

**Curtain booth series** 

#### Aluminum frame type antistatic curtain booth

Our curtain booth utilizes a clear antistatic sheet to control static electricity, and has a clean, finished look. With excellent sheet properties for processing, the curtain booth can handle various setting conditions and applications. The sheet is also fire retardant to ensure safety.

Locally cleaned

**Cost-cutting** 

Speed construction

#### Reference specification \*Order made is standard

S i z e: W1500  $\times$  D1500  $\times$  H2060mm F r a m e: Aluminum alumite treatment Surroundings: Antistatic vinyl curtain 0.3t C e i l i n g: Aluminum composite plate 3t F i l t e r: Fan filter unit 1 Pre-filter 1 Dust collection efficiency: More than 99.99% (0.3 $\mu$ m)

Cleanliness: Class 1000

D o o r : Curtain overlap type

L i g h t i n g: Fluorescent light  $40W \times 2$  light bulbs  $\times$  1 unit

Electric capacity: AC100V 1φ



#### **Production example**







Yellow clean booth



Large clean booth / air shower



Black-out curtain booth for testing

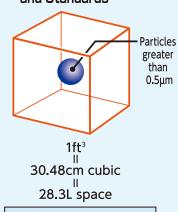
# Representation of cleanliness level

Generally, air cleanness criteria is based on the number of particles contained in a specified unit area.

The classification of the cleanness level in a clean environment is determined by this value.

Specifications	ISO standards / ISO 14644-1 JIS standards / JIS B 9920	U.S. federal standards / FED – STD – 209D *abolished in 2000	Molecular Number Comparison Ta	
Standard grain size	Diameter 0.1µm or more	Diameter 0.5µm or more	Diameter 0.1µm	Diameter 0.5µm
Unit area	1m³	1ft <sup>3</sup>	1m³	1 m <sup>3</sup>
Value	T value of the number of pieces $10^{\text{T}}$	Number of pieces	Number of pieces	Number of pieces
	1		10	
	2		100	4
	3	1	1000	35
Cleanliness	4	10	10000	352
class	5	100	100000	3520
	6	1000	1000000	35200
	7	10000		352000
	8	100000		3520000
	9			35200000

# Concept of the U.S. Federal Specifications and Standards



Particle 1000 Class 1000

Particle 10000 Class 10000

Particle 10000 Class 100000

Particle 10000 Class 100000

\*In U.S. federal standards, class value is determined by the number of the particles which are larger than 0.5  $\mu m$  contained in 1 square feet air.

#### Panel booth



## Aluminum frame type antistatic panel booth

The panel booth has an aesthetic design, and greater durability than a curtain booth. It is suitable as an equipment protection booth, windshield booth, etc.

Locally cleaned

Cost-cutting

Speed construction

#### Reference specification \*Order made is standard

 $e: W1370 \times D1510 \times H1880mm$ r a m e: Aluminum alumite treatment Surroundings: Antistatic PVC (transparent) 3t C e i l i n g: Aluminum composite plate 3t F i l t e r: Fan filter unit 1 Pre-filter 1 Dust collection efficiency: More than 99.99% (0.3µm)

Cleanliness: Class 1000

o o r: 1 location in entire surface Opening W790 × H1810mm

L i g h t i n g: LED (equivalent to 40W × 2 light bulbs)

Electric capacity: AC100V  $1\phi$ 



#### **Production example**







Large panel booth



Large panel booth



Equipment cover booth

#### Classification of the cleanness level by business category

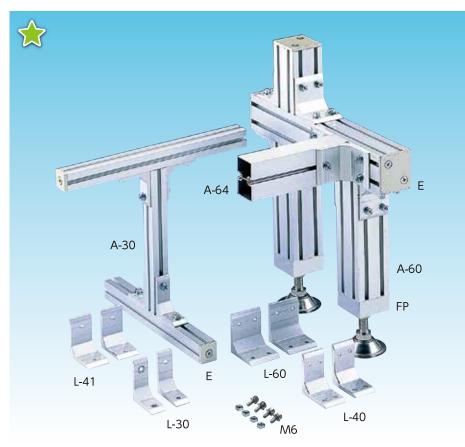
Business category			Class (clean degree)				
		Contents	10	100	1000	10000	100000
		Circuit design					
	Semi-conductor	IC / LSI chip manufacturing					
	Semi-conductor	Mask and wafer production					
		Assembly, Inspection					
	Precision and Electron devices	Watch and Electronic parts assembly					
		Bearings					
Industry		Electromagnetic tape					
		Small-sized relay					
		Parts processing, assembly, inspection					
	Optics and Printing	Printed circuit boards					
		Microfilm development and drying					
		Lens / Camera processing and assembly					
		Precise printing					
	Bread, Confectioneries, and Noodle production	Bread, Confectioneries, Noodle production					
Ford and at	Food processing	Paste, Deli food, Frozen packages					
Food product	Liquid and Paste food	Drinks, Seasoning filling					
	Dairy products	Milk, Yogurt, Cheese, Butter					

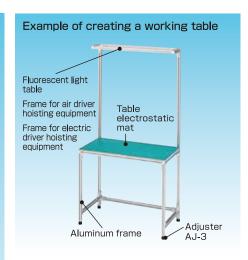
# **Aluminum frame**

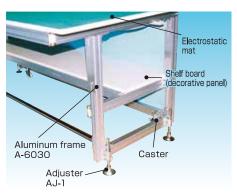


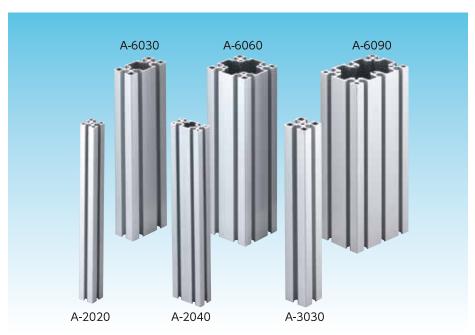
# Aluminum frame and bracket

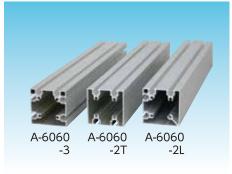
Suitable for order-made clean booths, clean benches, working tables, etc. Aluminum material has excellent strength and can be assembled into any shape. It can be used to create complex equipment covers.













# **Curtain series**

#### Antistatic curtain / sheet

#### AS-1 Antistatic crystal

 $(0.3, 0.5, 1.0 \text{mm} \times \text{W1370 mm} \ 0.1, 0.3 \text{mm} \times \text{W1830 mm})$ 

An epoch-making, antistatic sheet with high transparency has been developed from our special compounding technology. The material is fire resistant and is suitable for electrical and electronic equipment manufacturing, precision mechanical equipment manufacturing, and for clean rooms.



Performance

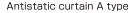
Example of test product standards,

actual measured value of 0.3 mm thickness and #490 hardness.

Test items		Achilles antistatic crystal	General film	
Volume resistance		$4.48 \times 10^{9} \Omega$ cm	$8.11 \times 10^{13} \Omega$ cm	
Surface resistance		$3.90 \times 10^{11} \Omega$	$3.22 \times 10^{15} \Omega$	
	50% Attenuation	0.01 seconds	More than 60 seconds	
Static decay time	90% Attenuation	0.03 seconds	More than 60 seconds	
	100% Attenuation	0.06 seconds	More than 60 seconds	
Friction-charged elec	ctrostatic potential	15V	More than 3000V	
Height of tobacco	ash adherence	Less than 1cm	Attached at 10cm	

<sup>\*</sup>If the static electricity of an individual piece is less than 1011  $\Omega$ , leakage is easy and can be considered safe. \*Generally the degree of fire retardant capacity is determined according to the







Antistatic curtain B type

#### AS-11 Antistatic crystal black

The antistatic sheet with light-blocking performance provides 0% light transmittance based on antistatic crystal basic performance.

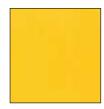
Surface specific resistance value is  $7.5 \times 10^9 \Omega$ . It is suitable for places where outside light should be shut out, such as a black room within the clean room.



#### AS-5 Flamirror electrostatic and insect-proof $(0.3mm \times W1370mm)$

As well as blocking UV light, the sheet has an orange color which is not visible to insects, providing high insect-proofing.

Highly transparent and flame retardant, it is suitable for food processing, printing, painting, chemical, and fertilizer plants.



#### AS-2 Antistatic F

(0.1, 0.3, 0.5mm × W1370mm)

An epoch-making, antistatic sheet with high transparency, developed from our special compounding technology.

The material is fire resistant and is suitable for electrical and electronic equipment manufacturing, precision mechanical equipment manufacturing, and for clean rooms



#### AS-6 Flamirror electrostatic welding

 $(0.3 \text{mm} \times \text{W}1370 \text{mm})$ 

The bronze color sheet cuts UV light, and 80% of visible light.

It has fire resistant properties, and is suitable as a partition for welding and light shielding.



#### AS-3 Yellow antistatic F

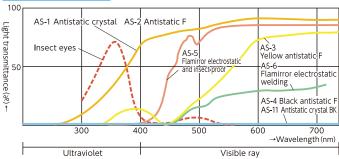
(0.3mm × W1370mm)

Blocks hazardous ultraviolet rays, protecting products and devices.

This sheet is highly transparent, and non-combustible.



#### Spectral characteristics



#### AS-4 Black antistatic F

(0.3mm × W1370mm)

Complete block out sheet with 0% light transmittance

Flame retardant sheet best suited for operations which require light screening or shielding.



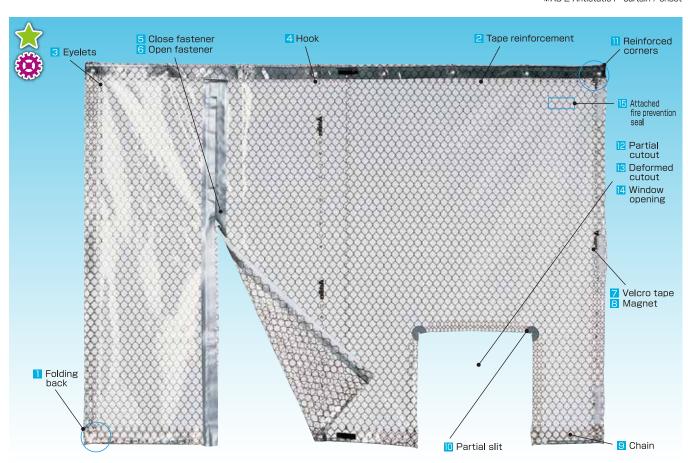
#### \*Can be processed to any size. Please feel free to ask for details.

Code	02-110	02-111	0	2-120	02-130	02-140	)	02-150	02-160
Product Name / Model	AS-1 Antistatic crystal	AS-11 Antistatic crystal black		AS-2 tistatic F	AS-3 Yellow antistatic F	AS-4 Black antista	itic F	AS-5 Flamirror electrostatic and insect-proof	AS-6 Flamirror electrostatic welding
Code	01			02		03			
Type	Curtain A type (0.3mm × W900 × H1800mm)			Curtain E	3 type(0.3mm × w900	) × H1800mm)	S	heet (roll) (0.3mm ×	W1370mm × 30m)

standards of Japan Fire Retardant Association.
(Notification of the registered fire retardant test no. can be issued upon request)

#### Antistatic curtain / sheet manufacturing example

\*AS-2 Antistatic F curtain / sheet





#### Folding back

The folded back edge is reinforced by welding.



#### 5 Close fastener

Close fasteners are attached to the entrance and exit.

#### 6 Open fastener

Open fasteners are attached for opening and closing and connecting.



10 Partial slit

Slit for entrance and exit.



#### 2 Tape reinforcement

Reinforcing tape is added to strengthen the hook attachment and prevent rips by the screw.



#### Velcro tape

Velcro tape is used for opening and closing.



#### Eyelets

Holes are punched to create eyelets for hooks and screws.



#### 8 Magnet

Magnets are used for opening and closing.



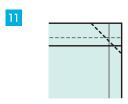
#### 4 Hook attachment

Hooks are attached to hang the curtain on a runner, etc.



#### Chain

Chain to reduce curtain movement.



Reinforced corners

Corners which are subject to exceptional stress are reinforced.



#### 12 Partial cutout

#### 13 Deformed cutout

Openings for piping and to avoid parts.

#### 14 Window holes

Window holes for piping, avoiding parts, and monitoring (cover flap attachment is available)

15 A fire prevention sticker issued by Japan Fire Retardant Association is attached

#### Fan filter unit / Particle counter

# PS01-AD Fan filter unit series

#### Pure space

A compact and simple clean environment is constructed. Simply connect the unit to an AC100V outlet, and air is supplied through the HEPA filer at a rate of approx.1 m/min. Pre-filter on the top is easy to replace. The unit is lightweight as a result of the resin body.

02-71401
PS01-AD
$W260 \times D260 \times H149mm$
W200 × D200 × H50mm
1m³/min
0.5m/s
More than 99.97% (0.3μm)
ABS resin
Length 1.8m with 2P plug
AC motor
AC100V 50/60Hz 36/38W
3.2kg

Code	02-71402	02-71403
Model number	PS01-1AD	PS01-PF
Specifications	Antibacterial / Deodorization HEPA filter	Pre-filter for replacement

<sup>\*</sup>Air volume setting: Cannot be remote-controlled.



# PSU-AD/PSX-AD Fan filter unit series

#### Pure space

Total control of multiple units is possible, providing a clean the environment that does not waste time.

- 5-step air volume adjustment is possible. Multiple units can be connected to a PC/remote controller and centrally controlled through one unit.
  Speed clean mode is built-in. Use in cases where quick cleaning is desired, such as when starting work operations.
  Energy-saving effect Air volume can be adjusted in 4 steps other than the default setting.
  Multiple unit control. Multiple units can be sequentially connected by the pure space remote control system, and can provide unified air volume. PSV-AD and PSX-AD can be used together.
  The remote controller cable can be extended. The standard 2 m cable can be extended using a PC LAN cable.

