



**ALP Co.,Ltd.**  
TOKYO JAPAN  
SINCE 1976

Automatic  
**AUTOCLAVE**

Laboratory use

**CL-32**  
**CL-40**  
series

100~140°C, 34 & 54ℓ..... **CL-32S & L** models

100~137°C, 60~105ℓ..... **CL-40S, M & L** models

With warm air drying ..... **-DP** models



CL-DP model

CL model

Quick lock lid  
Lid interlock  
Light lid -up -down

# More safety and more ease !

## ★ Quick Lock Lid

By the central lock lever, you can easily lock the lid with fingertip. The lid is lightened up and down by the automatic hinge. Even if you lose hold of the lid, it keeps stopped at the same position.

## ★ Lid Interlock

The lid is locked reliably during operation and till cooling down to the safe temperature (80°C···adjustable by parameter).

## ★ Electro Mechanical Lock

This function brings more safety to operator by locking the lid at the power failure or in the power OFF, to prevent operator from contamination by contacting un-sterilized objects carelessly. Locking is released only on standby state in the power ON.

## ★ Graphic Display

The current operation process is indicated clearly.

## ★ Timed Free Steaming

This reliable automatic air exhaust system guarantees always sure sterilization under pure steam exposure.

## ★ Adjustable Automatic Exhaust

After sterilization process, steam is slowly released or cooled by the key set especially for liquid bottles.

## ★ Warming & Dissolving of Culture Medium

Warming after sterilization and dissolving of culture medium.

## ★ Water Cooling System of Exhaust-steam & Drainage of water ··· CL models

For no exhaust-steam and smell-down to your working room during air exhaust process or at operation end, the water cooling system with enough ability of steam condensation is provided inside the main body. Condensed water flow into the exhaust bottle in the front of main body. Also to clean the chamber bottom, the remained water is drained to the drain tray by opening the drain valve cock at inner side of exhaust bottle.

## ★ Start-Timer by Calender

You can set operation start by month, day, hour and minute. The sterilized objects can be taken out at your next work-start.

## ★ Memory Back Up

Even on a power failure, the process progress is memorized. When the power is returned, it is re-displayed.

## ★ Mouth Boss for Object Temperature Sensor is provided on the Lid.

Through this mouth boss, one sensor for operation-start or three sensors for temperature distribution measurement can be set later (by option) with use of fitting accessory.

## ★ Light to use ··· -S models

-32S and -40S models have low loading heights especially for heavy objects such as liquid bottles. It is possible to work with light steps.

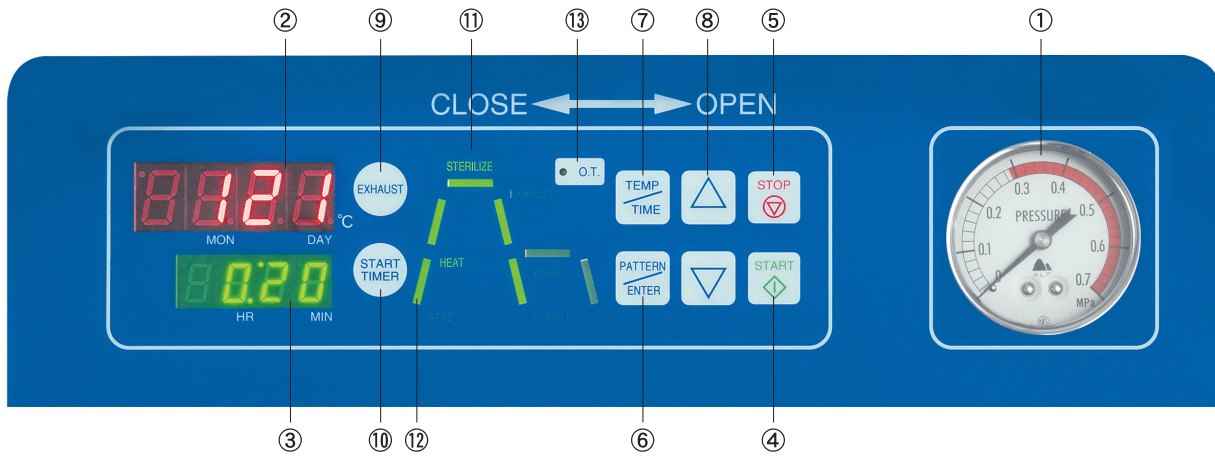
## ★ Warm Air Drying ··· CL-DP models

By warm flow through 0.2 $\mu$ m micro-filter, the sterilized objects can be dried clearly and cleanly.

