



ALP Co.,Ltd.
TOKYO JAPAN

Scientific and Medical Instruments



Across the mountains

We'll contribute to a sustainable
symbiotic society through our ALP products.

General catalog
No.704E



ALP Co., Ltd. is a professional enterprise in Tokyo founded in 1976, designs, manufactures, sells, and after-sales service scientific and medical devices

“Usefulness is our pleasure”

ALP has two product lineups, one is autoclaves and other is thermostatic chambers such as an incubator and a drying oven, and the annual production reaches 1000 sets. We provide these products to research institutes, universities, food manufacturing and pharmaceutical companies, and hospitals in more than 50 countries, mainly in ASEAN, South Asia, East Asia, Middle East, and Africa.

All products from ALP are strictly treated according to quality management system, such as ISO9001 and ISO13485. To supply the “zero-defect” unit with comprehensive, considerate and sincere service is our final target goal.

The customers satisfaction and the quality expectation are our unswerving pursuit. Advanced technology, quality management and excellent service is guarantee of the continuously improve for our products. Product safety, regulatory compliance and environmental protection is our social responsibility.

“Initiatives for SDGs”

For our company, whose main business is to support science and technology, contributing to sustainable development goals (SDGs) in the future is useful for solving social issues in various situations, and at the same time, while also responding to the demands of external stakeholders. In response, we believe that it will become a driving force for further growth of our business and corporate growth.

By having all of our employees work together on the SDGs, we will solve the issues of society and people and further contribute to the realization of the sustainable society that the SDGs aim for.

SUSTAINABLE DEVELOPMENT GOALS



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CL-32L

CL-40L

A good price performance by skilled craftsmanship

ALP's skilled craftsmanship realizes a good price performance with Japanese High Quality.

One-action safety interlock lid

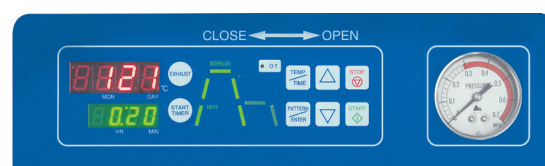
Simply slide the lock lever one action to close the lid securely.

Safety comes first

At the end of the cycle, the lid will not be released until temperature has reached safe prescribed levels.

Three operation modes as standard

In addition to "Sterilization" pattern, "Sterilization/Warming" and "Dissolving/ Warming" patterns as standard. Possible for a liquid sterilization depending on the setting.



Operation panel

Suppresses odor while operation

The incorporated water cooling device cools the discharged steam internally to turn it into water droplets, so it does not raise the humidity of the surrounding environment and suppresses odors during processing.

A wide variety of options (Refer to the page 15)

- *Floating sensor: Measures a load temperature
- *Printer: Prints the temperature and time on roll paper
- *Rapid cooling fan: Shortens the temperature drop time with cooling fan
- *Recorder: Profiles the temperature and time of multiple sensors

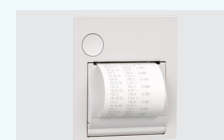
Corresponds to IQ/OQ in GMP, GLP

We provide IQ/OQ documentations as an option.

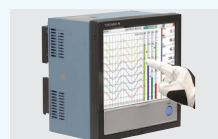
◆ Options



Floating sensor



Printer



Recorder



Rapid cooling fan

MODEL	CL-32S	CL-32L	CL-40S	CL-40M	CL-40L
Chamber size/volume	φ320×H450mm/45L	φ320×H660mm/62L	φ400×H470mm/72L	φ400×H660mm/97L	φ400×H820mm/117L
Outer dimension/weight	W550×D620×H870mm/65kg	W550×D620×H990mm/71kg	W620×D720×H880mm/84kg	W620×D720×H1000mm/88kg	W620×D720×H1160mm/95kg
Temperature(Max. press.)	100°C-140°C(0.270MPa)		100°C-137°C(0.250MPa)		
Sterilization time	0 minutes- 48 hours 00 minutes				
Dissolving temp./time	40°C-99°C / 0 minutes- 48 hours 00 minutes				
Warming temp./time	40°C-60°C / 0 minutes- 48 hours 00 minutes				
Safety device	Lid interlock, Water lack prevention, Over temperature prevention, Over pressure prevention Sensor breakage detection, Memory backup, Leakage breaker, Pressure safety valve				
Power demand	AC220/230/240V, 11/11/12A		AC220/230V/240V,18/19/20A		
Wire basket/quantity	φ300×200mm/2 pcs.	φ300×300mm/2 pcs.	φ380×200mm/2 pcs.	φ380×300mm/2 pcs.	φ380×400mm/2 pcs.

●Please specify voltage when you order.

●Specifications subject to change without notice for improvement.

Smart Lab Clave with dryer CL-DP series

A practical top-loading laboratory autoclave that DRY the loads effectively after sterilization with the built-in blower pump and heater.



CL-40MDP

Possible to sterilize a culture medium and liquid

Incorporates a "Sterilization/Warming" pattern maintaining a constant temperature after sterilization and a "Dissolving/Warming" pattern for pasteurization so wears another hat.

For your safety

At the end of the cycle, the lid will not be released until temperature has reached safe prescribed levels.

A wide variety of options (Refer to page 15)

- *Floating sensor : Measures a load temperature.
 - *Printer : Prints the temperature and time on roll paper.
 - *Rapid cooling fan : Shortens the temperature drop time with cooling fan.
 - *Recorder : Profiles the temperature and time of multiple sensors. Corresponds to IQ/OQ in GMP, GLP
- We provide IQ/OQ documentations as an option.

Fully automatic operation from sterilization to drying

Drains automatically after sterilization to dry the loads with warm air. Suitable for a metal or glassware you require to use it as dry. Allows to also use for only sterilization.

Incorporates a "Drying" mode for drying only.

You can select the "Dry" mode if an additional drying is required after the "Sterilization-Dry" mode or performing only drying.

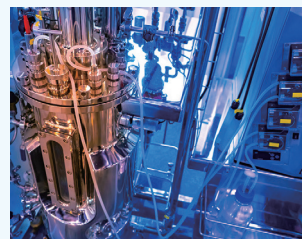
Contamination measures

Blows warm air through a sterilization filter to prevent the loads from contaminating during drying.

◆ Suitable items to be dried



Glassware



Incubators/Other related



Silicone rubber parts



Stainless steel/Fluororesin parts

*Porous medium, hollow tubular, or clothing are not designed to dry. If you intend to sterilize those medium/items, we recommend the "CLG-DVP" series equipped with the vacuum drying function on the page 06.

MODEL	CL-32SDP	CL-32LDP	CL-40SDP	CL-40MDP	CL-40LDP
Chamber size/volume	φ320×H450mm/45L	φ320×H660mm/62L	φ400×H470mm/72L	φ400×H660mm/97L	φ400×H820mm/117L
Outer dimension/weight	W550×D620×H870mm/75kg	W550×D620×H990mm/79kg	W620×D720×H880mm/91kg	W620×D720×H1000mm/95kg	W620×D720×H1160mm/102kg
Temperature(Max. press.)	100°C-140°C (0.270MPa)		100°C-137°C (0.250MPa)		
Sterilization time	0 minutes- 48 hours 00 minutes				
Drying temp./time	60°C-150°C / 0 minutes- 99 hours 59 minutes				
Dissolving temp./time	40°C-99°C / 0 minutes- 48 hours 00 minutes				
Warming temp./time	40°C-60°C / 0 minutes- 48 hours 00 minutes				
Safety device	Lid interlock, Water lack prevention, Over temperature prevention, Over pressure prevention, Sensor breakage detection, Memory backup, Leakage breaker, Pressure safety valve				
Power demand	AC220/230/240V, 11/11/12A		AC220/230V/240, 18/19/20A		
Wire basket/quantity	φ300×200mm/2 pcs.	φ300×300mm/2 pcs.	φ380×200mm/2 pcs.	φ380×300mm/2 pcs.	φ380×400mm/2 pcs.

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Multi Lab Clave CLG series

A premium model with a cycle similar to the steam-flush pressure-pulse (SFPP) for sterilizing challenging loads.



CLG-32L

Incorporates the parts not easily deteriorate over time

To avoid a running cost piling up due to the parts easily deteriorate over time, incorporates the lid gasket with steam resistant, the heater element made of stainless steel etc. so the parts last long time.

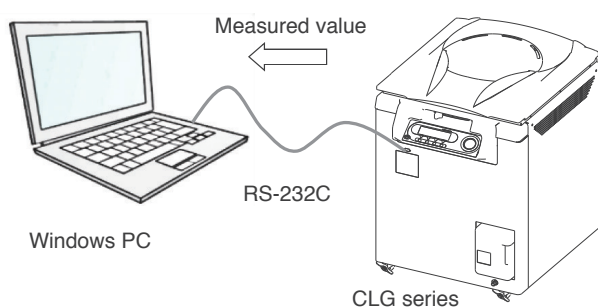
Rapid cooling fan as standard

Cools the loads after cycle to shorten the time until unloading.

Data logging system (Option)

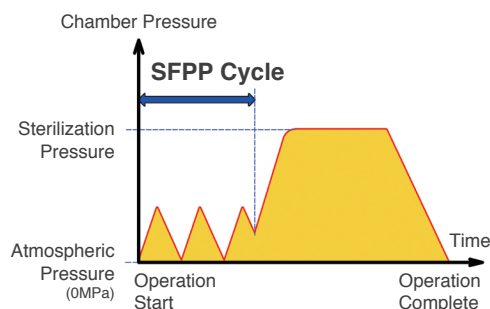
You can take the temperature, pressure, and time during operation into an optional software "ALP-LOGGER" by connecting between the unit and a PC.

The data are showed "Temperature (Pressure) - Time" diagram, can be printed, and exported to Microsoft Excel®.



Steam-flush pressure-pulse (SFPP)

Removes air from the load rapidly by repeatedly alternating a steam flush and a pressure pulse above atmospheric pressure. Optimum to sterilize challenging loads.



Available in plenty programs

In addition to five prescribed programs depending on the load such as LIQUID, SOLIDS, and WASTE, etc. you can set the sterilization temperature, time, and cooling method to save and invoke them up to ten memories.