Code	02-71404	02-71405	
Model number	PSV-AD	PSX-AD	
Overall size	W494 × D494 × H134mm	W654 × D654 × H134mm	
HEPA filter	W450 × D450 × H50mm	W610 × D610 × H50mm	
Airflow	(silent) 6㎡/min (speedclean)	5-step adjustment 10㎡/min (standard) 8, 6, 4㎡/min (silent) 11㎡/min (speedclean)	
Air speed	Standard 0.5m/s	(minimum 0.2m/s)	
Cleanliness of the outlet	Class	5 100	
Body material	ABS	resin	
Remote control cord length		m	
Motor	DC brushless motor		
Electric capacity	AC100V 50/60Hz 52W	AC100V 50/60Hz 86W	
Weight	8.6kg	11kg	



Code	02-71406	02-71407	02-71408
Model number	PSVX-PF	PSV-05AD	PSX-10AD
Considirations	Pre-filter	Antibacterial / Deodorization	Antibacterial / Deodorization
Specifications	for replacement	HEPA filter	HEPA filter
	-		

# HHPC2+/3+ Particle counter series

# Hand held type air particle counter

Code	02-71451	02-71452			
Model number	HHPC 2 +	HHPC 3 +			
Light source	Laser diode				
Measurement channel number	2	3			
Minimum measurable grain diameter (fixed)	0.5μm	0.3µm			
Grain size classification	Select 1-grain diameter from 1.0/2.0/5.0µm	Select 2-grain diameter from 0.5/1.0/2.0/5.0/10.0µm			
Flow rate	2.83	L/min			
Proofreading	by PSL (polystyre	ne latex) particles			
Maximum particle density	70000 pieces/L (number count loss less than 10%)	140000 pieces/L (number count loss less than 10%)			
Conversion unit		mber of pieces/ft³, pieces/L, pieces/M³			
Data memory		corresponding data is 5000 data)			
Interface	USB memory, USB cable, Ethernet				
Use temperature and humidity range	10~40℃, 20~90% RH (h	owever, no condensation)			
Security function		(excel data) Standard equipment			
Display part	3.5 inches Color crystal p	panel (LED back light type)			
Display language		e / English			
Battery / Power source	5 hours for continuous use (10 hours fo	r regular use) / AC100~240V, 50/60Hz			
Dimensions / Weight		690g (batteries included)			
Application specifications	ISO 21501-4	l / JIS B9921			
Standard accessories  Zero count counter, Adapter for zero count filter, Power supply, USB cable (A-mini-B), C Inspection results certificate, Calibration certificate, Traceability system di					
Options	Communic	ation stand			



# Air shower / Pass box

# AS-S/AS-D Air shower series

#### Air shower

Dust and bacteria which is attached to a person when entering a clean room or goods brought in, are blown off by automatic jet air and operations are automatically stopped by timer. Can also be used for multi-connection equipment, route changes, changes in jet blow direction. Ask for details.

#### Specification

Body material: Steel plate baking finish
Power supply: AC200V 3 phase 50/60Hz
HEPA filter: Wood panel, paper separator

specification

Dust collection efficiency More than 99.97% (0.3µm)

#### Manual door type



#### Automatic door type



		I		I			I
Code	Model number	Overall size	HEPA filter	Jet airflow	Door	Weight	Consumption current
02-59112	AS-D-1000	W1500 × D1000 × H2060mm	2	Dual side outlet type	One-side opening	350kg	1.0kW/1.2kW
02-59113	AS-D-1000-WD	W2500 × D1000 × H2060mm	2	Dual side outlet type	Both-side opening	400kg	1.0kW/1.2kW
02-59117	AS-D-1500	W1500 × D1500 × H2060mm	2	Dual side outlet type	One-side opening	450kg	1.8kW/2.5kW
02-59119	AS-D-2000	W1500 × D2000 × H2060mm	4	Dual side outlet type	One-side opening	700kg	2.0kW/2.4kW
02-59121	AS-D-3000	W1500 × D3000 × H2060mm	6	Dual side outlet type	One-side opening	1050kg	3.0kW/3.6kW
02-59123	AS-D-1000-SAD	W1500 × D1000 × H2140mm	2	Dual side outlet type	One-side automatic door	450kg	1.0kW/1.2kW
02-59125	AS-D-1500-SAD	W1500 × D1500 × H2140mm	2	Dual side outlet type	One-side automatic door	550kg	1.8kW/2.6kW
02-59126	AS-D-1500-DAD	W1500 × D1500 × H2140mm	2	Dual side outlet type	Both-side automatic door	550kg	1.8kW/2.6kW
02-59127	AS-D-2000-SAD	W1500 × D2000 × H2140mm	4	Dual side outlet type	One-side automatic door	750kg	1.0kW/1.2kW
02-59128	AS-D-2000-DAD	W1500 × D2000 × H2140mm	4	Dual side outlet type	Both-side automatic door	800kg	2.0kW/2.4kW
02-59129	AS-D-3000-SAD	W1500 × D3000 × H2140mm	6	Dual side outlet type	One-side automatic door	1150kg	3.0kW/3.6kW
02-59130	AS-D-3000-DAD	W1500 × D3000 × H2140mm	6	Dual side outlet type	Both-side automatic door	1150kg	3.0kW/3.6kW
02-59131	AS-D-1000-WDAD	W2200 × D1000 × H2140mm	2	Dual side outlet type	Both-side automatic door	500kg	1.0kW/1.2kW
02-59132	AS-D-1500-WDAD	W2200 × D2000 × H2140mm	2	Dual side outlet type	Both-side automatic door	600kg	1.8kW/2.6kW
02-59133	AS-D-2000-WDAD	W2200 × D3000 × H2140mm	4	Dual side outlet type	Both-side automatic door	850kg	2.0kW/2.4kW

<sup>\*</sup>One-side outlet type is also available. Ask for details.

\*AS-S-1000-3D is three-direction door.

# PB Pass box series

#### Pass box

Includes interlock equipment to prevent the outer air from flowing into the clean room. Inside the path box can be confirmed by the glass window (transparent glass).

#### Specification

Body material: Baking finish steel plate Inner floor surface: SUS304 hair-line finishing W i n d o w: Glass (transparent) 3t Interlock: Mechanical type







#### Assembled clean booth / Assembled booth

Simplified clean booth using conductive piping in the frame. Easy assembly/disassembly and transport, and ensuring a clean zone is simple. By choosing the frame length, a wide range can be handled, from tabletop to a several meter long booth. Like aluminum frame booths, semi-order made curtains are available.



KB-112 (Assembled booth)

KCB-112 (Assembled clean booth)

#### Specification

r a m e: Conductive property ABS resin covered steel pipe  $\phi$ 28

o i n t: Hot-rolled sheet steel metal joint Surroundings / ceiling: Antistatic crystal curtain 0.3t

F i l t e r: Fan filter unit 1 Pre-filter 1 Dust collection efficiency: More than 99.99% (0.3µm)

Cleanliness class: 10000

Code	Model number	Overall size	Ventilation frequency	Cleanliness area	Airflow	Electric capacity	
02-42005	KCB-112	W1500 × D1500 × H2000mm	40	2.25m²	3.0m³/min	AC100V 1 φ 40VA	
02-42006	KCB-122	W1500 × D2000 × H2000mm	50	3m²	E Om³/min	AC100V 1φ 50VA	
02-42007	KCB-222	W2000 × D2000 × H2000mm	37.5	4m²	3.0111/111111	ΑC1000 ΙΦ 300Α	
02-42008	KB-112	W1500 × D1500 × H2000mm					
02-42009	KB-122	W1500 × D2000 × H2000mm	_	_	_	<del>-</del>	
02-42010	KB-222	W2000 × D2000 × H2000mm					

## Assembled dark room clean booth / Assembled dark room booth

Inside remains dark using a black curtain. This is best suited for optic tests and inspections which require a high degree of cleanness.



KB-112B (Assembled dark room booth)

KCB-112B (Assembled dark room clean booth)

#### Specification

a m e: Conductive property ABS resin covered steel pipe  $\phi$ 28

J o i n t: Hot-rolled sheet steel metal joint Surroundings / ceiling: Antistatic crystal black curtain 0.3t Fluorescent lamp: 40 W × 1 light bulbs × 1 unit

F i l t e r: Fan filter unit 1 Pre-filter 1 Dust collection efficiency: More than 99.99% (0.3µm)

Cleanliness class: 10000

Code	Model number	Overall size	Ventilation frequency	Cleanliness area	Airflow	Electric capacity	
02-42011	KCB-112B	W1500 × D1500 × H2000mm	40	2.25m²	3.0m³/min	AC100V 1φ 120VA	
02-42012	KCB-122B	W1500 × D2000 × H2000mm	50	3m²	5.0m/min	AC100V 1φ 130VA	
02-42013	KCB-222B	W2000 × D2000 × H2000mm	37.5	4m²	5.0111/111111	ΑC100V ΤΦ 130VA	
02-42014	KB-112B	W1500 × D1500 × H2000mm					
02-42015	KB-122B	W1500 × D2000 × H2000mm	_	<b> </b>	_	AC100V 1 φ 80VA	
02-42016	KB-222B	W2000 × D2000 × H2000mm					

# Clean hood / Clean bench

#### Simplified clean hood

Clean hood series

This simplified clean hood uses an aluminum frame. Strong and light-weight, easy to carry, and best suited to ensure a clean zone on the working table.

#### Specification

Cleanliness: Class 100\*2

Clean zone: W660 × D370 × H480mm (CCF-1)

W760  $\times$  D470  $\times$  H480mm (CCF-2) W1160  $\times$  D470  $\times$  H480mm (CCF-3)

F i l t e r: Fan filter unit 1 Pre-filter 1

W260 × D260 × H149mm

Dust collection efficiency: More than 99.97% (0.3μm)

Airflow:1m<sup>1</sup>/min Top / Side / Back: Antistatic PVC 3t Frame material: Aluminum

alumite treatment

Electric capacity: AC100V 1A

\*CCF-1 can be used in combination with Acty cart AC-2.

\*2 Actual measurement values directly under

the clean module





Code	Model number	Overall size*1
02-26001	CCF-1	W700 × D400 × H500mm
02-26002	CCF-2	W800 × D500 × H500mm
02-26003	CCF-3	W1200 × D500 × H500mm

<sup>\*1</sup> The fan filter unit is not included in the outer dimensions.

# CCB-1S/2S/3S

Clean bench series

## Simplified clean bench

This simplified clean bench combines SUS pipes and anti-static vinyl sheet. Assembly is easy and lightweight, and is best suited to ensure a simple clean zone.





#### Specification

Cleanliness: Class 100

Clean zone: W670  $\times$  D385  $\times$  H485mm (CCB-1S)

W770 × D485 × H485mm (CCB-2S) W1170  $\times$  D485  $\times$  H485mm (CCB-3S)

i l t e r: Fan filter unit 1 Pre-filter 1

W260 × D260 × H149mm

Dust collection efficiency: More than 99.97% (0.3µm)

Airflow:1m³/min

Frame material: SUS304  $\phi$ 13 Pipe

All surroundings: Antistatic vinyl sheet 0.3t

Electric capacity: AC100V 1A

\*CCB-1S can be used in combination with Acty cart AC-2.

Code	Model number	Overall size*1
02-27001	CCB-1S	W700 × D400 × H500mm
02-27002	CCB-2S	W800 × D500 × H500mm
02-27003	CCB-3S	W1200 × D500 × H500mm

<sup>\*1</sup> The fan filter unit is not included in the outer dimensions.

# CCB-1B/2B/3B

Clean bench series

#### Simplified clean bench

This simplified clean bench uses an aluminum frame. Light-weight, easy to carry, and best suited to ensure a clean zone on the working table. The position of the door can raised or lowered be to match the operation.

#### Specification

Cleanliness: Class 100

Clean zone: W660 × D370 × H480mm (CCB-1B)

W760 × D470 × H480mm (CCB-2B)

W1160  $\times$  D470  $\times$  H480mm (CCB-3B)

F i l t e r: Fan filter unit 1 Pre-filter 1

 $W260 \times D260 \times H149mm$ 

Dust collection efficiency: More than 99.97% (0.3µm)

A i r f l o w:1m³/min

Top / Side / Back : Antistatic PVC 3t

r: Antistatic PVC 3t 50mm pitch variable 0

Frame material: Aluminum alumite treatment

Electric capacity: AC100V 1A

# CCB-1B

Code	Model number	Overall size*1
02-45001	CCB-1B	W700 × D423 × H500mm
02-45002	CCB-2B	W800 × D523 × H500mm
02-45003	CCB-3B	W1200 × D523 × H500mm

<sup>\*1</sup> The fan filter unit is not included in the outer dimensions.

#### Glove box / Dust collector



#### Small size stainless steel glove box

#### Specification

Overall size: W600 × D500 × H500mm Inside dimensions : W590  $\times$  D495  $\times$  H420mm

Main body opening:  $550 \times 305$ mm

Electrical equipment: 10W × 1 piece / 15W × 1 piece

Weight: 14kg

Body material: Body: SUS304

Window: Polycarbonate





# **EGX-350N Dust collector series**

#### **Dust collecting static blower**

This device blows ionized air on the work piece in the washing box, removing dust and static electricity at the same time. The compressed air nozzle is attached from the top and can be quickly removed. Air blowing is automatically operated by sensors. Removed dust is collected by the HEPA filter, preventing contamination of the air in the room environment.

#### Specification

Window opening dimensions :  $\sqrt{200 \times H150mm}$ Body material: Steel plate baking

Front door: Antistatic PVC (transparent) Exhaust air fan: Airflow 5.5/6.5m³/min(maximum) Wind speed 1.1/1.3m/s

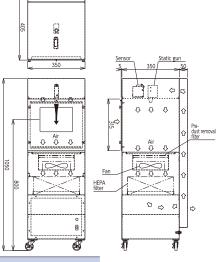
HEPA filter: W280  $\times$  D280  $\times$  98t

Dust collection efficiency More than 99.97% (0.3µm)

Dust removal filter : W215  $\times$  D215  $\times$  10t

Dust-collecting particles 10 $\mu m$  or more

Airblow Supplya Ioni	D switch: P		800 / V	\$ <b>5</b>
Code	Model number	Overall size		
02-44003	EGX-350N	W350 × D405 × H1050mr	n	
	•			



EG-1200 **Dust collector series** 

# **Dust collecting static** air gun

Compressed ionized air is blown onto the product in the washing box, removing dust and static electricity at the same time. Air blowing is automatically operated by sensors. Removed dust is collected by the HEPA filter, preventing contamination of the air in the room environment.

#### Specification

Window opening dimensions:  $VV180 \times H180mm$ Body material: PVC (ivory)

Exhaust air fan : Airflow 5.5/6.5m²/min(maximum)

Wind speed 1.1/1.3m/s (maximum)

HEPA filter: W220 × D220 × 75t

Dust collection efficiency More than 99.97% (0.3µm)

Dust removal filter: Polyester W240 × D240 × 20t

Dust-collecting particles 10µm or more

Pre-filter: Polyester W240  $\times$  D240  $\times$  5t Dust-collecting particles 30~50μm or more

Air blow switch: Photoelectric sensor

Supply air inlet:  $\phi$ 6 one touch joint

Ionizer:6kV

Electric capacity: AC100V 0.5A

Code	Model number	Overall size
02-37002	EG-1200	W456 × D253 × H373mm



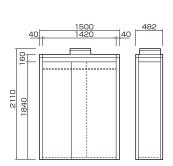
# Clean locker

# SCR-1500B

Clean locker series

#### Clean locker

Clean wear can be stored in the clean-processed locker. Taking clean wear in and out of the locker is carried out by opening and closing the transparent antistatic curtain. To save space, the curtain opens left to right.



#### Specification

Effective inside dimension:  $VV1420 \times D460 \times H1800$ mm Filter: Fan filter unit 1 Pre-filter Dust collection efficiency: More than 99.99% (0.3 $\mu$ m)

Airflow: 3.0/3.5m/min Body frame: Aluminium frame

All surfaces: Antistatic curtain (transparent)

Side/Top/Back/Bottom: Aluminum composite plate

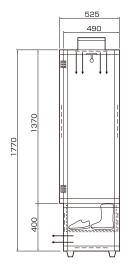


Code	Model number	Overall size	Electric capacity
02-44001	SCR-1500B	W1500 × D482 × H2110mm	AC100V 28/36W

# CL/CLC Clean locker series

#### Clean locker

Clean wear, boots, and shoes can be stored in the clean-processed locker. The double-door magnet packing type locker can be easily opened with one hand. Design specifications, such as size and degree of cleanness, can be adjusted.



#### Specification

Filter: Fan filter unit 1 Pre-filter 1 (CL-600 / CLC-600)

: Fan filter unit 2 units Pre-filter 2 pieces (CL-850 / CLC-850)  $W260 \times D260 \times H150$ mm

Dust collection efficiency: More than 99.97% (0.3µm) D o o r: Magnet packing type Window material: Antistatic PVC (transparent) Frame material: Aluminum alumite treatment

(CL-600 / CL-850) : Aluminum Electrodeposited

alumite treatment (CLC-600 / CLC-850)

Weight: 45kg

\*Can be manufactured to different cleanness and size criteria according to the place of installation and the environment.



Code	Model number	Overall size	Side / Top / Back / Bottom	Cleanliness class	Airflow	Electric capacity
02-29001	CL-850	W850 × D525 × H1935mm	Aluminum		2.0m/min	AC100V 104/98W
02-29002	CL-600	W600 × D525 × H1935mm	(silver)	1000	1.0m/min	AC100V 52/47W
02-30001	CLC-850	WX85() X   )575 X H1935mm	Alummum		2.0m/min	AC100V 104/98W
02-30002	CLC-600	W600 × D525 × H1935mm	composite plate (white)		1.0m/min	AC100V 52/47W

# Battery-powered clean wagon / Transport wagon



# Battery-powered clean wagon

Transport wagon equipped with a battery-powered clean unit. Convenient to transport products between clean rooms.

#### Specification

Unilocular frontage: W497 × H990mm D o o r: Draw latch type

Top / Side / Back: Antistatic PVC (transparent) plate Frame material: Aluminum alumite treatment

Shelf board material: SUS430 punched Shelf board size:  $494 \times 460 \, \text{mm}$  The number of shelf board: 3 sheets

C a s t e r:Nylon $\phi$ 65 Adjustable

Cleanliness: Class 100 Electric capacity: AC100V 2A

Code	Model number	Overall size
02-33101	CWB-1	W537 × D525 × H1526mm









Battery type fan filter unit

#### Specification

Body material: Steel plate baking (ivory)

Weight: 16kg

Dust collection efficiency: More than 99.97% (0.3 $\mu$ m) F i l t e r: HEPA filter 1 Pre-filter 1

A i r f l o w: 1.2m³/min

Operating time: Continuous operation is possible

for 1.5 hours after a full charge. When connected to an AC 100 V source, voltage is switched from DC and to provide continuous operation.

Protection circuit: Overcharge /

discharge prevention circuit

Electric capacity: AC100V 2A





When connected to an outlet, the fan recharge while operating.

# W-8 Transport wagon series

# 8" wafer transport wagon

This wafer transport wagon exhibits high vibration-free performance. Stable movement even over grating is possible due to the silicone gel vibration-proof materials and the urethane rubber casters. When not in use, it can be stored compactly due to the N-shape leg structure.

#### Specification

Overall size: W640 × D350 × H1120mm

(when attached to an auxiliary table: W930)

Body material: SUS304 W e i g h t: 13kg

\*The protection box is not included with the product. Various box dimensions, such as 6", 8", or 12", can be manufactured for the protection carrier wagon.

Code	Model number
02-35001	W-8





Illustration of storage condition



Vibration-proofing gel / collapse prevention tool



# Reticle storage cabinet

# R5-215

Storage cabinet series

#### Reticle storage cabinet

A fan filter unit is installed, ensuring a clean inner area. The reticle case ensures storage in a clean environment. Made to order according to the aluminum frame specifications, number of tiers and lanes of the storage reticle case.



Case receivers can be manufactured according to the shape and size of the reticle case.

#### Specification

i l t e r: Fan filter unit 1 Pre-filter 1

A i r f l o w: 1.0/0.8m/min

Body material: Aluminum composite plate Frame material: Aluminum alumite treatment Door surface material: Antistatic PVC (transparent) plate

o o r: Magnet packing type

Case received: Nylon

Reticle case storage number: 5 inch reticle case

15 tiers  $\times$  2 lines = 30 pieces stored

Code Model number		Overall size	
02-46101 R5-215		W538 × D330 × H1270mm	



#### **Customization example**





Reticle storage cabinet



Stainless reticle storage cabinet Stainless punching plate reticle storage cabinet









Guide rail receiving type

# Mask storage cabinet

#### Customization example

#### Mask storage cabinet

A fan filter unit is installed, ensuring a clean inner area. Ultra-high molecular weight polyethylene with excellent wear resistance for the receiver material is used to control dust.

Photomask and liquid crystal cells can be stored in a clean environment.





Overall size: W1104 × D525 × H1191mm i l t e r: Fan filter unit 1 Pre-filter 1 Dust collection efficiency: More than 99.99% (0.3µm)

i r f l o w: 3.4/4.5m³/min D r: Hermetic handle type 0 0

В y: Antistatic PVC Shelf board material: With slide groove Ultra-high molecular weight polyethylene

Frame material: Aluminum alumite treatment



Overall size: W950 × D930 × H1410mm F i l t e r: Fan filter unit 1 Pre-filter 1 Dust collection efficiency: More than 99.97% (0.3µm)

i r f l o w : 3.4/4.5 m/min y: SUS304 polish d t: Antistatic PET n

Lower roller: Ultra-high molecular weight polyethylene

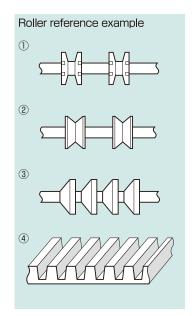
Upper roller: Teflon











# **Desiccators**



A desiccator is a container used to store items which are vulnerable to humidity, by creating a dry environment.

Valuable samples and precision devices can be stored in low humidity and a specific air composition environment.

# Application

#### ■Dehumidification / Dry Storage

Outside air is shut out and the dry condition is maintained. Silica gel is a common desiccant, but dehumidification performance relatively low because it uses moisture absorption and chemical change. Silica gel absorbed moisture can be recycled by heat treatment. An extremely moistened sample is usually stored in a desiccator after circulation drying, etc.

(Specific Application)

Storage of glass utensils

Storage of test drugs and samples

Storage of highly absorbent material

(powder material, filter paper, etc.)

Storage of sample showing deliquescency (NaOH, CaCl2, etc.)

Storage of the products which easily oxidize

Storage of samples and seeds

Storage of optical products for cameras, microscopes, etc.

#### Storage of optical products

Performance of optical products for camera lenses and microscopes can deteriorate due to moldy storage conditions. A desiccator equipped with a strong dehumidifier is recommended. For a small sized desiccator, silica gel can be used. Moreover, for a simplified method, storage with a dehumidifying agent included for mold prevention in sealed container is sometimes seen. (\*Mold cannot be completely prevented simply by dehumidification and/or drying.)

#### Preventing materials from oxidizing

When stronger dehumidification is needed, or when the material is oxy-phobic, air composition can also managed along with the humidity. Common methods include replacing air in the desiccator with inactive gases such as nitrogen and argon, or creating a vacuum environment by venting the air in the desiccator. A vacuum desiccator is also used for experimental operations such as vacuum drying, deaeration, and defoaming by decompression.

# Basic specifications of the desiccator

This is a high quality product overflowing with technology from our company, a leading company in aluminum frame desiccator manufacturing.





#### Magnet packing door

The magnet packing door can be easily opened and closed by one hand, and magnetized stainless steel is used in the main body, providing excellent air tightness. Hermetic handles and latches to emphasize air tightness can also be selected.





Magnet Magnetic packing





#### Aluminum alumite processed (original shape)

An aluminum frame in pursuit of functionality with a simple design is used. This is our original extrusion molding product.

#### Fitting groove

The fitting strength of the frame groove and the plate material is enhanced by increasing the sealing level, and is shaped to minimize stray of the silicone.



stainless steel



# Shelf board The position can be freely adjusted.

#### Shelf board (SUS430 \$\phi 20 Punching 36 holes)

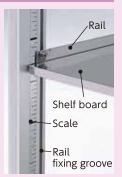
Material of the shelf board is strong stainless, with a surface polishing processing for cleanness. 36 holes are created by 20mm diameter punching for better air convection in storage.

#### Rail(SUS430)

Constructed of stainless steel for excellent strength and abrasion resistance

#### Rail fixing groove / scale

Square-nuts are embedded in the rail fixing groove, and the position of the rail can be freely adjusted while looking at the scale. According the size of the storing material, the space in the storage can be effectively utilized.





#### **aterial** (Window / Side / Top / Back)

Standard plate material is transparent acrylic.

However, any of the following plate materials can be selected.

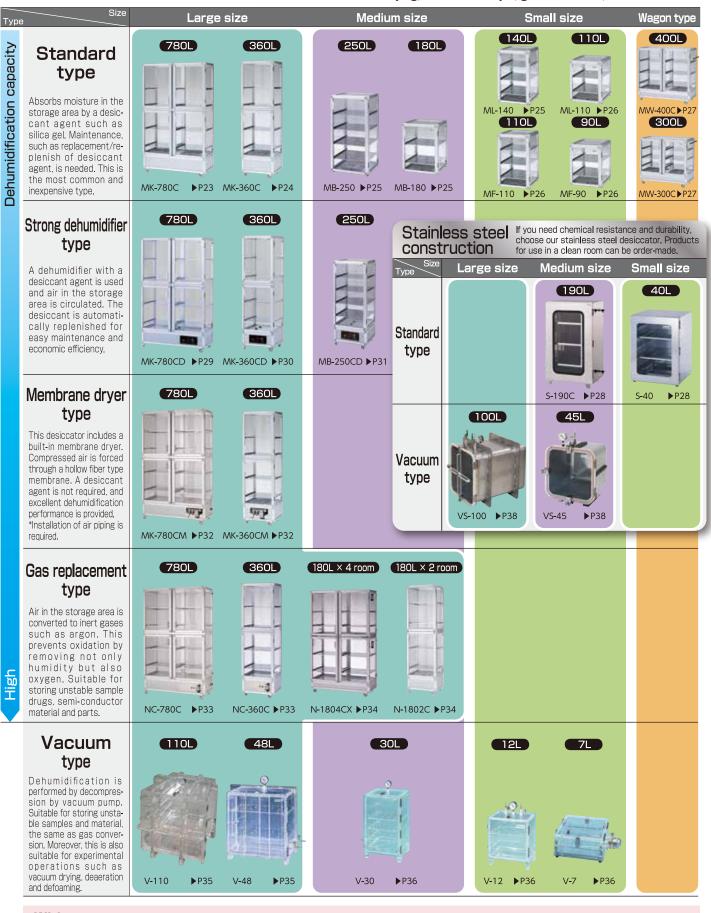
\*Price will vary depending on the material.

Acrylic: transparent, light-resistant, other color plates Antistatic PVC: transparent, light-resistant PET resin

Stainless composite plate Aluminum composite plate

# About the type of desiccator

Our desiccators are mainly divided into five types according to dehumidifying method: standard, powerful dehumidifying, mezo-blend dryer, gas conversion, and vacuum.



Our line up varies in size from large 780L capacity desiccators to small 90L desiccators. Partial made to order desiccators which include Wide products for ultraviolet countermeasures, static electricity countermeasures, and vibrational absorption casters are also available. lineup

#### Partial made to order

Door [ door Slide storage door

Shelf board Reinforced load-resistant shelf board

Material modifications (for ultraviolet countermeasures, static electricity countermeasures, etc.), vibration absorbing casters, etc

We accept special orders to meet your desired specifications and specific functions. Please feel free to ask for details.

**Example of desiccator** ●Clean carrier wagon ●Reticle storage cabinet ●Mask storage cabinet ●Aging equipment ●Ultraviolet exposure equipment ●Glove box, etc.

# **Customization example**

\*Manufacturing to special specifications is available.

#### Customization example

## Gas replacement stainless steel desiccator ( 8-room specification )



#### **Desiccator for storing wafers**

Large size desiccator to store 8-inch wafers.



#### Humidification storage cabinet Panel stocker

Storage for articles which require humidification. The front door is of double layer construction, and has specifications to avoid dew condensation.



#### Prevents dust accumulation using super-high-molecular polyethylene for the shelf boards. The shelf boards can be inserted clean, and removed by the slide rail,



#### Panel clean stocker

The panel stocker is equipped with a clean module unit on the top. Storage inside remains





# Gas replacement stainless steel desiccator (

Conforms to use in a clean room



#### Cassette storage cabinet

Ultra heavy glass cassette cases can be stored. A fan filter unit is installed, to maintain clean conditions inside the storage.



#### Large size vacuum desiccator Large size vacuum desiccator (Acrylic construction)

(Stainless steel construction)

The super-size vacuum desiccator is constructed of stainless steel. The front surface is clear acrylic, allowing for confirmation of internal conditions,





# **Desiccator - Standard type**

# MK-780C

#### Standard desiccator

Standard type / Large size

780 series

High airtightness has been achieved by the special frame structure. The large size standard type desiccator absorbs moisture in the storage area using silica gel. Magnet packing type doors which are easy to open and close, and close handle type doors to maintain high airtightness can be selected.



Stainless steel composite plate
The stainless steel composite boards
have excellent electrical conductivity,
chemical resistance, and corrosion
resistance and are suitable for storing
electronic parts and drugs.