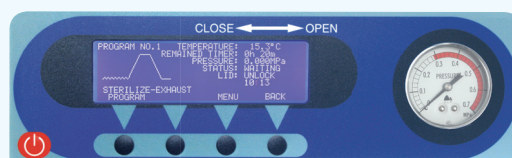
Interactive Liquid Crystal Display

The settings etc. on an enlarged screen as shown below. One - touch switching between the detailed and enlarged screen.

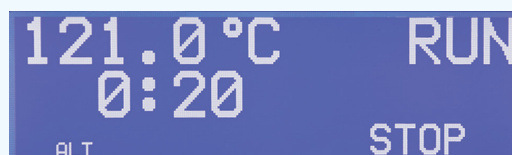
Corresponds to IQ/OQ in GMP, GLP

We provide IQ/OQ documentations as an option.

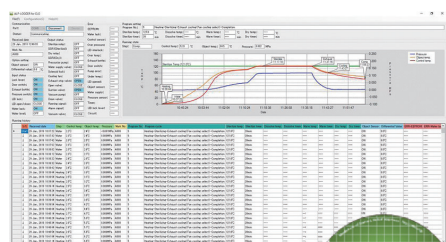
Detailed screen



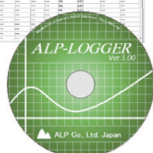
Enlarged screen



One-touch switching



•Please refer to page 15 for other options



MODEL	CLG-32L	CLG-40M	CLG-40L
Chamber size/volume	φ320×H660mm/62L	φ400×H660mm/97L	φ400×H820mm/117L
Outer dimension/weight	W550×D620×H990mm/71kg	W620×D720×H1000mm/88kg	W620×D720×H1160mm/95kg
Temperature(Max. press.)	100°C-140°C(0.270MPa)	100°C-137°C (0.250MPa)	
Sterilization time	0 minutes- 48 hours 00 minutes		
Dissolving temp./time	40°C-99°C / 0 minutes- 48 hours 00 minutes		
Warming temp./time	40°C-60°C / 0 minutes- 48 hours 00 minutes		
Safety device	Lid interlock, Lid opening/closing detection, Water lack prevention, Over temperature prevention, Over pressure prevention, Sensor breakage detection, Memory backup, Leakage breaker, Pressure safety valve		
Power demand	AC220/230/240V, 11/11/12A	AC220/230V/240V, 18/19/20A	
Wire basket/quantity	φ300×300mm/2 pcs.	φ380×300mm/2 pcs.	φ380×400mm/2 pcs.

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High-end Lab Clave

CLG-DVP series

A flagship model ! Pre & Post-vacuum laboratory autoclave equivalent to EN13060 Class B unit.
Sterilizes any load type securely.



CLG-40MDVP

Corresponds to also no water facility (Option)

It is necessary water supply and drainage facility, but if you do not have it, we will prepare the one not require them for a fee. (Needs to be discussed)

Corresponds to IQ/OQ in GMP, GLP

We provide IQ/OQ documentations as an option.

◆ Options



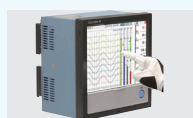
Floating sensor



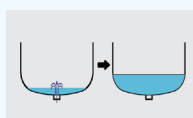
Printer



Data logging system



Recorder



Automatic water supply

●Please refer to page 15 for other options

Pre-vacuum to deliver a secure sterilization.

Air is removed from the chamber and loads by a vacuum pump eliminating air pockets to penetrate steam into the loads particularly a hollow tubular item and porous medium such as clothing every corner, letting its heat penetrability improved, delivering a secure sterilization.

Post-vacuum drying system

The heater dries up wetted loads under a vacuum the vacuum pump creates where the wetness evaporates quickly. You can dry up effeciently even a hollow tubular item and clothing.

Available in six programs according to the loads

You can select six programs according to the loads and application such as LIQUID"OPENED", LIQUID" CLOSED", SOLIDS, WASTE, DISSOLUTION, ADD DRYING. Moreover, ten memories are incorporated so you can select the sterilization temperature and time, drying or not, and cooling method.

◆ Examples of application (sterilization, drying, or evaluation test)



Jar fermenter



Dust-free garments, Masks



Evaluation Test



Liquid in a sealed vessel

MODEL	CLG-32LDVP	CLG-40MDVP	CLG-40LDVP
Chamber size/volume	φ320×H660mm/62L	φ400×H660mm/97L	φ400×H820mm/117L
Outer dimension/weight	W550×D720×H990mm/109kg	W620×D820×H1000mm/127kg	W620×D820×H1160mm/133kg
Temperature(Max. press.)	100°C-140°C (0.270MPa)	100°C-137°C (0.250MPa)	
Sterilization time	0 minutes- 48 hours 00 minutes		
Drying temp./time	60°C-150°C / 0 minutes- 100 hours 00 minutes		
Dissolving temp./time	40°C-99°C / 0 minutes- 48 hours 00 minutes		
Warming temp./time	40°C-60°C / 0 minutes- 48 hours 00 minutes		
Safety device	Lid interlock, Lid opening/closing detection, Water lack prevention, Over temperature prevention, Over pressure prevention, Sensor breakage detection, Memory backup, Leakage breaker, Pressure safety valve, Vacuum pump protection circuit		
Power demand	AC220/230/240V, 14/14/15A	AC220/230V/240A, 21/21/22A	
Wire basket/quantity	φ300×300mm/2 pcs.	φ380×300mm/2 pcs.	φ380×400mm/2 pcs.

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●Specifications subject to change without notice for improvement.

Robust Lab Clave

MC series

Robust, easy to maintain as a simple structure.
Available in a top model with the Max.temp.150 °C.
Ideal for sterilizing wastes.



MC-30L



Operation panel

Robust as a simple structure hard to break

Designed to be "Robust due to a simple structure hard to break" having with manual lid handles and an operation panel intuitively easy to operate.

Optimal for sterilizing wastes

The durable and hard-to-brake structure is ideal for sterilizing wastes.



A wide range of chamber volume 20-120L with space saving

Selectable chamber volume from a wide range depending on an amount of the load per cycle. Not take up much space due to a vertical structure, even a large chamber volume.

Max. Temperature 150°C

As the 3032S/L models can be set up to 150°C, enabling you to sterilize a prion-contaminated item and to utilize for material evaluation test.

Corresponds to IQ/OQ in GMP or GLP

We provide IQ/OQ documentations as an option.

Available a warm air drying function as an additional series -DP models

Drains automatically and blows warm air the loads* to get dried without taking out.

*Loads to be dried are limited to unwrapped items such as metal and glassware. Wrapped items and clothing are not designed to dry.



MC-40

MODEL	MC-23	MC-30S	MC-30L	MC-40	MC-40L	MC-3032S	MC-3032L
Chamber size (Volume)	φ230×H460mm/22L	φ300×H450mm/37L	φ300×H630mm/50L	φ400×H650mm/96L	φ400×H830mm/118L	φ300×H450mm/37L	φ300×H630mm/50L
Outer dimension(WxDxH)	520×400×890mm	600×400×910mm	600×400×990mm	770×560×980mm	770×560×1160mm	620×460×830mm	620×460×930mm
Weight	38kg	50kg	55kg	80kg	91kg	59kg	63kg
Temperature(Max. press.)	100°C-127°C (0.160MPa)					100°C-150°C (0.380MPa)	
Sterilization time	0 minutes- 48 hours 00 minutes						
Dissolving temp./time	40°C-99°C / 0 minutes- 48 hours 00 minutes						
Warming temp./time	40°C-60°C / 0 minutes- 48 hours 00 minutes						
Safety device	Water lack prevention, Over temperature prevention, Over pressure prevention, Sensor breakage detection, Memory backup, Leakage breaker, Pressure safety valve						
Power demand	AC220/230/240V, 8A	AC220/230/240V, 11/11/12A		AC220/230/240V, 18/19/20A		AC220/230/240V, 17/17/18A	
Wire basket/quantity	φ210×400mm/1 pc.	φ270×400mm/1 pc.	φ270×300mm/2 pcs.	φ380×300mm/2 pcs.	φ380×400mm/2 pcs.	φ270×200mm/2 pcs.	φ270×300mm/2 pcs.

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Front-loading Lab Clave MCY series

An easy front - loading laboratory autoclave.
An equipped drawer tray makes it easy to take heavy loads in and out. A women-friendly mechanism.



MCY-40L with optional cabinet

Reduces the burden to take in and out heavy loads.

Unlike top-loading autoclaves, you do not need to lift a basket with heavy loads. For example, a flask with medium can be loaded in the drawer tray directly from the wagon. A horizontal models pursuing the usability of women.



Equipped with a warm air drying (DP model)

Dries up wetted loads after sterilization. Prevents a contamination as it replaces the air through a sterilization filter.

Drawer trays can be freely combined

You can combine the upper, lower, and wide trays freely according to the loads. The upper and lower trays with slide rails enable you to pull out heavy loads easily.

Corresponds to IQ/OQ

We provide IQ/OQ documentations as an option.

Example Combinations of Trays with Vessels



1. Lower tray : Accommodates 2 or 3 pcs. (model L) of Erlenmeyer flask 5 litres



2. Lower tray & Wide tray : Accommodates 20 or 28 pcs.(model L) of Medium bottle 500 milliliters



3. Upper & Lower trays : Accommodates 85 or 108 pcs.(model L) of Erlenmeyer flask 100 milliliters

MODEL	MCY-40	MCY-40L	MCY-40DP	MCY-40LDP
Chamber size/volume	φ400×650mm/96L	φ400×830mm/118L	φ400×650mm/96L	φ400×830mm/118L
Outer dimension/weight	W590×D940×H770mm/92kg	W590×D1080×H770mm/106kg	W590×D940×H770mm/102kg	W590×D1080×H770mm/116kg
Temperature(Max. press.)	100°C-127°C (0.160MPa)			
Sterilization time	0 minutes-48 hours 00 minutes			
Drying temp./time	—		60°C-150°C / 0 minutes- 99 hours 59 minutes	
Dissolving temp./time	40°C-99°C / 0 minutes- 48 hours 00 minutes			
Warming temp./time	40°C-60°C / 0 minutes- 48 hours 00 minutes			
Safety device	Water lack prevention, Over temperature prevention, Over pressure prevention, Sensor breakage detection, Handle lock detection, Memory backup, Leakage breaker, Pressure safety valve			
Power demand	AC220/230/240V, 18/19/20A			

●Please specify voltage when you order.