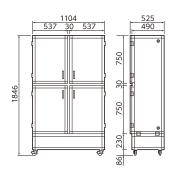


Aluminum composite plate Aluminum composite boards with good conductivity are used and are suitable for use as static electricity countermea-



MK-780CE PET resin

PET resin from recycled pet bottles is used. This is an environment friendly product that reduces global garbage.



	cifi		

Overall size : W1104  $\times$  D525  $\times$  H1846mm Effective inside dimension : W1064  $\times$  D470  $\times$  H1490mm

Cubic capacity: 780L

Unilocular frontage: W497  $\times$  H710mm Shelf board size: W494  $\times$  D460mm Shelf board material: Punchied shelf board SUS430  $\phi$ 20  $\times$  36 holes

The number of shelf board: 8 sheets

Shelf board load: 12kg uniform distributions

Silica gel container: 2 sheets

Frame material: Aluminum alumite treatment Corner material: Synthetic resin containing glass fiber

Stand material: Aluminum frame

 $\hbox{Composite panel plate (silver)} \\ \hbox{C a s t e } r : \hbox{Nylon } \phi 65 \hbox{ with stoppers}$ 

Whole withstand load: 120kg
Weight: 62kg

Accessories: Spare shelf board, Silica gel,

Purge flow meter, Gas filling valve,

Greenhouse clock



MK-780C Magnet packing type Caster

_						
	Code	Model number	Door type	Window / Side / Top / Back	Bottom	
(	1-02001	MK-780C		Acrylic (transparent)	Acrylic (white)	
(	1-02002	MK-780CN		Antistatic PVC (transparent)	Antistatic PVC (ivory)	
C	1-02003	MK-780CB	Magnet	Acrylic (light-shielding)	Acrylic (white)	
C	1-25001	MK-780CS	packing type	Stainless steel composite plate *Window: Antistatic PVC (transparent)	Stainless steel composite plate	
C	1-44001	MK-780CA	туре	Aluminum composite plate *Window:Antistatic PVC (transparent)	Aluminum composite plate	
(	1-47002	MK-780CE		PET resin (transparent)	PET resin (white)	
. (	1-02004	HK-780C		Acrylic (transparent)	Acrylic (white)	
(	1-02005	HK-780CN		Antistatic PVC (transparent)	Antistatic PVC (ivory)	
(	1-02006	HK-780CB	Sealed	Acrylic (light-shielding)	Acrylic (white)	
C	1-25002	HK-780CS	handle	Stainless steel composite plate *Window:Antistatic PVC (transparent)	Stainless steel composite plate	
C	1-44002	HK-780CA	type	Aluminum composite plate *Window:Antistatic PVC (transparent)	Aluminum composite plate	
, (	1-47014	HK-780CE		PET resin (transparent)	PET resin (white)	
C	1-36001	T-1	Spare she	lf board (with rails)		



#### Standard desiccator

Standard type / Large size

High airtightness has been achieved by the special frame structure. The large size standard type desiccator absorbs moisture in the storage area using silica gel. Draw latch type doors which are easy to open and close, and close handle type doors to maintain high airtightness can be selected.



Stainless steel composite plate The stainless steel composite boards have excellent electrical conductivity,

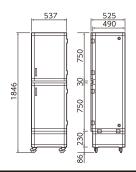


Aluminum composite plate Aluminum composite boards with good conductivity are used and are suitable for use as static electricity countermea-



MK-360CE PET resin

PET resin from recycled pet bottles is used. This is an environ-ment friendly product that reduces global garbage.



#### Specification

Overall size: W537 × D525 × H1846mm Effective inside dimension:  $W497 \times D470 \times H1490$  mm

Cubic capacity: 360L

Unilocular frontage: VV497 × H710mm Shelf board size : W494  $\times$  D460mm Shelf board material: Punchied shelf board SUS430  $\phi$ 20 × 36 holes

The number of shelf board: 4 sheets

Shelf board load: 12kg uniform distributions

Silica gel container: 1 sheet

Frame material: Aluminum alumite treatment Corner material: Synthetic resin containing glass fiber Stand material: Aluminum frame

Composite panel plate (silver)

C a s t e r: Nylon  $\phi$ 65 with stoppers

Whole withstand load: 120kg W e i g h t: 35kg

Accessories: Spare shelf board, Silica gel,
Purge flow meter, Gas filling valve,

Greenhouse clock



Code	Model number	Door type	Window / Side / Top / Back	Bottom
01-04001	MK-360C		Acrylic (transparent)	Acrylic (white)
01-04002	MK-360CN		Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-04003	MK-360CB	Magnet	Acrylic (light-shielding)	Acrylic (white)
01-27001	MK-360CS	packing type	Stainless steel composite plate *Window: Antistatic PVC (transparent)	Stainless steel composite plate
01-44016	MK-360CA		Aluminum composite plate *Window: Antistatic PVC (transparent)	Aluminum composite plate
01-47004	MK-360CE		PET resin (transparent)	PET resin (white)
01-04004	PK-360C		Acrylic (transparent)	Acrylic (white)
01-04005	PK-360CN		Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-04006	PK-360CB	Draw	Acrylic (light-shielding)	Acrylic (white)
01-27002	PK-360CS	latch type	Stainless steel composite plate *Window: Antistatic PVC (transparent)	Stainless steel composite plate
01-44017	PK-360CA		Aluminum composite plate *Window:Antistatic PVC (transparent)	Aluminum composite plate
01-47013	PK-360CE		PET resin (transparent)	PET resin (white)

MB-250 250 series

#### Standard desiccator

Standard type / Medium, Small size

High airtightness has realized the special frame structure. This mid- to small-size standard type desiccator absorbs moisture in the storage area using silica gel. Magnet packing type doors which are easy to open and close, and latch type doors to maintain high airtightness can be selected.



MB-250 Magnet packing type Rubber foot

# MB-180 180 series







#### Specification

Shelf board load: 12kg uniform distributions Overall size: Rubberfoot W537 × D525 × H1050mm

:(Caster) W537 × D525 × H1116mm Silica gel container: 1 sheet

Frame material: Aluminum alumite treatment Effective inside dimension: W497  $\times$  D470  $\times$  H990mm Corner material: Synthetic resin containing glass fiber Cubic capacity: 250L **Leg / Caster :** Rubber foot / Nylon  $\phi$ 65 with stoppers

Unilocular frontage: W497  $\times$  H990mm Shelf board size: W494  $\times$  D460mm Whole withstand load: 120kg

Weight: 26kg Shelf board material : SUS430  $\phi$ 20  $\times$  36 holes The number of shelf board: 4 sheets

Accessories: Spare shelf board, Silica gel, Purge flow meter, Gas filling valve, Greenhouse clock, Top board

Code	Model number	Door type/Foot	Window / Side / Top / Rear	Bottom	
01-43001	MB-250	Magnet	Acrylic (transparent)	Acrylic (white)	
01-43002	MB-250N	packing	Antistatic PVC (transparent)	Antistatic PVC (ivory)	
01-43003	MB-250B	type	Acrylic (light-shielding)	Acrylic (light-shielding)	
01-46001	MB-250A	Rubber foot	Aluminum composite plate *Window:Antistatic PVC (transparent)	Aluminum composite plate	
01-43004	MB-250C	Magnet	Acrylic (transparent)	Acrylic (white)	
01-43005	MB-250CN	packing	Antistatic PVC (transparent)	Antistatic PVC (ivory)	
01-43006	MB-250CB	type	Acrylic (light-shielding)	Acrylic (light-shielding)	
01-46002	MB-250CA	Casters	Aluminum composite plate *Window: Antistatic PVC (transparent)	Aluminum composite plate	
01-43007	PB-250	Draw	Acrylic (transparent)	Acrylic (white)	
01-43008	PB-250N	latch	Antistatic PVC (transparent)	Antistatic PVC (ivory)	
01-43009	PB-250B	type	Acrylic (light-shielding)	Acrylic (light-shielding)	
01-46003	PB-250A	Rubber foot	Aluminum composite plate *Window: Antistatic PVC (transparent)	Aluminum composite plate	
01-43010	PB-250C	Draw	Acrylic (transparent)	Acrylic (white)	
01-43011	PB-250CN	latch	Antistatic PVC (transparent)	Antistatic PVC (ivory)	
01-43012	PB-250CB	type Casters	Acrylic (light-shielding)	Acrylic (light-shielding)	
01-46004	PB-250CA		Aluminum composite plate *Window:Antistatic PVC (transparent)	Aluminum composite plate	
01-36001	T-1	Spare shelf board (with rails)			

#### Specification

Overall size: W537 × D525 × H825mm Silica gel container: 1 sheet

Effective inside dimension:  $W497 \times D470 \times H765$ mm Frame material: Aluminum alumite treatment Corner material: Synthetic resin containing glass fiber Cubic capacity: 180L

g: Rubber foot Shelf board size: W494 × D460mm Shelf board material : SUS430  $\phi$ 20  $\times$  36 holes Whole withstand load: 120kg Weight: 20kg The number of shelf board: 2 sheets

Shelf board load: 12kg uniform distributions Accessories: Spare shelf board, Silica gel, Purge flow meter,

Gas filling valve, Greenhouse clock, Top board

Code	Model number	Door type	Window / Side / Top / Rear	Bottom
01-08001	MB-180		Acrylic (transparent)	Acrylic (white)
01-08002	MB-180N	Magnet	Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-08003	MB-180B	packing	Acrylic (light-shielding)	Acrylic (light-shielding)
01-22001	MB-180A	type	Aluminum composite plate *Window:Antistatic PVC (transparent)	Aluminum composite plate
01-08004	PB-180		Acrylic (transparent)	Acrylic (white)
01-08005	PB-180N	Draw	Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-08006	PB-180B	latch	Acrylic (light-shielding)	Acrylic (light-shielding)
01-22002	PB-180A	type	Aluminum composite plate *Window:Antistatic PVC (transparent)	Aluminum composite plate
01-36001	T-1	Spare shelf board (with rails)		

#### Specifications

Overall size: W447 × D525 × H740mm Silica gel container: 1 sheet

Frame material: Aluminum alumite treatment Effective inside dimension: W407  $\times$  D470  $\times$  H680mm **Corner material:** Synthetic resin containing glass fiber

Cubic capacity: 140L Shelf board size: W403  $\times$  D460mm Shelf board material: SUS430  $\phi$ 20  $\times$  36 holes е g: Rubber foot Whole withstand load: 120kg The number of shelf board: 3 sheets Weight: 16kg

Shelf board load: 12kg uniform distributions Accessories: Spare shelf board, Silica gel,

Thermo-hygrometer, Top board

Code	Model number	Door type	Window / Side / Top / Rear	Bottom	
01-09001	ML-140	Magnet	Acrylic (transparent)	Acrylic (white)	
01-09002	ML-140N	Magnet packing	Antistatic PVC (transparent)	Antistatic PVC (ivory)	
01-09003	ML-140B	type	Acrylic (light-shielding)	Acrylic (light-shielding)	
01-09004	PL-140	Draw	Acrylic (transparent)	Acrylic (white)	
01-09005	PL-140N	latch	Antistatic PVC (transparent)	Antistatic PVC (ivory)	
01-09006	PL-140B	type	Acrylic (light-shielding)	Acrylic (light-shielding)	
01-36002	T-2	Spare shelf board (with rails)			

# ML-110 110 series

#### Standard desiccator

Standard type / Medium, Small size

Thermo-hygrometer, Top board

Thermo-hygrometer, Top board

High airtightness has realized the special frame structure. This mid- to small-size standard type desiccator absorbs moisture in the storage area using silica gel. Magnet packing type doors which are easy to open and close, and latch type doors to maintain high airtightness can be selected.



#### Specification

Overall size: W447 × D525 × H580mm Frame material: Aluminum alumite treatment Effective inside dimension:  $W407 \times D470 \times H520mm$ Corner material: Synthetic resin containing glass fiber

Cubic capacity: 110L g: Rubber foot е Shelf board size : W403  $\times$  D460mm Whole withstand load: 120kg

Shelf board material : SUS430  $\phi$ 20  $\times$  36 holes Weight: 12kg

Accessories: Spare shelf board, Silica gel, The number of shelf board : 2 sheetsThermo-hygrometer, Top board

Shelf board load: 12kg uniform distributions Silica gel container: 1 sheet

Code	Model number	Door type	Window / Side / Top / Rear	Bottom	
01-10001	ML-110	Magnet	Acrylic (transparent)	Acrylic (white)	
01-10002	ML-110N	packing	Antistatic PVC (transparent)	Antistatic PVC (ivory)	
01-10003	ML-110B		Acrylic (light-shielding)	Acrylic (light-shielding)	
01-10004	PL-110	Draw	Acrylic (transparent)	Acrylic (white)	
01-10005	PL-110N	latch	Antistatic PVC (transparent)	Antistatic PVC (ivory)	
01-10006	PL-110B	type	Acrylic (light-shielding)	Acrylic (light-shielding)	
01-36002	T-2	Spare shelf board (with rails)			

# MF-110 110 series

MF-110 Magnet packing type Rubber foot

#### Specification

Overall size: W447 × D422 × H740mm Frame material: Aluminum alumite treatment Effective inside dimension:  $W407 \times D367 \times H680$ mm Corner material: Synthetic resin containing glass fiber

Cubic capacity: 110L g: Rubber foot Shelf board size: W403  $\times$  D357mm Whole withstand load: 120kg Shelf board material : SUS430  $\phi$ 20  $\times$  36 holes Weight: 14kg

The number of shelf board: 3 sheets Accessories: Spare shelf board, Silica gel,

Shelf board load: 12kg uniform distributions

Silica gel container: 1 sheet

Code	Model number	Door type	Window / Side / Top / Rear	Bottom	
01-11001	MF-110	Magnet	Acrylic (transparent)	Acrylic (white)	
01-11002	MF-110N	packing	Antistatic PVC (transparent)	Antistatic PVC (ivory)	
01-11003	MF-110B		Acrylic (light-shielding)	Acrylic (light-shielding)	
01-11004	PF-110	Draw	Acrylic (transparent)	Acrylic (white)	
01-11005	PF-110N	latch	Antistatic PVC (transparent)	Antistatic PVC (ivory)	
01-11006	PF-110B	type	Acrylic (light-shielding)	Acrylic (light-shielding)	
01-36003	T-3	Spare shelf board (with rails)			

# MF-90 90 series



# Overall size: W447 × D422 × H580mm

Frame material: Aluminum alumite treatment Effective inside dimension:  $VV407 \times D367 \times H520$ mm Corner material: Synthetic resin containing glass fiber

g : Rubber foot Cubic capacity: 90L е Shelf board size : W403  $\times$  D357mm Whole withstand load: 120kg Shelf board material : SUS430  $\phi$ 20  $\times$  36 holes Weight: 10kg

The number of shelf board: 2 sheets Accessories: Spare shelf board, Silica gel,

Shelf board load: 12kg uniform distributions Silica gal container: 1 sheet

ilica gel container	i sneet			

	Code	Model number	Door type	Window / Side / Top / Rear	Bottom
0	1-12001	MF-90	packing	Acrylic (transparent)	Acrylic (white)
0	1-12002			Antistatic PVC (transparent)	Antistatic PVC (ivory)
0	1-12003	MF-90B		Acrylic (light-shielding)	Acrylic (light-shielding)
0	1-12004	PF-90	Draw	Acrylic (transparent)	Acrylic (white)
0	1-12005	PF-90N	latch	Antistatic PVC (transparent)	Antistatic PVC (ivory)
0	1-12006	PF-90B	type	Acrylic (light-shielding)	Acrylic (light-shielding)
0	1-36003	T-3	Spare she	elf board (with rails)	

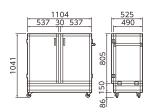
# Desiccator - Wagon type

MW-400C 400 series

#### Wagon desiccator

Standard type / Wagon type

A handle is attached to the desiccator to use as a carrier wagon. Magnet packing type doors which are easy to open and close, and close handle type doors to maintain high airtightness can be selected.



#### Specification

Overall size: W1104 × D525 × H1041mm Effective inside dimension:  $VV1064 \times D470 \times H765mm$ 

Cubic capacity: 400L

Unilocular frontage: W497  $\times$  H765mm Shelf board size : W494  $\times$  D460mm

Shelf board material : SUS430  $\phi$ 20  $\times$  36 holes

The number of shelf board: 6 sheets

Shelf board load: 12kg uniform distributions

Silica gel container: 2 sheets

Frame material: Aluminum alumite treatment

Corner material: Synthetic resin containing glass fiber Push handle:  $SUS304 \phi 25$ 

C a s t e r: Nylon  $\phi$ 65 with stoppers

Stand material: Aluminum frame

Composite panel plate (silver)

Whole withstand load: 100kg Weight: 40kg

Accessories: Spare shelf board, Silica gel,

Thermo-hygrometer, Top board

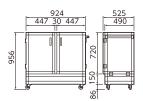




Example of top panel attachment

	Code	Model number	Door type	Window / Side / Top / Rear	Bottom
		MW-400C		Acrylic (transparent)	Acrylic (white)
0	1-16002	MW-400CN	Magnet	Antistatic PVC (transparent)	Antistatic PVC (ivory)
0	1-16003	MW-400CB	packing	Acrylic (light-shielding)	Acrylic (white)
0	1-45001	MW-400CA	type	Aluminum composite plate *Window: Antistatic PVC (transparent)	Aluminum composite plate
0	1-16004	HW-400C		Acrylic (transparent)	Acrylic (white)
0	1-16005	HW-400CN	Sealed	Antistatic PVC (transparent)	Antistatic PVC (ivory)
0	1-16006	HW-400CB	handle	Acrylic (light-shielding)	Acrylic (white)
0	1-45002	HW-400CA	type	Aluminum composite plate *Window:Antistatic PVC (transparent)	Aluminum composite plate
0	1-36001	T-1	Spare she	elf board (with rails)	
0	1-36014	TO-11	Top boar	d	

# MW-300C 300 series



#### Specification

Overall size: W924 × D525 × H956mm Effective inside dimension: W884  $\times$  D470  $\times$  H680mm

Cubic capacity: 300L

Unilocular frontage: W407 × H680mm Shelf board size: W403 × D460mm

Shelf board material : SUS430  $\phi$ 20 imes 36 holes

The number of shelf board: 6 sheets

Shelf board load: 12kg uniform distributions

Silica gel container: 2 sheets

Frame material: Aluminum alumite treatment Corner material: Synthetic resin containing glass fiber

Push handle: SUS304 φ25

C a s t e r: Nylon  $\phi$ 65 with stoppers

Stand material: Aluminum frame

Composite panel plate (silver)

Whole withstand load: 60kg Weight: 34kg

Accessories: Spare shelf board, Silica gel,

Thermo-hygrometer, Top board





Example of top panel attachment

Code	Model number	Door type	Window / Side / Top / Rear	Bottom
01-16007	MW-300C		Acrylic (transparent)	Acrylic (white)
01-16008	MW-300CN	Magnet	Antistatic PVC (transparent)	Antistatic PVC (ivory)
	MW-300CB	packing	Acrylic (light-shielding)	Acrylic (white)
01-45003	MW-300CA	type	Aluminum composite plate *Window: Antistatic PVC (transparent)	Aluminum composite plate
01-16010	HW-300C		Acrylic (transparent)	Acrylic (white)
01-16011	HW-300CN	Sealed	Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-16012	HW-300CB	handle	Acrylic (light-shielding)	Acrylic (white)
01-45004	HW-300CA	type	Aluminum composite plate *Window:Antistatic PVC (transparent)	Aluminum composite plate
01-36002	T-2	Spare shelf board (with rails)		
01-36015	TO-9	Top hoard		

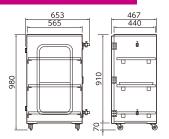
# Desiccator - Stainless steel type

S-190C Stainless steel series

#### Stainless steel desiccator

Standard type / Stainless steel type / Medium size

This is a stainless steel desiccator with exceptional chemical resistance and durability. Can be used as a gas desiccator with the standard equipped gas sealed valve. (simple sealed type)



#### Specification

Effective inside dimension:  $VV515 \times D440 \times H860$ mm

Cubic capacity: 190L D o o r s: Draw latch type Body packing: Neoprene rubber Body material: SUS430

Window material : Acrylics (transparent) Shelf board size : W540  $\times$  D410  $\times$  H25mm Shelf board material : SUS430  $\phi$ 20  $\times$  20 holes

Shelf board space: 40mm pitch The number of shelf board: 3 sheets

Shelf board load: 20kg uniform distributions

Gas intake valve :  $\phi$ 6 tube joint Silica gel container: SUS430 1 sheet

C a s t e r s: Nylon  $\phi$ 50 with stoppers 2

Without stopper 2

Whole withstand load: 60kg Weight: 32kg

Accessories: Spare shelf board, Silica gel,

Thermo-hygrometer

\*Glass is also available for window material.



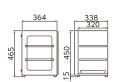
Code	Model number	Overall size
01-28001	S-190C	W565 × D467 × H980mm
01-36004 T-8		Spare shelf board (with bracket)

S-40Stainless steel series

#### Stainless steel desiccator

Standard type / Stainless Steel type / Small size

This is a stainless steel desiccator with exceptional chemical resistance and durability. This is a space-saving compact type and can be used for multiple applications.



#### Specification

Effective inside dimension: W310  $\times$  D320  $\times$  H420mm

Cubic capacity: 40L

D o o r s: Draw latch type Body packing: Neoprene rubber

Body material: SUS430

Window material: Acrylics (transparent) Shelf board size : W309  $\times$  D304  $\times$  H12mm Shelf board material : SUS430  $\phi$ 20  $\times$  25 holes

Shelf board space: 70mm pitch The number of shelf board: 2 sheets

Shelf board load: 20kg uniform distributions

Silica gel container : SUS430 1 sheet

Whole withstand load: 40kg Weight: 10kg

Accessories : Spare shelf board, Silica gel,

Thermo-hygrometer

\*Glass is also available for window material. \*However, a greenhouse clock cannot be attached to a glass window.



	Code	Model number		Overall size
	01-28002 S-40 \		W364 × D338 × H465mm	
01-36005 T-9 S		T-9	Spare shelf board	

<sup>\*</sup>However, a greenhouse clock cannot be attached to a glass window.

# Desiccator - Strong dehumidifier type

# MK-780CD

#### Desiccator with strong dehumidifier Strong dehumidifier type / Large size

780 series

With the strong built-in dehumidifier, even a large quantity of products can be stored without worry. The special frame structure maintains high airtightness. Magnet packing type doors which are easy to open and close, and close handle type doors to maintain high airtightness can be selected.



MK-780CSD

#### Stainless steel composite plate

The stainless steel composite boards have excellent electrical conductivity. chemical resistance, and corrosion resistance and are suitable for storing electronic parts and drugs.



MK-780CAD

#### Aluminum composite plate

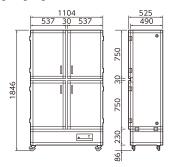
Aluminum composite boards with good conductivity are used and are suitable for use as static electricity countermea-



MK-780CED

#### PET resin

PET resin from recycled pet bottles is used. This is an environ-ment friendly product that reduces global garbage.



#### Specification

Overall size: W1104 × D525 × H1846mm Effective inside dimension:  $VV1064 \times D470 \times H1490mm$ 

Cubic capacity: 780L

Unilocular frontage : W497 × H710mm W494 × D460mm Shelf board size:

Shelf board material : SUS430  $\phi$ 20 imes 36 holes The number of shelf board: 8 sheets

Shelf board load: 12kg uniform distributions Dry air flow: Compulsive convection type opening-

and-closing control of a valve Dehumidification cycle: 1. Setting Humidity Un-Reaching A repetition of dryness 25 minutes and

dehumidification 50 minutes 2. After set humidity reach

ON-OFF-controls by the Semiconductors sensors

Temperature settings: 20% - ambient humidity

Temperature display: Humidity in warehouse: Green lamp Set humidity: Red lamp

Frame material: Aluminum alumite treatment Corner material: Synthetic resin containing glass fiber Stand material: Aluminum frame

Composite panel plate (silver)

C a s t e r: Nylon  $\phi$ 65 with stoppers Whole withstand load : 120kg Electric capacity: AC100V 1A

(when reproducing the desiccant)

Weight: 63kg

Accessories: Spare shelf board, Greenhouse clock



	Code	Model number	Door type	Window / Side / Top / Back	Bottom
	01-01001	MK-780CD		Acrylic (transparent)	Acrylic (white)
1	01-01002	MK-780CND	Magnet	Antistatic PVC (transparent)	Antistatic PVC (ivory)
4	01-01003	MK-780CBD		Acrylic (light-shielding)	Acrylic (white)
S		MK-780CSD	packing type	Stainless steel composite plate *Window:Antistatic PVC (transparent)	Stainless steel composite plate
	01-44011	MK-780CAD	c, pc	Aluminum composite plate *Window:Antistatic PVC (transparent)	Aluminum composite plate
	01-47001	MK-780CED		PET resin (transparent)	PET resin (white)
	01-01004	HK-780CD		Acrylic (transparent)	Acrylic (white)
r	01-01005	HK-780CND		Antistatic PVC (transparent)	Antistatic PVC (ivory)
	01-01006	HK-780CBD	Sealed	Acrylic (light-shielding)	Acrylic (white)
)	01-24002	HK-780CSD	handle	Stainless steel composite plate *Window:Antistatic PVC (transparent)	Stainless steel composite plate
	01-44012	HK-780CAD		Aluminum composite plate *Window:Antistatic PVC (transparent)	Aluminum composite plate
)	01-47011	HK-780CED		PET resin (transparent)	PET resin (white)
k	01-36001	T-1	Spare she	elf board (with rails)	<u> </u>

# MK-360CD 360 series

#### Desiccator with strong dehumidifier Strong dehumidifier type / Large size

With the strong built-in dehumidifier, even a large quantity of products can be stored without worry. The special frame structure maintains high airtightness. Magnet packing type doors which are easy to open and close, and latch type doors to maintain high airtightness can be selected.



# Stainless steel composite plate

The stainless steel composite boards have excellent electrical conductivity, chemical resistance, and corrosion resistance and are suitable for storing electronic parts and drugs.



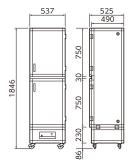
#### Aluminum composite plate

Aluminum composite boards with good conductivity are used and are suitable for use as static electricity countermea-



#### PET resin

PET resin from recycled pet bottles is used. This is an environ-ment friendly product that reduces global garbage.



#### Specification

Overall size: W537 × D525 × H1846mm W497 × D470 × H1490mm Effective inside dimension:

Cubic capacity: 360L

Unilocular frontage : Shelf board size : W497 × H710mm W494 × D460mm SUS430  $\phi$ 20 × 36 holes Shelf board material:

The number of shelf board: 4 sheets

Shelf board load: 12kg uniform distributions

Dry air flow: Compulsive convection type openingand-closing control of a valve

Dehumidification cycle: 1. Setting Humidity Un-Reaching A repetition of dryness 25 minutes and

dehumidification 50 minutes 2. After set humidity reach

ON-OFF-controls by the Semiconductors sensors

Temperature settings: 20% - ambient humidity Temperature display: Humidity in warehouse: Green lamp

Set humidity: Red lamp

Frame material: Aluminum alumite treatment Corner material: Synthetic resin containing glass fiber Stand material: Aluminum frame

Composite panel plate (silver)

C a s t e r : Nylon  $\phi$ 65 with stoppers

Whole withstand load : 120kg

Electric capacity : AC100V 1A

(when reproducing the desiccant)

Weight: 36kg Accessories: Spare shelf board, Greenhouse clock



Code	Model number	Door type	Window / Side / Top / Back	Bottom
01-03001	MK-360CD		Acrylic (transparent)	Acrylic (white)
	MK-360CND		Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-03003	MK-360CBD	Magnet	Acrylic (light-shielding)	Acrylic (white)
		packing type	Stainless steel composite plate *Window:Antistatic PVC (transparent)	Stainless steel composite plate
01-44021	MK-360CAD	rypc	Aluminum composite plate *Window:Antistatic PVC (transparent)	Aluminum composite plate
01-47003	MK-360CED		PET resin (transparent)	PET resin (white)
01-03004	PK-360CD		Acrylic (transparent)	Acrylic (white)
01-03005	PK-360CND		Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-03006	PK-360CBD	Draw	Acrylic (light-shielding)	Acrylic (white)
01-26002	PK-360CSD	latch type	Stainless steel composite plate *Window: Antistatic PVC (transparent)	Stainless steel composite plate
01-44022	PK-360CAD	,,	Aluminum composite plate *Window: Antistatic PVC (transparent)	Aluminum composite plate
01-47012	PK-360CED		PET resin (transparent)	PET resin (white)
01-36001	T-1	Spare shelf board (with rails)		

# Desiccator - Strong dehumidifier type

MB-250CD

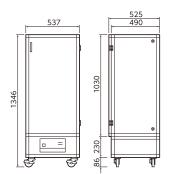
#### **Desiccator with dehumer**

Strong dehumidifier type / Medium size

250 series

With the strong built-in dehumidifier, even a large quantity of products can be stored without worry. The special frame structure maintains high airtightness. Magnet packing type doors which are easy to open and close, and close handle type doors to maintain high airtightness can be selected.