●Specifications subject to change without notice for improvement.

Compact Lab Clave

TR series

A compact top-loading laboratory autoclave with one-action safety interlock lid by one-handed operation and small footprint.



TR-24S

TR-24LA/B

One-action interlock lid, One-handed operation

The one-hand slide handle allows seamless operation from opening and closing the lid to locking. Loads can be taken in and out with the other hand, enabling smooth operation.

Safety comes first

At the end of the cycle, the lid will not be released until temperature has reached safe prescribed levels.

Bench-top type & Floor-standing type

Available in the bench-top type for lab table and the floor-standing type. Both of them suit a narrow space due to its small footprint.

Automatic operation

Just pour water with a jug, close the lid, and press the START button to operate.

Just a Power supply is required to use

No need to a piping work and drainage facility. You can install it almost all locations.

Corresponds to IQ/OQ in GMP or GLP

We provide IQ/OQ documentations as an option.

◆ One-action slide handle

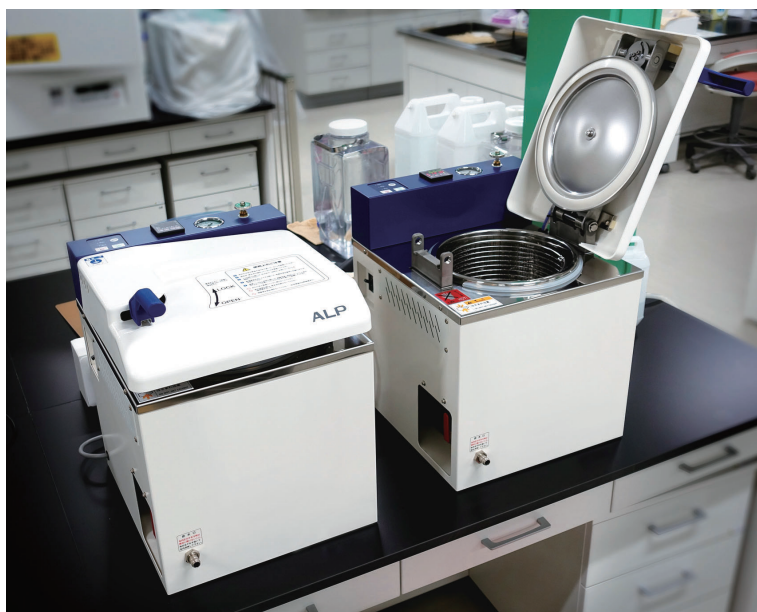


Simply slide the handle to "LOCK" by one hand. You can release the locked door by pressing the "RELEASE" button.

◆ Built in exhaust bottle (TR-24L)



Cools the steam in a built in bottle to not discharge it outside. The bottle is easy to access as it is located in the front of the body.



Two sets of the TR-24S are installed on a laboratory bench.

MODEL	TR-24S	TR-24LA	TR-24LB
Type of placement	Bench-top	Floor-standing	
Chamber size/volume	φ240×H220mm/12L	φ240×H450mm/22L	
Outer dimension/weight	W370×D430×H500mm/28kg	W370×D430×H800mm/36kg	
Temperature(Max. press.)	105°C-127°C (0.160MPa)		
Sterilization time	1 second-99 minutes 59 seconds		
Safety device	Lid Interlock, Water lack prevention, Over pressure prevention, Pressure safety valve, Leakage breaker		
Power demand	AC220/230/240V,8A		
Wire basket/quantity	φ210×200mm/1 pc.	φ210×400mm/1 pc.	φ210×200mm/2 pcs.

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●Specifications subject to change without notice for improvement.



KTR-2322

KTR-2346A/B

"Mecha minimum ism" fits a minimum budget

No performance compromises even on the minimum budget.

Bench-top and Floor-standing

Available in the bench-top type for lab table and the floor-standing type. Both of them suit a narrow space due to its small foot print.



The KTR-2322 is installed on a laboratory bench

Suitable for a wide range of applications

Chemical plants, Bio-Labs, Water & Air pollution Labs, Fisheries, Food QC, Mass kitchens, etc.

Safety comes first

Equipped with fulfilled safety devices. A cover on the lid to prevent burns is equipped as standard.

Corresponds to IQ/OQ in GMP, GLP

We provide IQ/OQ documentations as an option.



MODEL	KTR-2322	KTR-2346A/KTR-2346B	KTR-3022	KTR-3045A/KTR-3045B	KTR-3065A/KTR-3065B
Type of placement	Bench-top	Floor-standing	Bench-top	Floor-standing	Floor-standing
Chamber size/volume	φ230×H210mm/12L	φ230×H460mm/22L	φ300×H220mm/22L	φ300×H460mm/37L	φ300×H630mm/50L
Outer dimension/weight	W380×D340×H430mm/20kg	W380×D340×H780mm/28kg	W450×D390×H480mm/31kg	W450×D390×H820mm/41kg	W450×D390×H970mm/47kg
Temperature(Max. press.)	110°C-125°C(0.160MPa)				
Sterilization time	1 second-99 minutes 59 seconds				
Safety device	Water lack prevention, Over pressure prevention, Leakage breaker, Pressure safety valve				
Power demand	AC220/230/240V, 5A	AC220/230/240V, 8A	AC220/230/240V, 5A	AC220/230/240V, 11/11/12A	
Wire basket/quantity	φ210×200mm/1 pc.	KTR-2346A:φ210×400mm/1 pc. KTR-2346B:φ210×200mm/2 pcs.	φ270×200mm/1 pc.	KTR-3045A:φ270×400mm/1 pc. KTR-3045B:φ270×200mm/2 pcs.	KTR-3065A:φ270×300mm/2 pcs. KTR-3065B:φ270×200mm/3 pcs.

●Please specify voltage when you order.

●Specifications subject to change without notice for improvement.



RK-3030

Multi-stage pressure control

A two-step pressure setting is provided for each of the sterilization and cooling enabling elaborate processing. It prevents deformation of the pouch and enables various examinations, and also makes it hard for jelly cups and packets of disposable contact lense to deform and burst.

You can set the temperature of the cooling shower

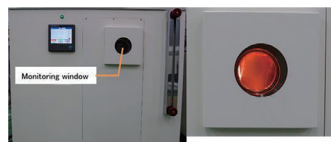
The cooling water can be adjusted from room temperature to 70°C. Sprays warm water to the packed foods by the shower after sterilization to cool down and prevent them from deforming and bursting due to rapid cooling.

Temp./Press./F-value profile function as standard

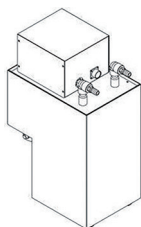
The built-in graphic recorder and item temperature sensor can monitor, record, and save the heat, pressure load and sterilization strength (F-value) of the sample. It is also equipped with "F-value control" that sets the F-value in advance and forcibly terminates the sterilization process when the core temperature of the sample reaches that value.

◆ Options

[Monitoring window/Lighting]
You can visually monitor the state of the packages in the chamber.



[Drainage cooling unit]
Used if there is no heat-resistant drainage facility.



Toward "Sustainable Development Goals"

For the development of packaging materials with reduced environmental load. Equipped with counter pressure system, hot water sterilization and multi-stage pressure control functions for sterilizing and cooling the packaged samples without bursting. It is most suitable unit for evaluation tests of packaging materials (stress test, printing test, dissolution test, etc.) as well as food development.

Possible for Hot water sterilization

Foodstuffs with low heat permeability (lumps of meat, fish, vegetables, etc.) and packages not floating on water such as steel cans, glass bottles/jars, vacuum-packed retort pouches, etc. are suitable for the hot water sterilization. Suppresses temperature unevenness due to placement location in the chamber compared to the steam sterilization as the foodstuffs are submerged in water.

Pre-heating system shortens sterilization time

Shortens the sterilization time and suppresses the heat denaturation of the foodstuffs by putting the foodstuffs in the chamber after making the chamber a preparation state at 90°C (variable).



Plastic/Aluminum pouches



Infusion bags



Steel cans



Jelly packs



Plastic cases

MODEL	RK-3030
Chamber size/volume	φ300×H450mm/37L
Outer dimension/weight	W1050×D470×H1000mm/134kg (without compressor)
Temperature(Max. press.)	80°C-140°C (0.34MPa)
Sterilization time	0 minutes- 5 hours 00 minutes
F-value operation	Controlled by the built-in recorder
Power demand	AC220V/230V, 33A/35A

●Please specify voltage when you order.

●Specifications subject to change without notice for improvement.

Multipurpose Retort Clave

RKZ-40II

A multipurpose retort clave, designed for small-batch production of packed foods such as Ready-To-Eat Meals. It also can be used for some R&D purposes.



Food loss reduction

RKZ-40II

Fully automatic operation just the start button

After setting of the sterilization temperature, pressure, and time, just press the start button for fully automatic operation.

F-value operation

F-value is a numerical value that indicates the bactericidal strength of the packaged foods for the purpose of avoiding food poisoning. By setting and controlling a predetermined F-value according to the form of the foods, a reliable sterilization can be guaranteed.

Built-in recorder and Item temperature sensor

A Built-in recorder converts a core temperature of the food measured by an item temperature sensor into the F-value to be displayed.