#### Specification

 $\textbf{Overall size:} \\ \textbf{\textit{Rubber foot}} \ \text{W537} \times \text{D525} \times \text{H1280mm} \\$ 

: Caster W537 × D525 × H1346mm

Effective inside dimension: W497  $\times$  D470  $\times$  H990mm

Cubic capacity: 250L

Unilocular frontage : W497  $\times$  H990mm Shelf board size : W494  $\times$  D460mm

Shelf board material : SUS430  $\,\phi$ 20 imes 36 holes

The number of shelf board: 4 sheets

Shelf board load: 12kg uniform distributions

Dry air flow: Compulsive convection type opening-

and-closing control of a valve

Dehumidification cycle : 1. Setting Humidity Un-Reaching

A repetition of dryness 25 minutes and dehumidification 50 minutes 2. After set humidity reach

ON-OFF-controls by the Semiconductors

sensors

Temperature settings: 20% - ambient humidity

Temperature display: Humidity in warehouse: Green lamp

Set humidity: Red lamp

Frame material: Aluminum alumite treatment Corner material: Synthetic resin containing glass fiber

Stand material: Aluminum frame

Composite panel plate (silver)

 ${\sf Leg/Caster}: {\sf Rubber foot/Nylon} \ \phi \, {\sf 65} \ {\sf with stoppers}$ 

Whole withstand load: 120kg Electric capacity: AC100V 1A

(when reproducing the desiccant)

Weight: 27kg

Accessories: Spare shelf board, Greenhouse clock

\*Ask for details regarding the desiccant.

MB-250CD	Magnet packing type	Caster
TVID ZOCCD		

Code	Model number	Door type / Foot	Window / Side / Top / Back	Bottom
01-41001	MB-250D	Magnet	Acrylic (transparent)	Acrylic (white)
01-41002	MB-250ND	packing type	Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-41003	MB-250BD	Rubber foot	Acrylic (light-shielding)	Acrylic (light-shielding)
01-41004	MB-250CD	Magnet	Acrylic (transparent)	Acrylic (white)
01-41005		packing type	Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-41006	MB-250CBD	casters	Acrylic (light-shielding)	Acrylic (light-shielding)
01-41007	PB-250D	Draw latch	Acrylic (transparent)	Acrylic (white)
01-41008		type	Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-41009	PB-250BD	Rubber foot	Acrylic (light-shielding)	Acrylic (light-shielding)
01-41010	PB-250CD	Draw latch	Acrylic (transparent)	Acrylic (white)
01-41011	PB-250CND	type	Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-41012	PB-250CBD		Acrylic (light-shielding)	Acrylic (light-shielding)
01-36001	T-1	Spare she	lf board (with rails)	

# Desiccator - Membrane dryer type



## Membrane dryer desiccator

Membrane dryer type / Large size

This desiccator includes a built-in membrane dryer. Compressed air is forced through a hollow fiber type membrane.

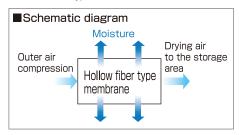
A large quantity of products can be stored due to the strong dehumidification performance.



Membrane drver unit

#### ■Principle

Based on the principle that dry air can be generated by passing compressed air through a hollow fiber type membrane device.





\*Specifications for MK-360CM are different. Ask for details.

#### Specification

Overall size: W1104  $\times$  D525  $\times$  H1846mm Effective inside dimension: W1064  $\times$  D470  $\times$  H1490mm

Cubic capacity: 780L

Unilocular frontage: W497  $\times$  H710mm Shelf board size: W494  $\times$  D460mm Shelf board material: SUS430  $\phi$ 20  $\times$  36 holes

The number of shelf board: 8 sheets

Air used: Compressed air

Gas IN side: 6mm Joint for tube Entrance air pressure: 0.3~0.85MPa

Shelf board load: 12kg uniform distributions Frame material: Aluminum alumite treatment Corner material: Synthetic resin containing glass fiber

Stand material: Aluminum frame Composite panel plate (silver)

C a s t e r: Nylon  $\phi$ 65 with stoppers

Whole withstand load: 120kg W e i g h t:65kg

Air dryer unit: Mist separator / micro mist separator included Regulator included

Accessories: Spare shelf board, Greenhouse clock



Code	Model number	Door type	Window / Side / Top / Back	Bottom
01-52001	MK-780CM	Magnet	Acrylic (transparent)	Acrylic (white)
01-52002	MK-780CNM	packing type	Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-52011	HK-780CM		Acrylic (transparent)	Acrylic (white)
01-52012	HK-780CNM	handle type	Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-52013	MK-360CM		Acrylic (transparent)	Acrylic (white)
01-52014	MK-360CNM	packing type	Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-52015	PK-360CM	Draw latch	Acrylic (transparent)	Acrylic (white)
01-52016	PK-360CNM	type	Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-36001	T-1	Spare shelf board (with rails)		

MK-780CM Magnet packing type Caster

# Desiccator - Gas controlled type

#### Gas controlled desiccator

This desiccator converts air in the storage area to inert gases such Gas replacement type / Large size as nitrogen and argon. Effective operation is ensured by controlling the gasflow rate by a timer when the door is opened or closed.

NC-780C

780 series

#### Specification

Overall size: W1104 × D525 × H1846mm Effective inside dimension: W1064  $\times$  D470  $\times$  H1490mm

Cubic capacity: 780L

Unilocular frontage: W497  $\times$  H710mm Shelf board size: W494  $\times$  D460mm Shelf board material: Punchied shelf board SUS430  $\phi$ 20 × 36 holes

The number of shelf board: 8 sheets

Flow meter: 0~5L/min Flow adjustment valve

Gas IN side:  $\phi$ 6 Joint for tube T i m e r:0 $\sim$ 30 minutes

Inert gas supply time when the door is closed

Inert gas control: After supply OFF when door is opened and supply

ON when closed, repeat OFF after the ON timer set time has passed and ON after the OFF timer

set time has passed

Shelf board load: 12kg uniform distributions Frame material: Aluminum alumite treatment Corner material: Synthetic resin containing glass fiber

Stand material: Aluminum frame

Composite panel plate (silver) C a s t e r: Nylon  $\phi$ 65 with stoppers

Whole withstand load: 120kg Weight: 68kg

Accessories: Spare shelf board,

Thermo-hygrometer

\*A small amount of dust is generated, please ask about clean specifications.



NC-780C Magnet packing type Caster

Code	Model number	Door type	Window / Side / Top / Back	Bottom
01-50001	NC-780C	Magnet	Acrylic (transparent)	Acrylic (white)
01-50002	NC-780CN	packing type	Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-36001	T-1	Spare shelf board (with rails)		

# NC-360C 360 series

#### Specification

Overall size: W537 × D525 × H1846mm Effective inside dimension:  $W497 \times D470 \times H1490$ mm

Cubic capacity: 360L

Unilocular frontage: W497 × H710mm

Shelf board size : W494  $\times$  D460mm Shelf board material: Punchied shelf board SUS430  $\phi$ 20 × 36 holes

The number of shelf board: 4 sheets

Flow meter: 0~5L/min Flow adjustment valve

Gas IN side:  $\phi$ 6 Joint for tube T i m e r:0 $\sim$ 30 minutes

Inert gas supply time when the door is closed

Inert gas control: After supply OFF when door is opened and supply ON when closed, repeat OFF after the ON timer set time has passed and ON after the OFF timer

set time has passed

Shelf board load: 12kg uniform distributions Frame material: Aluminum alumite treatment

Corner material: Synthetic resin containing glass fiber

Stand material: Aluminum frame

Composite panel plate (silver)

C a s t e r: Nylon  $\phi$ 65 with stoppers

Whole withstand load: 120kg Weight: 40kg

Accessories: Spare shelf board,

Thermo-hygrometer

*A small a	mount of	dust is	generated,	please	ask
about cle	an specific	cations			



Code	Model number	Door type	Window / Side / Top / Back	Bottom
		Magnet	Acrylic (transparent)	Acrylic (white)
01-50004	NC-360CN	packing type	Antistatic PVC (transparent)	Antistatic PVC (ivory)
01-36001	T-1	Spare she	lf board (with rails)	

# Desiccator - Gas replacement type

#### Gas replacement desiccator

This desiccator converts air in the storage area to inert gases such Gas replacement type / Large size as nitrogen and argon. Each room is independent, minimizing the effect of opening and closing the door.





4 independent rooms

#### Specification

Effective inside dimension : W497  $\times$  D470  $\times$  H765mm  $\times$  4 rooms

Cubic capacity:  $180L \times 4$  rooms Unilocular frontage: W497  $\times$  H765mm D o o r: Magnet packing type Window/Side/Top/Back: Acrylics (transparent) bottom surface: Acrylic (white) Shelf board size :  $W494 \times D460mm$ Shelf board material: Punchied shelf board SUS430  $\phi$ 20 × 36 holes

The number of shelf board: 8 sheets

Shelf board load: 12kg uniform distributions Flow meter:  $0\sim5L/\min$  Valve attached  $\times$  4 Independent piping

with  $\phi$ 6 tube joint (only **CX** type) Gas intake valve: Connection diameter

 $\phi$ 8 × 4 (only **CX** type) C a s t e r: Nylon  $\phi$ 65 with stoppers Frame material: Aluminum alumite treatment

Corner material: Synthetic resin containing glass fiber

Stand material: Aluminum frame

Composite panel plate (silver)

Whole withstand load: 120kg Weight: 80kg

Accessories: Spare shelf board,

Thermo-hygrometer, Shelf board (with rails)

Ļ			
/	pe)		
SS	s fiber		
			N-1804CX Magnet packing type Caster
	Code	Model number	Overa <b>ll</b> size
	01-51001	N-1804C	W1104 × D525 × H1856mm
	01-51002	N-1804CX	VV   104 ^ D323 ^ 111030

	Code	Model number	Overali size
	01-51001	N-1804C	W1104 × D525 × H1856mm
	01-51002	N-1804CX	
	01-36001	T-1	Spare shelf board (with rails)
		<u> </u>	pare shell board (With rails)

# N-1802C 180×2 series

#### Specification

Effective inside dimension: W497  $\times$  D470  $\times$  H765mm  $\times$  2 rooms

Cubic capacity:  $180L \times 2$  rooms Unilocular frontage: W497  $\times$  H765mm D o o r: Magnet packing type
Window/Side/Top/Back: Acrylics (transparent) bottom surface : Acrylic (white) Shelf board size: W494 × D460mm Shelf board material: Punchied shelf board SUS430  $\phi$ 20 × 36 holes

The number of shelf board: 4 sheets

Shelf board load: 12kg uniform distributions Flow meter:  $0\sim5L/\min Valve attached \times 2$ 

Independent piping

with  $\phi$ 6 tube joint (only **CX** type)

Gas intake valve: Connection diameter

 $\phi$ 8 × 4 (only **CX** type) C a s t e r: Nylon  $\phi$ 65 with stoppers

Frame material: Aluminum alumite treatment Corner material: Synthetic resin containing glass fiber

Stand material: Aluminum frame

Composite panel plate (silver)

Whole withstand load: 120kg Weight: 40kg

Accessories: Spare shelf board,

Thermo-hygrometer, Shelf board (with rails)



2 independent rooms



N-1802C Magnet packing type Caster

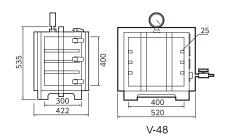
Code	Model number	Overall size
	N-1802C N-1802CX	W537 × D525 × H1856mm
01-36001	T-1	Spare shelf board (with rails)

# Desiccator - Vacuum type

# U-48/U-110 Vacuum series

#### Vacuum desiccator

A vacuum pump decompresses the storage area, removing humidity and oxygen. For use in experimental operations such as vacuum drying, deaeration, and defoaming, as well as for dry storage and oxidation prevention.



Code 01-29001 01-29000			
Model number V-48 V-110			
Overall size   W520 × D422 × H535mm   W720 × D617 ×	H810mm		
Effective inside dimension $W400 \times D300 \times H400mm$ $W520 \times D400 \times$	H550mm		
Cubic capacity 48L 110L			
Door type Draw latch type	atch type		
Body material Acrylics (transparent) 25t			
Shelf board size W395 × D260 × 5t W515 × D385	5 × 5t		
Shelf board material Acrylics (transparent) $\phi$ 10 × 12 holes $\phi$ 10 × 18 h			
Shelf board space 3 shelves Fixed 90mm 4 shelves Fixed	133mm		
The number of shelf board 2 sheets			
Shelf board load 5kg uniform distributions	5kg uniform distributions		
Door sealing Silicorn rubber $\phi 8$			
Air valve 2 pieces, φ8 Caliber			
Vacuum gauge 0∼0.1MPa			
Max vacuum level 133Pa (1Torr)	133Pa (1Torr)		
Weight 40kg 82kg			
Code 01-36030 01-36034	1		
Spare shelf board T-48 T-110			



V-48 Draw latch type





Decompression regulator valve

#### Customization example

\*Manufacturing to special specifications is available.



Large vacuum desiccator (ultraviolet protection specifications) Large vacuum desiccator

Large vacuum desiccator

# **U-30** Vacuum series

### Specification

Effective inside dimension: W260  $\times$  D235  $\times$  H440mm

Cubic capacity: 30L

D o o r: Draw latch type

Body material: Acrylics (transparent) 30t Shelf board size : W257  $\times$  D220  $\times$  5t Shelf board material: Acrylics (transparent)

 $\phi$ 10 × 10 holes

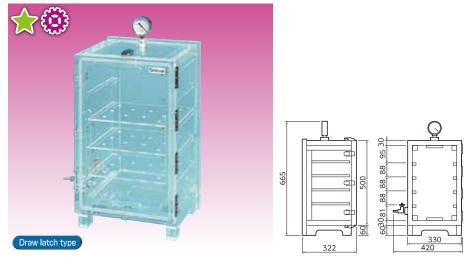
Shelf board space: 4 shelves Fixed 88mm

The number of shelf board: 3 sheets

Shelf board load: 5kg uniform distributions Door sealing: Silicorn rubber  $\phi 8$ Air valve: 2 pieces  $\phi 8$  Caliber

Vacuum gauge: 0~0.1MPa Max vacuum level: 133Pa (1Torr)

W e i g h t:32kg



Code	Model number	Overall size
01-29002	V-30	W330 × D322 × H565mm
01-36031	T-30	Spare shelf board



### Specification

Effective inside dimension: W260  $\times$  D180  $\times$  H260mm

Cubic capacity: 12L

D o o r: Draw latch type

Body material: Acrylics (transparent) 20t Shelf board size : W257  $\times$  D170  $\times$  5t Shelf board material: Acrylics (transparent)

 $\phi$ 10 × 8 holes

Shelf board space: 2 shelves Fixed 110mm

The number of shelf board: 2 sheets
Shelf board load: 5kg uniform distributions Door sealing : Silicorn rubber  $\phi 8$ Air valve: 2 pieces  $\phi$ 8 Caliber

Vacuum gauge : 0∼0.1MPa Max vacuum level : 133Pa (1Torr)

Weight: 12kg



Code	Model number	Overall size
01-29003 V-12 V		W310 × D222 × H365mm
01-36032 T-12 Spare shelf board		Spare shelf board

# Vacuum series

### Specification

Effective inside dimension:  $VV260 \times D260 \times H100$ mm

Cubic capacity: 7L

D o o r: Draw latch type

Body material: Acrylics (transparent) 20t Shelf board size :  $W257 \times D257 \times 5t$ Shelf board material: Acrylics (transparent)  $\phi$ 10 × 8 holes

Shelf board space: 1 shelves Fixed

The number of shelf board: 1 sheet

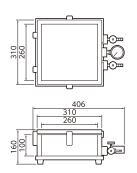
Shelf board load: 5kg uniform distributions

Door sealing : Silicorn rubber  $\phi 8$ 

Air valve: 2 pieces  $\phi$ 8 Caliber Vacuum gauge: 0~0.1MPa Max vacuum level: 133Pa (1Torr)

Weight:9kg





	Code Model number		Overall size
01-29004 V-7		V-7	W310 × D310 × H160mm
01-36033 T-7		T-7	Spare shelf board

# Desiccator - Vacuum type

# **UT-12** Vacuum series

# Vertical vacuum desiccator

The lid of this vacuum desiccator opens upward.