How to arrange Pouch/Steel can in the wire basket & Throughput



Stand-up pouch
(180mm×140mm×30mm)
20 pcs./basket
Total 60 pcs./operation



Non-stand-up pouch
(Horizontal placement)
(180mm×140mm×20mm)
20 pcs./basket
Total 60 pcs./operation



Non-stand-up pouch
(Vertical placement)
(180mm×140mm×20mm)
32 pcs./basket
Total 96 pcs./operation



Steel can
(φ75mm×110)
18 pcs./basket
Total 54 pcs./operation

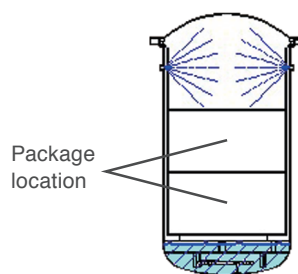
A counter pressure controlled with compressor

An included compressor makes a counter pressure control properly to prevent pouches from deforming and bursting.

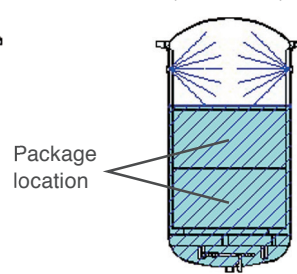
Selectable two cooling systems

The longer the packaged foods are exposed to high temperature, the more the foods will go mushy, burnt odor, and discolor, and finally the commercial value will decrease, so it is necessary to lower the temperature immediately after sterilization. Thus, it has a function to cool rapidly the food stuff with a cooling shower after sterilization. In addition to the shower cooling, a submerged cooling is also available in which canned foods difficult to cool can be cooled efficiently.

Showered cooling



Submerged cooling
(SINK OUT)



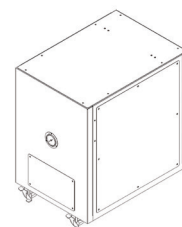
◆ Optional equipment

[Water pumping unit]

Used in case the supply water pressure is 0.200MPa or less.

[Drainage cooling unit]

Used if there is no heat-resistant drainage facility.



Water pumping unit



MODEL	RKZ-40II
Chamber size/volume	φ400×H650mm/96L
Outer dimension/weight	W920×D560×H1130mm/115kg (Without Compressor)
Temperature(Max. press.)	60°C-121°C (0.170MPa)
Sterilization time	1 second- 99 minutes 59 seconds
F-value operation	Controlled by the built-in recorder
Power demand	AC220V/230V, 26A/27A
Power demand for Compressor	AC220V/230V, 5A

●Please specify voltage when you order.

●Specifications subject to change without notice for improvement.

Smart Medical Clave CLM series

In medical settings, not only front-loading autoclaves, but also top-loading autoclaves are used like these models. Both high functionality and space saving are achieved. Optimal for clinics, mobile hospitals, health centers, etc.



Explainer
video



CLM-32L

CLM-40L

Just a Power supply is required to use

No need to a piping work and drainage facility. You can install it almost all locations.

Accommodates a vertically long instrument

The CLM-40L accommodates even an instrument with longitudinal 800mm, while you can install it even a quite narrow space thanks to a small footprint of one square meter.



Possible for a liquid sterilization required for clinical examination

"Sterilization/Warming" and "Dissolving/ Warming" patterns as standard, optimum for liquid sterilization. Optional floating sensor enables you to set sterilization conditions for even a large mass of liquid.

Maximum temperature 135°C (138°C : CLM-32L)

Handles a sterilization of instrument at 135°C for 3 to 4 minutes, commonly required under EN13060 Class N sterilization conditions for medical sterilization.

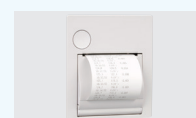
◆ Options



Floating sensor



Rapid cooling fan



Printer

MODEL	CLM-32L	CLM-40M	CLM-40L
Chamber size/volume	φ320×H660mm/62L	φ400×H660mm/97L	φ400×H820mm/117L
Outer dimension/weight	W550×D620×H990mm/71kg	W620×D720×H1000mm/88kg	W620×D720×H1160mm/95kg
Temperature(Max. press.)	100°C-138°C(0.260MPa)	100°C-135°C(0.240MPa)	
Sterilization time	0 minutes- 48 hours 00 minutes		
Dissolving temp./time	40°C-99°C / 0 minutes- 48 hours 00 minutes		
Warming temp./time	40°C-60°C / 0 minutes- 48 hours 00 minutes		
Safety device	Lid interlock, Water lack prevention, Over temperature prevention, Over pressure prevention, Sensor breakage detection, Memory backup, Leakage breaker, Pressure safety valve		
Power demand	AC220/230/240V, 11/11/12A	AC220/230V/240V, 18/19/20A	
Wire basket/quantity	φ300×300mm/2 pcs.	φ380×300mm/2 pcs.	φ380×400mm/2 pcs.

●Please specify voltage when you order.

●Specifications subject to change without notice for improvement.

Optional accessories for autoclave

Wire basket

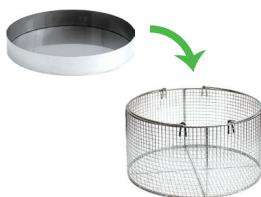
The structure easily intaking the steam.
Selectable depending on the diameter and the height of chambers.



Applicable model	Product code	Inner size (Dia.xHeight)
MC-23, TR-24S, TR-24LA/B, KTR-2322, KTR-2346A/B	BW2120	φ210×200mm
MC-23, TR-24LA/B, KTR-2346A/B	BW2140	φ210×400mm
KTR-3022, KTR-3045A/B, KTR-3065A/B, MC-30S, MC-30L, MC-3032S, MC-3032L, RK-3030	BW2720	φ270×200mm
KTR-3045A/B, KTR-3065A/B, MC-30S, MC-30L, MC-3032S, MC-3032L, RK-3030	BW2730	φ270×300mm
KTR-3045A/B, KTR-3065A/B, MS-30S, MC-30L, MC-3032S, MC-3032L, RK-3030	BW2740	φ270×400mm
CLG-32L, CLG-32LDVP, CL-32S(DP), CL-32L(DP), CLM-32L	BW3020	φ300×200mm
CLG-32L, CLG-32LDVP, CL-32S(DP), CL-32L(DP), CLM-32L	BW3030	φ300×300mm
CLG-40M(DVP), CLG-40L(DVP), CLS-40S(DP), CLS-40M(DP), CLS-40L(DP), CLM-40M, CLM-40L, RKZ-40II	BW3815	φ380×150mm
CLG-40M(DVP), CLG-40L(DVP), CL-40S(DP), CL-40M(DP), CL-40L(DP), CLM-40M, CLM-40L, RKZ-40II	BW3820	φ380×200mm
CLG-40M(DVP), CLG-40L(DVP), CL-40S(DP), CL-40M(DP), CL-40L(DP), CLM-40M, CLM-40L, RKZ-40II	BW3830	φ380×300mm
CLG-40M(DVP), CLG-40L(DVP), CLM-40M, CLM-40L, CL-40S(DP), CL-40M(DP), CL-40L(DP)	BW3840	φ380×400mm

Bottom Pan for wire basket

Enables to prevent spills of liquid culture media during sterilization. As your baskets can store these pans, you can also purchase it seperately as necessary.



Applicable wire basket (Product code)	Product code	Inner size (Dia.xHeight)
BW2120, BW2140	DH2036	φ203×60mm
BW2720, BW2730, BW2740	DH2676	φ267×60mm
BW3020, BW3030	DH2896	φ289×60mm
BW3820, BW3830, BW3840	DH3636	φ363×60mm

Bucket

It is useful for sterilizing a large quantity of soil and liquid that wire basket is not suitable for. Also, it is recommended to use for sterilizing a waste when not using a sterilization bag.



Applicable model	Product code	Inner size (Dia.xHeight)
MC-23, TR-24LA/B, KTR-2346A/B	VN2121	φ210×210mm
MC-30S, MC-30L, KTR-3045A/B, KTR-3065A/B, CLG-32L(DVP), CL-32S(DP), CL-32L(DP), CLM-32L	VN2727	φ270×270mm
CLG-40M(DVP), CLG-40L(DVP), CLM-40M, CLM-40L, CL-40S(DP), CL-40M(DP), CL-40L(DP)	VN3630	φ360×300mm

Do not stack the buckets in two layers (upper & lower) in the chamber.
Otherwise, the air in the lower bucket is not evacuated, which causes a sterilization failure.

Dressing drum

Suitable to store clothes. The slits at open makes the objects exposed with steam and that at close prevents bacteria invaded after sterilization.



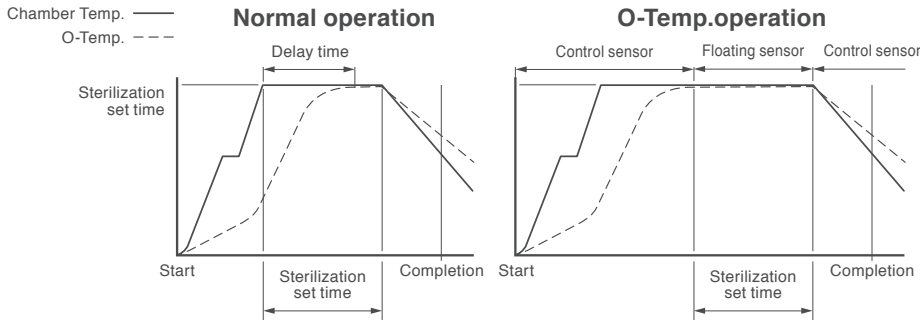
Applicable model	Product code	Inner size (Dia.xHeight)
All Models	SC2121	φ180×120mm
All Models except for MC-23, TR-24S, TR-24LA/B, KTR-2322, KTR-2346A/B	SC2727	φ270×180mm

Optional functions for autoclave

Floating Sensor

Floating sensor with Teflon lead wire enables to display the temperature inside or near the sterilization objects in the chamber during operation. What's more, switching of the operation mode to "the object temperature operation" ("O-Temp.operation") enables to start operation with a timer by the floating sensor makes more reliable sterilization possible.

◆ Applicable : CL, CLG, and CLM series (Object operation unusable when the recorder connected)



Printer

Printing the date and time at the start of operation while printing both the temperature of control sensor and floating sensor in regular intervals.

◆ Applicable : CL, CLG and CLM series

*Data independence is not guaranteed because the printer only synchronizes the measurements from main controller. Therefore, it is not applicable to pharmaceutical companies under GMP control.