# Vacuum type / Small size



Effective inside dimension: W260  $\times$  D260  $\times$  H180mm

Cubic capacity: 12L

D o o r: Draw latch type

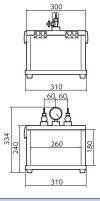
Body material: Acrylics (transparent) 20t Shelf board size :  $W257 \times D257 \times 5t$ Shelf board material : Acrylic  $\phi$ 10 × 8 holes Shelf board space: 1 shelves Fixed

The number of shelf board: 1 sheet

Shelf board load: 5kg uniform distributions Door sealing: Silicorn rubber  $\phi 8$ Air valve: 2 pieces  $\phi$ 8 Caliber

Max vacuum level: 133Pa (1Torr) W e i g h t: 10.5kg



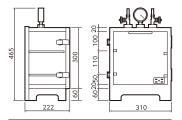


Code Model number Over		Model number	Overall size
	01-29005 VT-12		$W310 \times D310 \times H240$ mm
<b>01-36033 T-7</b> Spare s		T-7	Spare shelf board

# **UC-12/30** Vacuum series

# Vacuum desiccator with an electrical outlet Vacuum type / Medium, Small size

This vacuum desiccator can use electricity since an electrical outlet has been installed in the desiccator,



### Specification

Effective inside dimension :  $W260 \times D180 \times H260$ mm

Cubic capacity: 12 L

D o o r: Draw latch type Body material: Acrylics (transparent) 20t Shelf board size : W257  $\times$  D170  $\times$  5t Shelf board material: Acrylics (transparent)

 $\phi$ 10 × 8 holes

Shelf board space: 2 shelves Fixed 110mm

Door sealing: Silicorn rubber  $\phi$ 8 Air valve: 2 pieces φ8 Caliber Vacuum gauge: 0~0.1MPa Max vacuum level: 133Pa (1Torr)

Weight: 13kg

The number of shelf board: 2 sheets Shelf board load: 5kg uniform distributions Outlet: AC100V 10A Draw latch type 3-socket Cord 2P with 2m Code Model number Overall size W310 × D222 × H365mm

999	80 80 80 80 80 80 80 80 80 80 80 80 80 8	88 88 88 88 88 88 88 88 88 88 88 88 88	
	Speci	fication	
	de dimension: W2 apacity: 30		1440mm

D o o r: Draw latch type Body material: Acrylics (transparent) 30t Shelf board size : W257  $\times$  D220  $\times$  5t Shelf board material: Acrylics (transparent)

 $\phi$ 10 × 10 holes

Shelf board space: 4 shelves Fixed 88mm

The number of shelf board: 3 sheets

Shelf board load: 5kg uniform distributions Door sealing: Silicorn rubber  $\phi 8$  Air valve: 2 pieces  $\phi 8$  Caliber Vacuum gauge: 0~0.1MPa Max vacuum level: 133Pa (1Torr)

Outlet: AC100V 10A 3-socket Cord 2P

with 2m

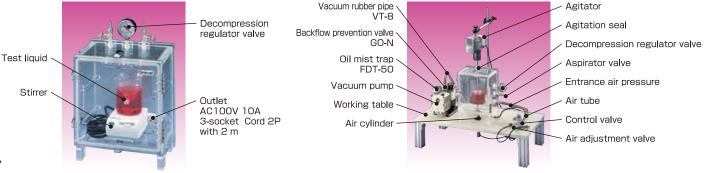
W e i g h t: 33kg



Code	Model number	Overall size
01-30001	VC-30	W330 × D322 × H565mm
01-36031	T-30	Spare shelf board

# 01-30002 VC-12 01-36032 T-12 Spare shelf board

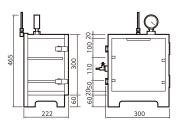
### Example of using vacuum desiccator with an electrical outlet Example of using the desiccator for stirring or vacuum defoaming



# **UD-12/30** Vacuum series

# Desiccator for stirring and vacuum degassing Vacuum type / Medium, Small size

By attaching a stirring bar inside the desiccator, vacuum defoaming operations using an agitator can be performed. Can be used as a standard vacuum desiccator by utilizing a blank cap.



# Specification

Effective inside dimension : W260  $\times$  D180  $\times$  H260mm

Cubic capacity: 12L

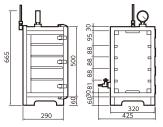
D o o r: Draw latch type Body material: Acrylics (transparent) 20t Shelf board space: 2 shelves Fixed Door sealing: Silicorn rubber  $\phi 8$ Air valve: 2 pieces  $\phi 8$  Caliber Vacuum gauge: 0~0.1MPa Max vacuum level: 133Pa (1Torr) **Stand bar**:  $\phi$ 16 × L400 Cr Plating Weight: 12kg

Options: Shelf board: W257 × D170 × 5t

Acrylics (transparent)  $\phi 10 \times 8$  holes

With stand bar  $\phi$ 16

		φισκοπ	O(C)
		Model number	Overall size
		VD-12	W310 × D222 × H365mm
		T-12	Spare shelf board



# Specification

Effective inside dimension : W260  $\times$  D235  $\times$  H440mm

Cubic capacity: 30L

D o o r: Draw latch type Body material: Acrylics (transparent) 30t Shelf board space: 4 shelves Fixed 88mm Door sealing: Silicorn rubber  $\phi 8$ Air valve: 2 pieces  $\phi 8$  Caliber Vacuum gauge :  $0\sim0.1$ MPa Max vacuum level: 133Pa (1Torr) **Stand bar**:  $\phi$ 16 × L400 Cr Plating

Weight: 31kg Options: Shelf board:

W257 × D220 × 5t Acrylics (transparent)  $\phi$ 10 × 10 holes

With stand bar  $\phi$ 16

	Code Model number		Overall size
			W330 × D322 × H565mm
			Spare shelf board

# US-45/100 Vacuum series

# Stainless steel vacuum desiccator (Standard type / Stainless steel type / Large, Medium type

This vacuum desiccator is constructed of stainless steel for excellent chemical resistance and durability





### Specification

Effective inside dimension: W354  $\times$  D410  $\times$  H304mm

Cubic capacity: 45L Body material: SUS304 Window material: Acrylic 25t Door sealing: Silicorn rubber  $\phi 8$ Air valve: 1 piece  $\phi$ 8 Caliber Vacuum gauge :  $0 \sim 0.1 MPa$ 

Max vacuum level: 133Pa (1Torr) Weight: 20kg

Code	Model number	Overall size
01-32001 VS-45		W430 × D530 × H482mm

# Specification

Effective inside dimension: W392  $\times$  D543  $\times$  H442mm

Cubic capacity: 100L Body material: SUS304

Window material: Acrylic 25t Reinforcement included

Door sealing: Silicorn rubber  $\phi 8$ Air valve: 2 pieces  $\phi$ 8 Caliber

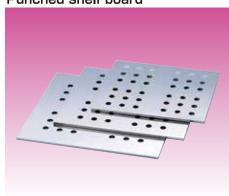
Vacuum gauge :  $0 \sim 0.1 MPa$ Max vacuum level: 133Pa (1Torr)

W e	i g	h t	50kg
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Code	Model number	Overall size
01-32002	VS-100	W500 × D676 × H550mm

# **Accessories**

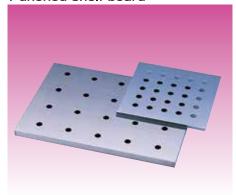
# Punched shelf board



Code	Model number	Overall size
01-36001	T-1	W494 × D460mm
01-36002	T-2	W403 × D460mm
01-36003	T-3	W403 × D357mm

Material: SUS430 With rails

### Punched shelf board



Code	Model number	Overall size
01-36004	T-8	W540 × D410 × H25mm
01-36005	T-9	W309 × D304 × H12mm
Material:	SUS430 W	ith bracket (T-8)

SUS430 (T-9) T-8 is for S-190C T-9 is for S-40

### Punched shelf board with a slide rail



Code	Model number	Overall size
01-36006	ST-1	W463 × D460mm
01-36007	ST-2	W372 × D460mm

Material: SUS430 With Slide rail

# Tray



Code	Model number	Overall size
01-36008	ST-6	W480 × D335mm
01-36009	ST-7	W355 × D445mm

Material: SUS430 With rails

# **Top board** (or experiment / writing table)



Code	Model number	Overall size
01-36014	TO-11	W1104 × D490mm
01-36015	TO-9	W924 × D490mm
01-36016	TO-5	W537 × D490mm
01-36017	TO-4	W447 × D490mm

Material: Melamine plywood 20t

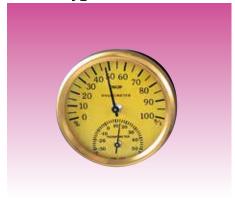
# Clean hinges



Code	Model number	Overall size
33-01020	CH-1	$W50 \times L65$ mm

Low dust type

# Thermo-hygrometer



Code	Model number	外径
01-36018	DM-42	$\phi$ 68 × 23Hmm

Acrylic bracket attached Minimum scale mark 2°C 5%

# Silicone filler



Code	Model number	内容量
01-36035	PS	330ml

Deoximation type Pure sealant clear

Seal material of interior joint of desiccator and air filter. There is almost no siloxane volatilization.

# Digital temperature-humidity meter



Code	Model number	Overall size
01-36034	TH-7	W85 × D75 × H20mm

Acrylic bracket attached Range:  $-10 \sim +50^{\circ}\text{C}/20 \sim 90^{\circ}\text{RH}$  Measurement precision:  $\pm 1^{\circ}\text{C}/\pm 7^{\circ}\text{RH}$ 

# Positive pressure safety device



01-36019 SD-31
Pressure resistant 30Pa

### Socket



Standard accessory for big and mid-size desiccators RC1/4

# Gas flow meter(for monitors) / One touch joint included



Code		Model number
01-36020	GF-11	

5L/min $\pm$ 10%, With bracket,  $\phi$ 6 joint for tube 2 for N<sub>2</sub>

Code		Model number	
01-36021	ZL-062		

L-type  $\phi$ 6 joint for tube RC1/4

# Gas intake valve



Code		Model number
01-36024	GV-01	

Connection  $\phi$ 8, nickel plating

# Gas intake valve



Code		Model number
01-36023	BVL-06	

 $\phi$ 6 for tube

# Metal fittings for wall attachment (earthquake proofing)



Code	Model number
01-36027	L-1

Material: SUS304 With tapping screw Number contained: 2 pieces

# Double lock (for security)



Chrome plated

# Latch with key (for security)



 $W28 \times L45$ mm

Chrome plated

01-36026 CC-83

## Door lock (earthquake proofing)



Material: SUS304 \*Press "PUSH" and remove.

# Laboratory equipments

# Glove box

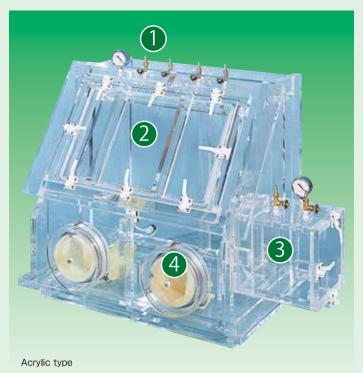
A glove box is an operating box with high airtightness designed so that only the operator's hands can enter the box wearing gloves. Operations can be performed in a space/environment completely isolated from outside influence. A representative application is shown below.

- Operations in a temperature and humidity controlled environment
- Materials which are dangerous if directly touched by the operator can be handled
- Operations in a specific air composition environment
- Removal of contamination by the operator for operations in a sterile environment

When a glove box is used, experiment operations can be performed under specific environment conditions.

Moreover, safety of the operator can be ensured while handling high risk drugs and materials.

Glove boxes are available in various types, such as gas conversion, vacuum, low dew-point, explosion protection, and clean, for use in various situations in the semi-conductor, optics, and precision device manufacturing fields. Moreover, explosion protection glove box, clean glove box, and isolator (sterile glove box), etc., can be used in bio fields such as medical, pharmaceutical, chemical, biotechnology.





1 Gas intake valve

2 Window

3 Pass box

4 Glove port

5 Lighting / Sterilization lamp

# Fume hood



The desktop exhaust hood can also be used for a simplified draft system by attaching it to the working table. Our original constructed aluminum frame is used. In addition to size and specifications, main body design, and manufacturing with high degree of freedom to include a table, etc. is possible.\*VOC (volatile organic compound) countermeasures are also possible. Please feel free to ask for details.

# Personal draft DFH

### Specification

Body material: Acrylic (transparent) 3t Frame material: Aluminum alumite treatment

Door material: Acrylic (transparent) 3t 50mm pitch variable

Guide rail: Ultrahigh molecular weight polyethylene

D u c t:  $\phi$ 38 × 500L Flexible hose E x h a u s t a i r: Sirocco fan (teflon coating)

F a n b o x: W240  $\times$  D240  $\times$  H166mm PVC (ivory)

F i l t e r:Three-layer structure

Electric capacity: AC100V 0.5A

Fan capability: Maximum air volume 1.6/1.8m²/min

Input 28/32W

Maximum static pressure 152/221Pa

Code	Model number	Overall size*
06-03001	DFH-1200	W1200 × D500 × H500mm
06-03002	DFH-800	W800 × D500 × H500mm
06-03003	DFH-700	W700 × D400 × H500mm

<sup>\*</sup>The fan box is not included in the outer dimensions.