Recorder

Enables to measures and records the temperature pressure the inside chamber with temperature sensor and pressure sensor. Necessary device to record the daily use under GMP control. Both Paper and Paperless type can be installed.

◆ IQ/OQ documentation is available as an option.

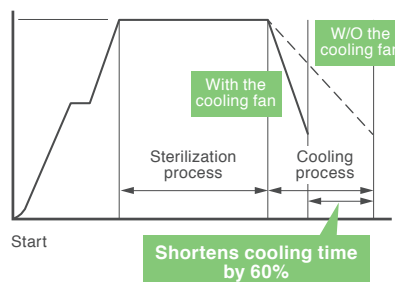
◆ Applicable : CL, CLG series



Rapid cooling fan

After sterilization is completed, the cooling fan starts to operate to blow air for cooling the chamber wall till the notification on the completion where the inside chamber reaches 80°C. The cooling time reduces by approx. 60% compared to that of natural cooling (compared our conventional one / at no load).

◆ Applicable : CL and CLM series



Automatic water supply system with pre-heat system

The sterilization starts after water is supplied to the suitable water level automatically, which release the operator from time-consuming water level check and manual water supply each time. Pre-heat system realize to shorten operation period by pre-heating the machine to the set temperature before loading the objects.

◆ Applicable : CL, CLG and CLM series

Corresponding to the usage in high altitudes

ALP autoclaves correspond to the usage in high altitudes. In case of using the autoclave in high altitudes, 500m or higher, please let us know prior to order to change the parameter properly at the time of shipment.

*It may not be possible depending on the intended model and operating temp.range.

Please note that the optional functions above can be fitted to the machine only when you place an order and cannot be retrofitted to the machine after the order.

Large-sized Incubator

ITD series

A wide structure with air jacket heating system.
A program function including stepping operation as standard.
Ideal to process a large number of culture medium at once.



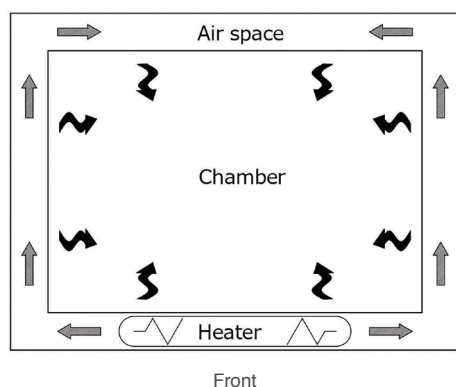
ITD-120

Wide-width chambers with from 100 to 1600mm

Since there is no intermediate pillar, it allows to load long items.

Air jacket heating/Natural convection in the chamber

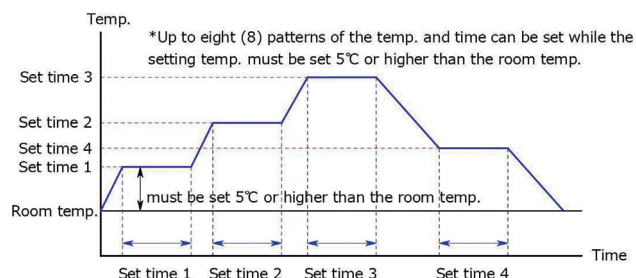
Inside the chamber is naturally convected with no wind as the air jacket structure does not heat the chamber directly, leading to prevent the loads from drying and contaminating.



A controller with program function

One (1) memory and up to eight (8) step operation programs can be set in addition to the constant value operation.

◆ Operating program



A double door is adopted

Equipped with an inner door allowing you to monitor inside the chamber without opening the door prevents the chamber temperature from fluctuating.

MODEL	ITD-100	ITD-120	ITD-140	ITD-160
Inner dim. WxDxH/ Cap.	1000×600×700mm/420L	1200×600×900mm/648L	1400×600×1000mm/840L	1600×700×1250mm/1400L
Outer dim. WxDxH/Weight	1200×820×1650mm/150kg	1400×820×1750mm/220kg	1600×820×1750mm/260kg	1800×920×1850mm/300kg
Temperature range	Room temperature+5°C-60°C			
Temp. distribution accuracy	±1.5°C (at 37°C)*			
Circulating system	Natural convection (Windlessness)			
Program operation	1 memory, Max.8 steps			
Outer door/Inner door	Double doors/Double doors			
Sensor port	Φ46mmx1 Front left side			
Safety devices	Overheat prevention device, Independent overheat prevention device, Sensor disconnection detection, Leakage breaker			
Power demand/Current	AC 220/230/240V, 2A	AC 220/230/240V, 3A	AC 220/230/240V, 4A	AC 220/230/240V, 6A
Shelves (max. load)	2 pcs. (15kg/pc.)	3 pcs. (30kg/pc.)	3 pcs. (50kg/pc.)	3 pcs. (50kg/pc.)

●Please specify the voltage when you order. ●Specifications subject to change without notice for improvement.
* Measured at center inside chamber & 3 points upper, middle and lower parts, no load.

Large-sized Cooled Incubator

ILD series

Large-sized cooled incubators with two types available; one is a forced circulation to emphasize temperature distribution performance, the other is a natural convection windlessness to prevent the samples from contaminating and drying.



ILD-110HG



ILD-150/150C



ILD-100HGC

A large and wide structure with low temperature from 3°C

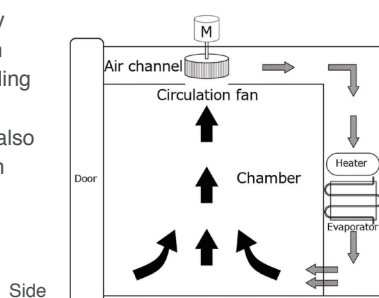
Achieves both large capacity and precise low temperature control. You can load longitudinal items and a large amount of the petri dishes thanks to no intermediate pillar.

A controller with program function

One (1) memory and up to eight (8) step operation programs can be set in addition to the constant value operation.

A forced circulation type (wind circulation) (ILD-110HG, ILD-120, and ILD-150)

A slight wind is constantly circulated by a circulation fan in the chamber, enabling highly responsive temperature control and also suppressing differential in temperature distribution.



A double door is adopted, except for ILD-110HG

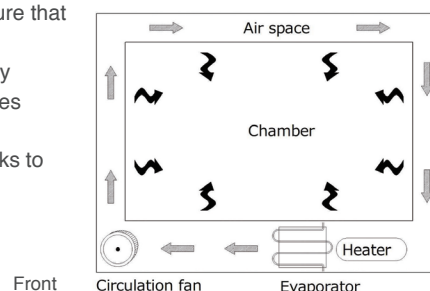
Equipped with an inner door allowing you to monitor inside the chamber without opening the door prevents the chamber temperature from fluctuating when taking in and out the samples.

Model ILD-100HG with monitoring window and lighting

A monitoring window on the outer door and fluorescent light inside the chamber allow you to observe the samples with the door closed.

Air jacket structure/Natural convection (Windlessness) (ILD-100HGC, ILD-120C, ILD-150C)

An air jacket structure that does not cool the chamber directly prevents the samples from drying and contaminating thanks to natural convection windlessness.



MODEL	ILD-110HG	ILD-120	ILD-150	ILD-100HGC	ILD-120C	ILD-150C
Inner dim. WxDxH/ Cap.	1000×600×1060mm/636L	1200×600×900mm/648L	1500×600×1000mm/900L	1000×600×1000mm/600L	1200×600×900mm/648L	1500×600×1000mm/900L
Outer dim. WxDxH/Weight	1120×780×1730mm/220kg	1400×850×1720mm/270kg	1700×850×1820mm/340kg	1200×790×1760mm/225kg	1400×790×1770mm/270kg	1700×790×1870mm/340kg
Temperature range	3°C-50°C					
Temp. distribution accuracy	±1.0°C (at 20°C)*			±1.5°C (at 20°C)*		
Circulating system	Forced convection (Wind circulation)			Natural convection (Windlessness)		
Program operation	1 memory, Max.8 steps					
Outer door/Inner door	Double doors/No door	Double doors/Double doors				
Sensor port	Φ46mmx1 Front left side			Φ46mmx1 Back side		
Refrigerator	Air-cooled condenser Refrigerant: Hydrofluorocarbon (HFC) R134a					
Refrigerator output	200W	200W	300W	200W	200W	300W
Safety devices	Overheat prevention device, Independent overheat prevention device, Sensor disconnection detection Heater disconnection detection, Thermal relay for fan motor, Leakage breaker					
Power demand/Current	AC 220/230/240V, 6A/5A/5A	AC 220/230/240V, 6A/6A/5A	AC 220/230/240V, 7A/7A/6A	AC 220/230/240V, 6A/6A/5A	AC 220/230/240V, 5A/5A/5A	AC 220/230/240V, 7A/6A/6A
Shelves (max. load)	4 pcs. (15ka/pc.)	3 pcs. (30ka/pc.)	3 pcs. (50ka/pc.)	4 pcs. (15ka/pc.)	3 pcs. (30ka/pc.)	3 pcs. (50ka/pc.)

•Please specify the voltage when you order. •Specifications subject to change without notice for improvement.
* Measured at center inside chamber & 3 points upper, middle and lower parts, no load.

Hot Air Incubator & Drying Oven

RT/RY ST/SY series

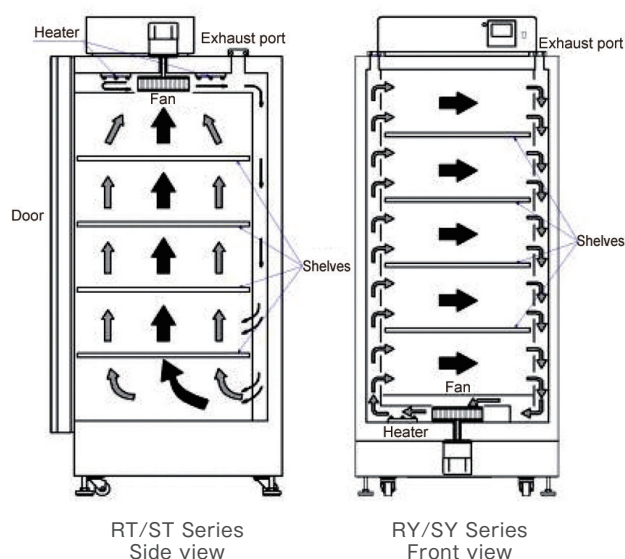
Air circulating incubator. Selectable for vertical flow or horizontal flow. Useable temperature: Room temperature +5°C to 100°C (50°C-200°C : ST/SY series)

RT/ST series — Vertical flow

Vertical flow is in the same direction as thermal convection. Thanks to this, heat is easily transferred to the sample. RT(RY) series is suitable to use as incubator with a temperature higher than the room temperature. Observation window is also helpful to check the sample during operation.