# Personal draft DC



# Specification

Body material: Vinyl sheet (transparent) 0.5t

Frame material: SUS304 13mm

Curtain material: Vinyl (transparent) 0.5t (zipper open / close type)

D u c t:  $\phi$ 38 × 500 L Flexible hose E x h a u s t a i r: Sirocco fan (teflon coating)

F a n b o  $x: W240 \times D240 \times H166mm$  PVC (ivory)

i l t e r:Three-layer structure

Electric capacity: AC100V 0.5A

Fan capability: Maximum air volume 1.6/1.8 m/min

Input 28/32W

Maximum static pressure 152/221Pa

Code	Model number	Overall size*
06-04001	DC-1200	W1200 × D500 × H500mm
06-04002	DC-800	W800 × D500 × H500mm
06-04003	DC-700	W700 × D400 × H500mm

# \*The fan box is not included in the outer dimensions.

# Mini-draft MND-1



# Specification

Body material: PVC (ivory)

D u c t:  $\phi$ 38 × 500 L Flexible hose E x h a u s t a i r: Sirocco fan (teflon coating) F i l t e r: Three-layer structure

Dust removal filter : Non-woven fabric : ⋈ 227 × 20t Pre-filter : Non-woven fabric : ⋈ 227 × 3t

Electric capacity: AC100V 0.5A

Fan capability: Maximum air volume 1.6/1.8m/min

Input 28/32W

Maximum static pressure 152/221Pa

Code	Model number	Overall size*
06-05001	MND-1	W240 × D165 × H240mm

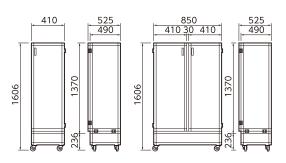
<sup>\*</sup>The flexible hose is not included in the outer dimensions.

# Glassware storage cabinet

# GK-500C·220C **GK** type

# Glassware storage cabinet

This stocker uses magnet packing with high tightness and can store glassware in a clean environment. Shelves can be selected according to the storing items, such as a rack, basket, or tray. The dry shelf and dry wagon can be used together, easily and conveniently





### Specification

Effective inside dimension: GK-500C W810 × D470 × H1330mm

GK-220C W370 × D470 × H1330mm

r: Magnet packing type Window / Side / Top / Back: Acrylic (transparent) B o t t o m: Acrylic (white)

Shelf spacing: Optional
Frame material: Aluminum alumite treatment
Water receiving pad: GK-500C 2 sheets G GK-220C 1 sheet Stand material: Aluminum frame Aluminum composite plate (silver)

a s t e r: Nylon  $\phi$ 65 with stoppers

W e i g h t:GK-500C 45kg GK-220C 28kg

Accessories: Choose your desired shelf from P.44.

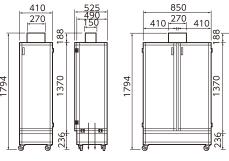
Code	Model number	Overall size
05-01001	GK-500C	W850 × D525 × H1606mm
05-01002	GK-220C	W410 × D525 × H1606mm



# DGK-500C·220C DGK type

# Glassware storage cabinet with dryer

This stocker uses magnet packing with high tightness and can store glassware in a clean environment. The heater fan built-in on the top makes drying glass utensils faster. Shelf can be freely set according to the storing items such as a rack, basket, or tray. The dry shelf and dry wagon can be used together, easily and conveniently.





# Specification

r: Magnet packing type 0 Window / Side / Top / Back: Acrylic (transparent) B o t t o m: Acrylic (white) Shelf spacing: Optional

Frame material: Aluminum alumite treatment

Water receiving pad: DGK-500C 2 sheets DGK-220C 1 sheet Stand material: Aluminum frame Aluminum composite plate (silver)

C a s t e r: Nylon  $\phi$ 65 with stoppers

e a t e r:520W

W a r m a i r: Maximum 6 hours(50Hz) / 5 hours (60Hz) continuous blowing (max 60°C) Protection equipment: Thermostat Temperature fuse for the heater and motor (119°C) Electric capacity: AC100V 6A

W e i g h t:DGK-500C 48kg DGK-220C 31kg

A c c e s s o r i e s: Choose your desired shelf from P.44.

Code	Model number	Overall size
05-02001	DGK-500C	W850 × D525 × H1794mm
05-02002	DGK-220C	W410 × D525 × H1794mm



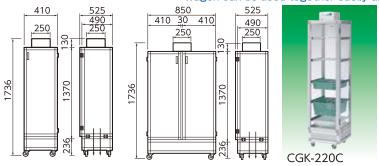
**DGK-500C** are not included in the main body.

# Clean dry box / Accessories

# CGK-500C·220C **CGK** type

# Clean dry box

This stocker uses magnet packing with high tightness and can store glassware in a clean environment. A clean module unit is installed, to maintain clean conditions inside the storage. Shelves can be adjusted according to the storing items, such as a rack, basket, or tray. The dry shelf and dry wagon can be used together easily and conveniently.



l t e r: Fan filter unit 1 Pre-filter 1 Dust collection efficiency: More than 99.97% (0.3μm)

A i r f l o w: 1.0m/min

 $\begin{array}{c} \text{Effective inside dimension: } \textbf{CGK-500C} & \textbf{W810} \times \textbf{D470} \times \textbf{H1330mm} \\ \textbf{CGK-220C} & \textbf{W370} \times \textbf{D470} \times \textbf{H1330mm} \\ \end{array}$ 

r: Magnet packing type Window / Side / Top / Back: Acrylic (transparent) B o t t o m: Acrylic (white)

Frame material: Aluminum alumite treatment

Shelf spacing: Optional Water receiving pad: CGK-500C 2 sheets CGK-220C 1 sheet Stand material: Aluminum frame Aluminum composite plate (silver)

a s t e r: Nylon  $\phi$ 65 with stoppers

Electric capacity: AC100V 1A

W e i g h t: CGK-500C 49kg CGK-220C 32kg

Accessories: Choose your desired shelf from P.44.

\*The filter may be changed.

Code	Model number	Overall size
05-03001	CGK-500C	W850 × D525 × H1736mm
05-03002	CGK-220C	W410 × D525 × H1736mm

# \*Basket, Net shelf, etc., CGK-500C are not included in the main body.

Four types of shelves are available-racks, basket, trays, and liquid receptacles according the use environment and application. Moreover, a shelf board rail can be installed in any position, so the number of shelf board and the space between them can be freely adjusted.

# ■ Accessories GK / DGK / CGK Series

# Net shelf Slide rail included N-20 N-60

Code	Model number		Specification
05-04001	N-20	20 × 37mm	130 space
05-04002	N-34	$34 \times 56$ mm	56 space
05-04003	N-60	$60 \times 63$ mm	24 space
05-04004	N-77	77 × 77mm	20 space

# Basket Rail included



Code	Model number	Overall size
05-04005	P-165	W360 × D480 × H165mm
05-04006	P-85	W365 × D485 × H85mm

Material: PE

Material: Steel PE coating

Adjustable mesh rack for measuring cylinders N-20 25ml N-34 100ml N-60 500ml N-77 1000ml

# Tray rail included



	Code	Model number	Overall size
	05-04007	S-60	W355 × D445 × H60mm
Maria del Cuica da		51.16.3.0.4	

### Water vat with rail



Code	Model number	Overall size
05-04008	P-70	$W322 \times D442 \times H70$ mm

Material: PE Material: SUS304

# Dry shelf / Accessories

**DRY-580** 580 series

# Dry shelf

A net type shelf for drying and storing washed glassware. DRY-580 dries glassware faster using a heater fan installed on the top. Glassware storage cabinet and dry wagon can be used together easily and conveniently.

### Specification

e l f: W910 × D460 × H1500mm Steel Chrome plating

urtain: Soft PVC

Shelf board: Standard mesh rack 2 sheets

Stitched shelf board 40  $\times$  180mm 1 sheet  $80 \times 180$ mm 1 sheet

Shelf board space: 25mm pitch Water receiving tray: PVC (ivory) H e a t e r:520W

W a r m a i r: Maximum 6 hours(50Hz) / 5 hours (60Hz) continuous blowing (max 60°C) Protection equipment: Thermostat Temperature fuse for the heater and motor(119°C)

Electric capacity: AC100V 6A Weight: 24kg

Accessories: Choose from the following list.

Code	Model number	Overall size
05-15001	DRY-580	W950 × D500 × H1682mm

\*Caution: Not to be used as a dryer of wet utensils.



are not included in the main body.



### Specification

h e l f: W910 × D460 × H1500mm Steel Chrome plating

urtain:SoftPVC

Shelf board: Standard mesh rack 2 sheets

Stitched shelf board 40 × 180mm 1 sheet  $80 \times 180$ mm 1 sheet

Shelf board space: 25mm pitch Water receiving tray: PVC (ivory) Weight: 22kg

Accessories: Choose from the following list.

Code	Model number	Overall size
05-15007	DS-580	W950 × D500 × H1500mm

# DS-580 \*Basket, net shelf, etc., are not included in the main body.

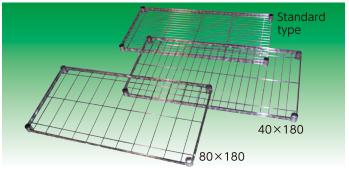
# ■ Accessories 580 Series

### **Basket**



Code	Product name	Model number	Overall size
05-15002	Basket Deep type	B-165	W360 × D480 × H165mm
05-15003	Basket Shallow type	B-85	W365 × D485 × H85mm

### Shelf board



Code	Product name	Model number	Overall size
05-15004	Shelf board (Standard)	DIR-9146	W910 × D460mm
05-15005	Shelf board $(40 \times 180)$	DIR-4018	W910 × D460mm
05-15006	Shelf board (80 $\times$ 180)	DIR-8018	W910 × D460mm
04-77116	Caster (4 pieces/set)	UTWB-50B	50mm



A wagon to dry /and transport washed glassware. The glassware storage cabinet, dry shelf and dry wagon can be used together easily and conveniently.

# Dry wagon NDS



### Specification

Top board material: Melamine plywood 20t C a s t e r: Rubber 65mm Stopper included

Accessories: PE basket × 2 pieces W480 × D360 × H165mm PE vat × 2 pieces W442 × D322 × H70mm

e i g h t:11kg

Code	Model number	Overall size
05-05001	NDS	W500 × D450 × H730mm

# Dry wagon NDW



Top board material: Melamine plywood 20t C a s t e r: Rubber 65mm Stopper included

Accessories: PE basket × 4 pieces W480 × D360 × H165mm

PE vat  $\times$  4 pieces W442  $\times$  D322  $\times$  H70mm

e i g h t:21kg

Code	Model number	Overall size
05-05002	NDW	W900 × D500 × H730mm

# Dry wagon DW



# Specification

Cylinder hanging tool:  $66 \times 71 \text{ mm}$  60 space

Support pillar: Steel ⋈19 Steel Chrome plating C a s t e r: Rubber 65mm Stopper included

A c c e s s o r i e s : PE basket Deep type  $\times$  1 piece W480  $\times$  D360  $\times$  H165mm PE basket Shallow type  $\times$  1 piece W485  $\times$  D365  $\times$  H85mm

PE vat × 2 pieces W442 × D322 × H70mm

e i g h t:10kg

Code	Model number	Overall size
05-05003	DW	W785 × D474 × H950mm

# Three-tiered wagon TW



# Specification

C a s t e r: Rubber 65mm Stopper included

Accessories: PE basket × 3 pieces W480 × D360 × H165mm

W e i g h t:6kg

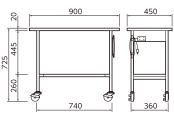
Code	Model number	Overall size
05-05004	TW	W530 × D361 × H920mm

# **Acty cart**

AC-2 Acty cart series

# Acty cart

This convenient cart can be used as a simplified experiment table, working table, and carrier table. The casters are equipped with stoppers, and can be left in place during experiment oper-



# Specification

O u t l e t: AC100V 10A a b l e: W900  $\times$  D450  $\times$  20mm

3-socket Cord 2P with 2m Melamine plywood C a s t e r: Rubber 65mm Stopper included

Bottom shelf dimensions : W740  $\times$  D305  $\times$  15mm Weight: 16kg

Overall withstand load: 50kg

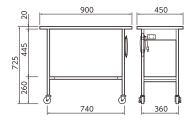
Code	Model number		Overall size
03-01001	AC-2	W900 × D450 × H725mm	



AC-2R Acty cart series

# Acty cart (top panel corners rounding model)

In this model, the top panel corners have been rounded.



# Specification

l e: W900 × D450 × 20mm O u t l e t: AC100V 10A

3-socket Cord 2P with 2m Melamine plywood C a s t e r: Rubber 65mm Stopper included

Support pillar: Steel ∠25 Melamine paint Bottom shelf dimensions: W740 × D305 × 15mm Weight: 16kg

Overall withstand load: 50kg

Code	Model number		Overall size
03-01002	AC-2R	W900 × D450 × H725mm	

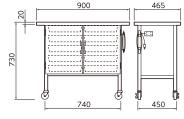


AC-2R

AC-6 Acty cart series

# Acty cart (tray storage model)

10 trays can be stored. This model is convenient for storing, organizing, and transporting food.



# Specification

a b l e:W900  $\times$  D465  $\times$  20mm O u t l e t: AC100V 10A

3-socket Cord 2P with 2m Melamine plywood

C a s t e r: Rubber 65mm Stopper included t: PP W445 × D325 × H70mm 10 sheets D o o r: Acrylic (transparent) а

Overall withstand load: 50kg Weight: 18kg

			Overall size
03-01008 AC-	-6	$W900 \times D465 \times H730$ mm	





# Siphon type pipette washer

Pipettes are washed only with tap water, using the siphon principle. This all-vinyl chloride product has excellent chemical resistance.

### Specification

Body material: PVC (transparent)

(washer / washing basket) Rigid PVC (gray) (sulfuric acid tank)

Code	Model number	Name	Overall size	
05-07001	P-18	Washer	Inner diameter $\phi$ 188 $\times$ H730mm	
05-07002	P-17	Washing basket	Outer diameter $\phi$ 167 × H600mm	
05-07003	P-20	Sulfuric acid tank	Inner diameter $\phi$ 200 × H660mm	
05-07004	PS-180	Siphon type pipette washer P-18·17 set		







**TW-20** Glassware washer and dryer series

# Test tube washer

The up/down shower nozzle rotates by water pressure to wash the test tubes. Please use this for water washing and rinsing processes.

### Specification

Body material: PVC (transparent) Test tube storage basket : SUS304 With 3 pieces Number of test tubes to be stored :  $\phi$  16 × 150 pieces

Supply water inlet :  $\phi$  13 Drain outlet: φ32

Water supply hose :  $\phi 12 \times \phi 18$  Blade hose

### Test tube washer

$\phi$ 400 × H450mm	
43mm	
43	

With one coil spring











Shin-ei Sangyo Co., Ltd.

# http://www.s-shin-ei.co.jp

—— Head office and factory ——
1-10, Shinden-nishimachi, Daito-city, Osaka-pre, 574-0057, JAPAN
TEL:+81-72-806-7800 FAX:+81-72-806-7801

— Kanto office —

Yamamoto Bld.2F, 2-5-23, Buzo, Minami-ku, Saitama-city, Saitama-pre, 336-0025, JAPAN TEL:+81-48-747-7300 FAX:+81-48-747-7880