RY/SY series — Horizontal flow

Horizontal flow allows for temperature uniformity in chamber without blocking wind even when multiple shelves are placed. Thanks to its wide temperature range of SY(ST) series, it performs not only hot air sterilization, but also hardening treatment of resin coating and annealing.



- Space saving · Large capacity
- Used as a High-precision hot air incubator
- Observation window (RT/RY series)

Drying Oven

MODEL	RT-120HM	RT-120HL	RT-120HG	RY-120HM	RY-120HL	RY-120HG	
	ST-120HM	ST-120HL	ST-120HG	SY-120HM	SY-120HL	SY-120HG	
Inner dim. WxDxH/Cap.	600x500x1200mm/360L	800x500x1200mm/480L	1000x600x1200mm/720L	530x550x1200mm/350L	730x550x1200mm/480L	930x700x1200mm/780L	
Circulating system	Vertical flow			Horizontal flow			
Program operation	1 memory, Max. 8 steps						
Door	Single door (left side opening door)	Double doors		Single door (left side opening door)	Double doors		
Sensor port	Φ23mmx1 Front left side			Φ23mmx1 Top surface			
Safety devices	Overheat prevention device, Independent overheat prevention device, Sensor / Heater disconnection alarm, Thermal relay for fan motor, Leakage breaker						
Shelves (max. load)	4 pcs.(15kg/pc.)	4 pcs.(15kg/pc.)	4 pcs.(30kg/pc.)	4 pcs.(15kg/pc.)	4 pcs.(15kg/pc.)	4 pcs.(30kg/pc.)	
RT / RY	Outer dim. WxDxH/Weight	710x680x1730mm/118kg	920x680x1730mm/144kg	1120x780x1750mm/221kg	710x690x1770mm/126kg	920x690x1770mm/150kg	1120x840x1770mm/227kg
	Temperature range	Room temperture+5°C-100°C					
	TDA*1	±1.5°C (at 37°C&70°C)*2					
	Power demand	AC 220/230/240V					
	Current	5/4/4A	6A/6A/6A	10A/10A/10A	5A/5A/5A	7/6/6A	10/9/9A
ST / SY	Outer dim. WxDxH/Weight	710x700x1730mm/122kg	920x700x1730mm/148kg	1120x800x1750mm/225kg	710x720x1770mm/128kg	920x720x1770mm/154kg	1120x870x1770mm/231kg
	Temperature range	50°C-200°C					
	TDA*1	±1.5°C(at 70°C), ±2.5°C (at 150°C)*2					
	Power demand	AC 220/230/240V					
	Current	8/7/7A	10/10/9A	14/13/13A	8A/8A/8A	10A/10A/10A	15/14/14A

●The temperature distribution accuracy is at room temperature of 23°C±5°C. ●Please specify voltage when you order. ●Specifications subject to change without notice for improvement.
*1 Temp. distribution accuracy *2 Measured at center inside chamber & 3 points upper, middle, lower part, no load.

Powder & Soil Dryer

PW series

An Horizontal Air Flow Circulation and Variable Air volume
Ideal for drying hydrous powdery materials,
granular materials, and/or soil-containing plant samples



PW-120HM



PW-120HL / HG
(Above trays not included)

Max. temperature 200°C / Possible for Program operation

Since the operating temperature is wide range from room temp. + 10°C to 200°C, it can be used as an incubator or heat treatment device.

In addition, the step operation (up to 8 segments) is available, so thermal history tests can be performed.

Usable for the produce dry powder of agricultural products

Usable for the produce dry powder of agricultural products subject to disposal such as surplus, scratches and nonstandard ones, which enables to reduce food loss.

Major Applications



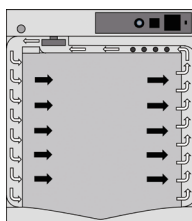
Contribute to the SDGs

Efforts to reduce food loss are being actively pursued as an important issue for the SDGs. PW series can be used as a device to support reproduction, research, and development using waste and agricultural residues generated in agriculture and fishery processing.



Horizontal air circulation suitable for multiple shelves

The wind in the Chamber flows horizontally from left to the right, exerts sufficient drying efficiency when loading of samples in multiple shelves as the wind is not easily blocked.



Equipped with Air Volume Variator

Enables to adjust Air Volume and prevent the sample from splattering.

Washable Inner-Chamber

The perfect seal structure of the inner-Chamber make it possible to wash the inner chamber with water as a whole.



MODEL	PW-120HM	PW-120HL	PW-120HG
Inner dim. WxDxH/ Cap.	530×550×1200mm/350L	730×550×1200mm/480L	930×700×1200mm/780L
Outer dim. WxDxH/Weight	740×810×1850mm/230kg	960×810×1850mm/270kg	1160×960×1850mm/310kg
Temperature range	Room temperature +10°C - 200°C		
Temp. distribution accuracy	±1.5°C (at 70°C), ±2.0°C (at 150°C)*		
Circulating system	Horizontal flow		
Program operation	1 memory, Max. 8 steps		
Door	Single door (left side opening door)	Double doors	
Sensor port	φ48mm, front left side		
Safety devices	Overheat prevention device, Independent overheat prevention device, Sensor/Heater disconnection alarm, Motor overload safety device, Leakage breaker		
Power demand/Current	AC220V/230V/240V, 9/9/9A	AC220V/230V/240V, 10/10/10A	AC220V/230V/240V, 15/14/14A
Shelves (max. load)	4pcs.(20ka/pc.)	4pcs.(20ka/pc.)	4pcs.(20ka/pc.)

●Please specify the voltage when you order. ●Specifications subject to change without notice for improvement.

*Measured at center inside chamber & 3 points upper, middle and lower parts, no load.

Large Hot Air Circulating Oven GTR series

Hot air circulation oven with large capacity ideal for a wide range of applications from agriculture to industry. Also usable for dry heat sterilization of instruments thanks to the Max. Temp.300°C.



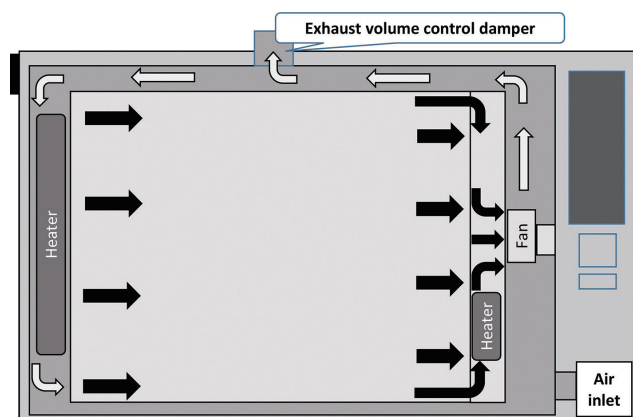
GTR-150

The Large capacity for high work efficiency Maximum loading capacity 500kg

Selectable from the capacity 960L to the capacity 3,000L depending on the application.

Horizontal air flow circulation

Realizes highly accurate temperature distribution with the large-size strong fan and the efficient laminar circulation system.



One-touch operation

Equipped with the 99 hours 59 minutes timer and the changeable continues operation/ program operation. Also, available in eight programs depending on the usage.

In daily operation, all you have to do is to press the start button to make it the automatic operation.

Usable for various purposes

Temp.range from RT+15°C to 300°C enable a wide range of use.

Major Applications

Crop drying, Dry heat sterilization, Endotoxin Inactivation, Hardening treatment for resin coating, Annealing process, Storage of raw materials.



Casting



Crops

MODEL	GTR-100	GTR-120	GTR-150	GTR-200
Inner dim. WxDxH/ Cap.	1000×800×1200mm/960L	1200×900×1200mm/1296L	1500×1000×1500mm/2250L	2000×1000×1500mm/3000L
Outer dim. WxDxH/Weight	1790×1150×1700mm/450kg	1990×1250×1700mm/500kg	2290×1350×1970mm/700kg	2790×1350×1970mm/800kg
Temperature range	Room temperature +15°C - 300°C			
Temp. distribution accuracy	±2.0°C (at 100°C), ±4.0°C (at 250°C)*		±2.0°C (at 100°C), ±6.0°C (at 250°C)*	
Circulating system	Horizontal flow			
Program operation	8 memories, Max. 32steps (including temp. gradient segment)			
Door	Double doors			
Sensor port	Φ23mm, Front left side			
Safety devices	Overheat prevention device, Independent overheat prevention device, Sensor/Heater disconnection alarm, Motor overload safety device, Leakage breaker, Emergency stop switch			
Power demand/Current	AC380V/14A	AC380V/20A	AC380V/ 24A	AC380V/28A
Shelves (max. load)	without intermediate pillar, 3pcs.(MAX.load 50kg/pc.)		with intermediate pillar L&R each 4pcs.(MAX.load 50kg/pc.) 8pcs.in total	

●Please specify the voltage when you order. ●Specifications subject to change without notice for improvement. ●GTR series are NOT Explosion-proof.

*Measured at 9 points inside chamber, no load

Instrument Cleaning Dryer

SB series

Cleaning dryer with HEPA filter "Clean grade Class 6" equivalent. Ideal for drying instruments for Aseptic preparation.



SB-120HM



SB-120HL

Drying and Storage at Clean grade Class 6 (ISO14644-1)

Vertical circulation oven at the clean grade Class 6 (ISO14644-1) with reasonable price. Enables the chamber air is constantly circulated under positive pressure through a HEPA filter, which maintains transparency and keeps samples clean.

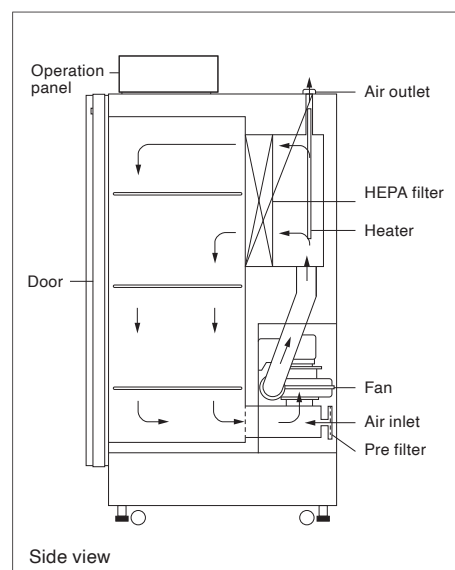
ISO14644-1	Fed. Std. 209D	EU-GMP
Class3	Class1	—
Class4	Class10	—
Class5	Class100	GradeA
Class6	Class1,000	GradeB
Class7	Class10,000	GradeC
Class8	Class100,000	GradeD

Drying and Storage at medium temperature

Suitable for the drying of the pharmaceutical and food lab instruments and drying and storage of samples with low heat resistance.

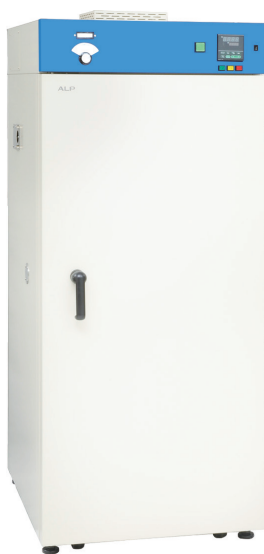
Differential pressure gauge

Tells you the right timing of replacement of HEPA filter.



MODEL	SB-120HM	SB-120HL	SB-120HG
Inner dim. WxDxH/Cap.	600×500×1200mm/360L	800×500×1200mm/480L	1000×500×1200mm/600L
Outer dim. WxDxH/Weight	720×930×1730mm/150kg	930×930×1730mm/180kg	1130×930×1730mm/220kg
Temperature range	Room temperture+5°C-80°C		
Temp. distribution accuracy	±4.0°C (at 70°C)*		
Ciruculating system	Vertical flow		
Program operation	1 memory, max. 8 steps		
Cleaning level	Class 6 (When the temperature is stable /Target particle size : 0.5μm)		
Filter	HEPA Filter (Prefilter: Unwoven cloth filter)		
Door	Single door (left side opening door)	Double doors	
Sensor port	φ22mm×1 Front right side		
Safety devices	Overheat prevention device, Independent overheat prevention device, Sensor disconnection alarm, Thermal relay, Leakage breaker, Heater disconnection alarm		
Power demand	AC 220/230/240V		
Current	7/7/7A	9/9/8A	12/11/11A
Shelves (max. load)	3 pcs.(15ka/pc.)		3 pcs.(30ka/pc.)

•Please specify the voltage when you order. •Specifications subject to change without notice for improvement.
*Measured at center inside chamber & 3 points upper, middle and lower parts, no load.



DCH-120HM



DCH-120HL/HG



Clean grade Class 5 (ISO14644-1) equivalent

Horizontal air flow circulation system and highly reliable heat-resistant HEPA filter.

Usable Maximum temp. 300°C

Suitable for the heat treatment or the dry heat sterilization with the hot air.

Space saving • Large capacity

Despite the large capacity 360L to 600L, the vertical structure allows the small footprint.

Corresponds to IQ/OQ in GMP/GLP

We provide IQ/OQ documentations as an option.

Differential pressure gauge

Tells you to replace the HEPA filter with new one. You can replace it from the inside the chamber.

●Fed. Std. 209D compared with ISO 14644-1 and PIC/S (EU) GMP Annex 1 (Particles-pcs/m² of above 0.1μm contained in 1m³)

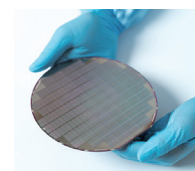
ISO 14644-1	Fed. Std. 209D	EU-GMP
Class3	Class1	—
Class4	Class10	—
Class5	Class100	GradeA
Class6	Class1,000	GradeB
Class7	Class10,000	GradeC
Class8	Class100,000	GradeD



Dry sterilizing
for glassware



Endotoxin inactivation
treatment of hopper
for aseptic preparation



Annealing
process

MODEL	DCH-120HM	DCH-120HL	DCH-120HG
Inner dim. WxDxH/ Cap.	600×500×1200mm/360L	800×500×1200mm/480L	1000×500×1200mm/600L
Outer dim. WxDxH/Weight	840×1140×1990mm/330kg	1040×1140×1990mm/390kg	1240×1140×1990mm/460kg
Temperature range	Room temperature +50°C-300°C		
Temp. distribution accuracy	±5.0°C (at 300°C)*		
Cirulating system	Horizontal flow		
Program operation	8 memory, Max. 32 segment		
Cleanliness	Class 5 (ISO14644-1, When the temperature is stable /Target particle size : 0.5μm)		
Filter	Heat-resistant HEPA Filter		
Door	Single door (left side opening door)	Double doors	
Sensor port	Φ48mm×1 Front left side		
Safety devices	Overheat prevention device, Independent overheat prevention device, Overheat prevention device for Heater room, Door switch, Thermal relay, Temp. sensor disconnection alarm, Leakage breaker, Thermostat in operation panel		
Power demand/Current	AC 220/230/240V / 40A	AC 220/230/240V / 48A	AC 220/230/240V / 56A
Shelves (max. load)	3 pcs. (15kg/pc.)		3 pcs. (30kg/pc.)

●Please specify the voltage when you order. ●Specifications subject to change without notice for improvement.

*Measured at center inside chamber & 3 points upper, middle and lower parts, no load.

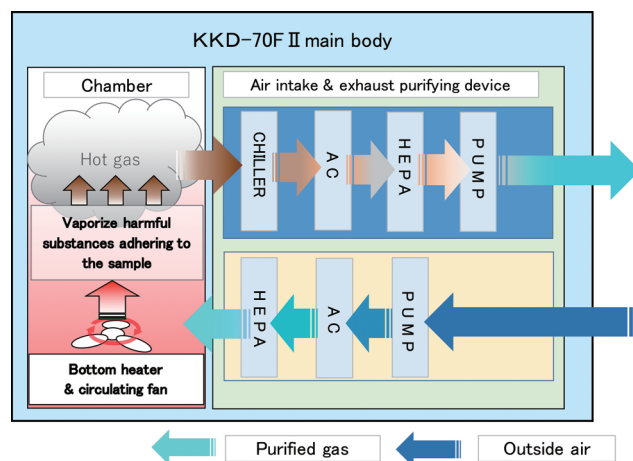


High temperature heating cleaning

400 - 500°C temperature in the chamber enables to vaporize dioxin and chemicals adhering to the glass vessels, potteries, etc.

Door safety lock device

The door is locked at the start of the operation and cannot be opened during operation. Supplies purified air continuously even after the heating finished and the door is open after the inside of chamber cools down to 100°C for safety.



Air-intake system purifying mechanism

Intakes the purified air passed through Prefilter → Activated carbon filter → HEPA filter forcibly into the chamber by the pump. At the start of operation, the heating is started after the pre-cleaning for a certain time.

Exhaust system purifying mechanism

Discharges evaporated dioxin and other fine particles forcibly together with high-temperature air by the pump. Then purifying by the exhaust system purifying mechanism consisting of the activated carbon filter (AC) and HEPA filter.

MODEL	KKD-70FII
Inner dim. WxDxH/ Cap.	725×530×630mm/242L
Outer dim. WxDxH/Weight	1170×940×1510mm/340kg
Temperature range	100°C-500°C (Normal use temperture 450°C)
Temp. distribution accuracy	±15°C (at 450°C)*
Circulating system	Vertical flow
Program operation	1 memory, 1 step
Door	Single door (left side opening door)
Safety devices	Overheat prevention device, Independent overheat protection device, Overheat prevention device for heater room, Door interlock device, Alarm of sensor breakage, Heater disconnection alarm, Motor overload & Electric leakage breaker.
Power demand/Current	AC 220/230/240V, 20/19/18A
Shelves (max. load)	2 pcs. (20kg/pc.)

•Please specify the voltage when you order. •Specifications subject to change without notice for improvement.
*Measured at center inside chamber & 3 points upper, middle and lower parts, no load.



KMD-100HM



KMD-120HL



KMD-120/-120F

Slim/Wide types are available

KMD-100HM / 120HL are the slim bodies.

KMD-100/120 are the wide bodies. No intermediate pillar in the chamber which enables to load and unload long object smoothly.

Natural convection / Hot air circulating

In addition to the natural convection, KMD-100F / 120F adopted the hot air circulation system to further improve the temperature distribution and has the efficient drying and the exhaust functions.

Constant value / Time control and Program operation

Program function with 1 memory making the set of max. 8 steps of the temperature and the time set enabling use multipurpose such as a program operation, a repeated operation etc.

Safety functions

Double overheat prevention device;

-The control circuit with built-in controller that has an operating margin for the set temp.

-The independent dial-type temperature controller being set the operation setting temp.

The upper limit temperature value setting, the Heater/Sensor disconnection alarm, the motor overload safety device (-F model only) etc.

Corresponds to IQ/OQ in GMP/GLP

We provide IQ/OQ documentations as an option.

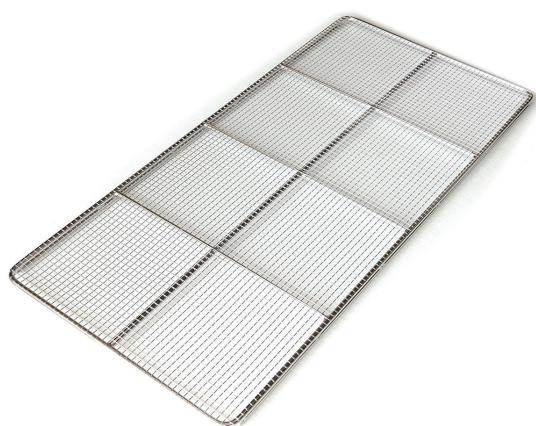
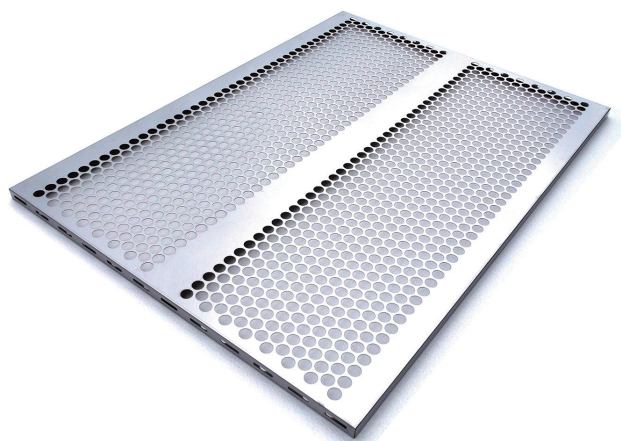
MODEL	KMD-100HM	KMD-120HL	KMD-100	KMD-120	KMD-100F	KMD-120F
Inner dim. WxDxH/ Cap.	600x500x1000mm/300L	800x500x1200mm/480L	1000x600x700mm/420L	1200x600x900mm/648L	1000x600x700mm/420L	1200x600x900mm/648L
Outer dim. WxDxH/Weight	830x730x1560mm/180kg	1040x730x1760mm/210kg	1450x780x1670mm/210kg	1650x780x1680mm/260kg	1450x780x1670mm/215kg	1650x780x1680mm/265kg
Temperature range	50°C - 260°C					
Temp. distribution accuracy	±6.0°C(at 200°C)*				±4.0°C(at 200°C)*	
Circulating system	Natural convection				Hot air circulation by motor fan	
Program operation	1 memory, max. 8 steps					
Door	Single door (left side opening door)	Double doors				
Sensor port	Φ23mm×1 Top surface					
Safety devices	Overheat prevention device. Independent overheat prevention device, Heater / Sensor disconnection alarm, Thermal relay (-F model only), Leakage breaker					
Power demand	AC220/230/240V					
Current	10/9/9A	15/14/14A	13/12/12A	17/16/16A	14/13/13A	18/17/16A
Shelves (max. load)	4 pcs.(15kg/pc.)	4 pcs.(15kg/pc.)	2 pcs.(25kg/pc.)	3 pcs.(25kg/pc.)	2 pcs.(25kg/pc.)	3 pcs.(25kg/pc.)

●Please specify the voltage when you order. ●Specifications subject to change without notice for improvement.

*Measured at center inside chamber & 3 points upper, middle and lower parts, no load.

Optional accessories & functions for Incubator/Drying Oven/Hot Air Sterilizer

Shelves



Applicable Model

RT-120HM, RY-120HM, ST-120HM, SY-120HM, PW-120HM

RT-120HL, RY-120HL, ST-120HL, SY-120HL, PW-120HL

ITD-100, ILD-110HG, ILD-100HGC, RT-120HG, RY-120HG, ST-120HG, SY-120HG, PW-120HG

ITD-120, ILD-120, ILD-120C

ITD-140, ITD-160, ILD-150, ILD-150C

GTR-100

GTR-120

GTR-150, GTR-200

SB-120HM/HL

SB-120HG

DCH-120HM

DCH-120HL/HG

KMD-100HM

KMD-120HL

KMD-100, KMD-100F, KMD-120, KMD-120F

Specifications without shelves

Number of the shelves of standard accessories can be reduced upon request. Please let us know your preference upon estimating.

◆ Applicable: all models

Load capacity of shelves

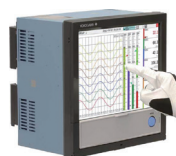
If you need to load more than the standard load capacity of shelves, we can produce the shelves of special specification which satisfy required load capacity. We propose specifications that match the weight and shape of the sample.

◆ Applicable: all models

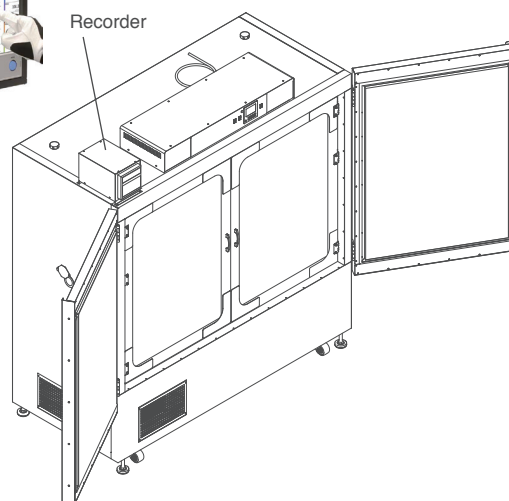
Recorder + floating sensor

A floating sensor can be inserted into the chamber from the standard measurement port to measure and record the temperature inside the chamber. As a incubators in pharmaceutical manufacturing and hot air sterilizers as GMP management device, it is a necessary function for daily use record. Both paper type and paperless type can be selected.

◆ Applicable: all models



Recorder

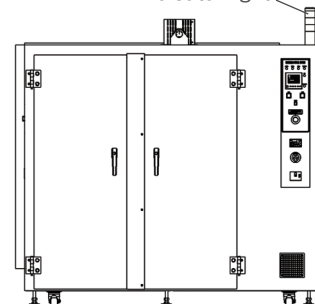


Indicator light

An indicator light can be mounted on the top of the device so that you can check the operating status of the device from a distance.

◆ Applicable: GTR series
In case of other models, consultation are required

Indicator light



The optional accessories above are available both when you place an order for the machine and after the order.

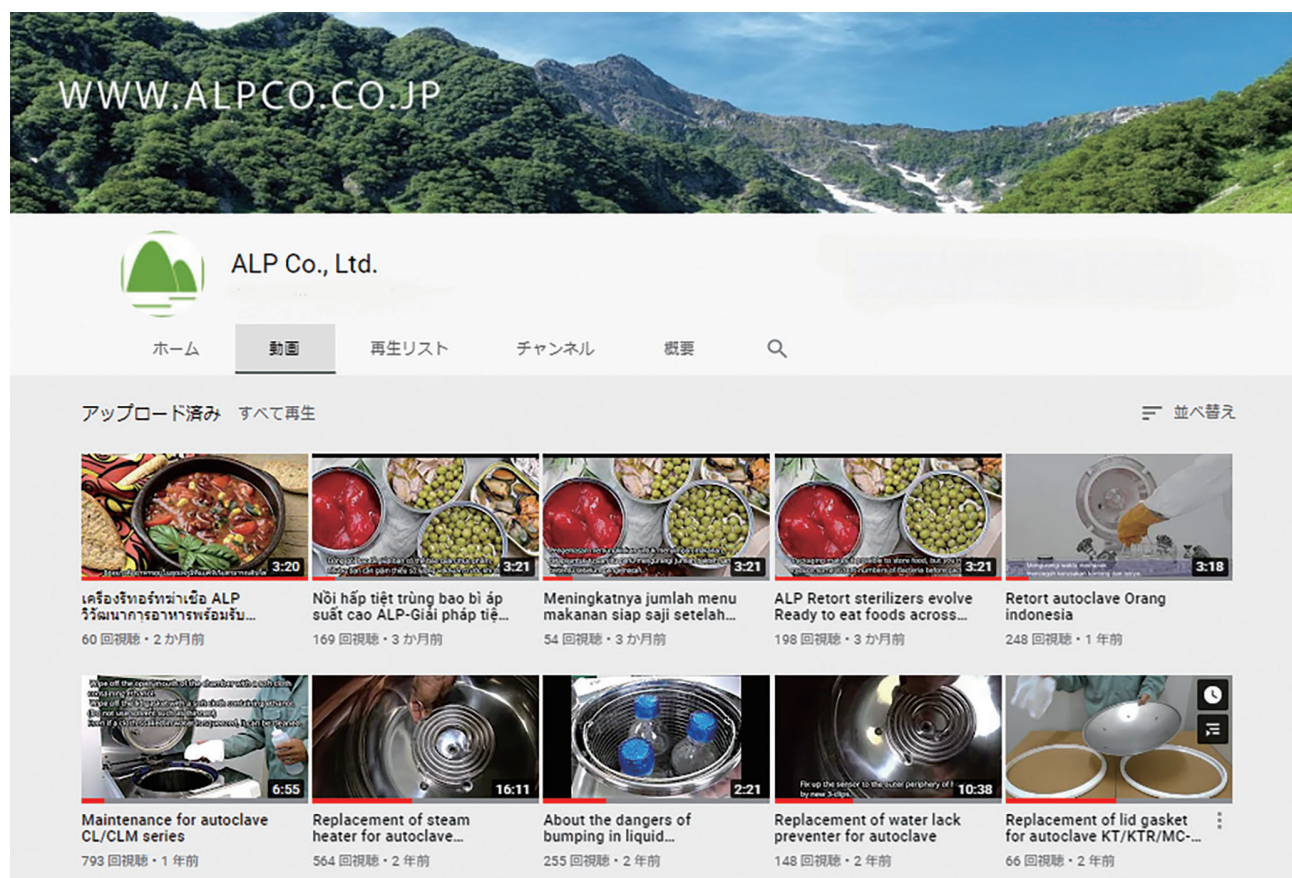
Please note that the optional functions above can be fitted to the machine only when you place an order and cannot be retrofitted to the machine after the order.

Promotion Videos on YouTube

Access our PV on YouTube !

PV & Maintenance are uploaded on YouTube which will help you to understand our products. Especially, we uploaded PV retort autoclave not only in English version but also in Thai, Vietnamese and Indonesian version. We will continue to upload useful information in the future.

Please subscribe our channel !





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ISO9001



ISO13485