The vacuum-drying models (CLG series) with pulse pre-vacuum system by the vacuum pump are also prepared.



# OPERATION PANEL



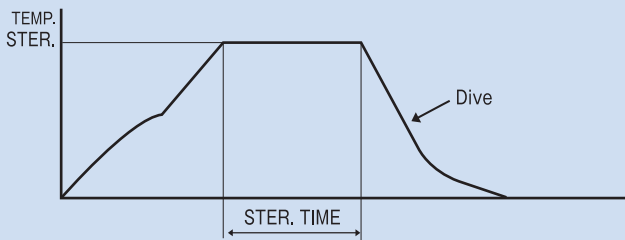
- ① Pressure gauge
- ② Temperature display
- ③ Time display
- ④ Start key
- ⑤ Stop key
- ⑥ Pattern/Enter key
- ⑦ Temp./Time key
- ⑧ Change key
- ⑨ Exhaust key
- ⑩ Start timer key
- ⑪ Character display
- ⑫ Process line display
- Option
- ⑬ Object temp. key

## OPERATION PATTERNS

It can be chosen from 3 patterns (-DP;5 patterns) according to your purposes. Once changed the values are stored, even if the power is switched off.

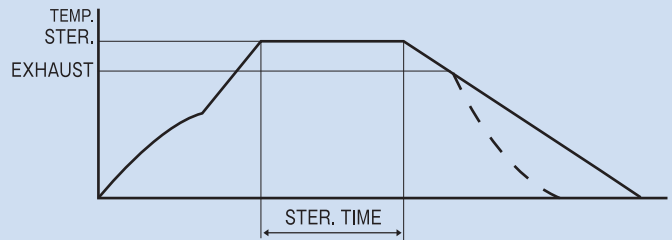
### Sterilization of Solids / Instruments

① A : Ster. (with auto. exhaust)



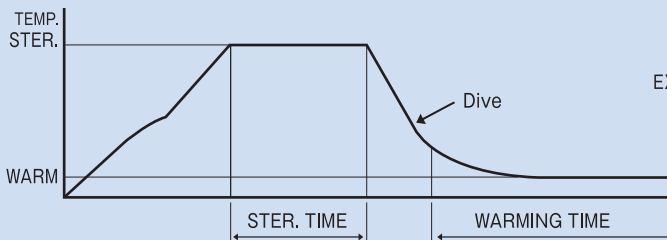
### Sterilization of Liquid

(without exhaust or with adjustment)



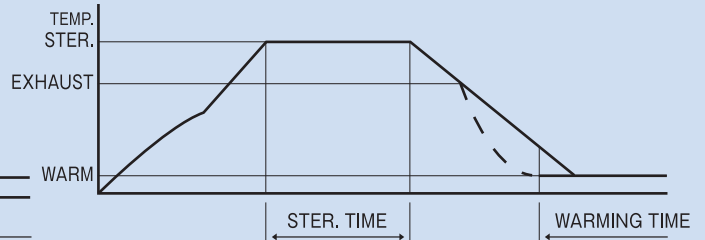
### Sterilization of Solids with Warming

② B : Ster. / Warming (with auto. exhaust)



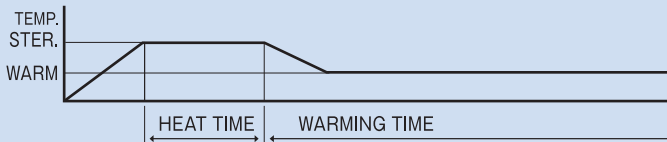
### Sterilization of Culture medium

(without exhaust or with adjustment)



### Dissoving of Culture medium

③ C : Heating / Warming

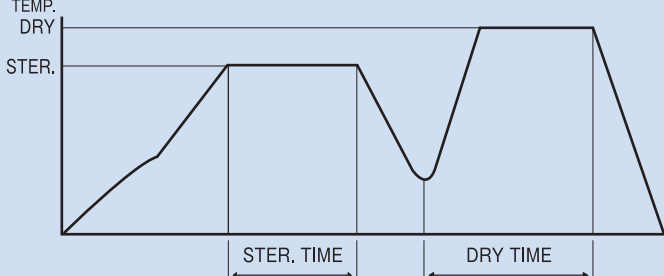


Caution

If a lot of materials difficult of air-exhaust, such as many small containers in sterilization bags, are sterilized at usable maximum temperature, pressure inside the chamber must increase and the over pressure detector may operate. Then, it is requested to decrease the set temperature a little (about 3°C or more).

### Sterilization with Drying

④ D : Ster. / Drying

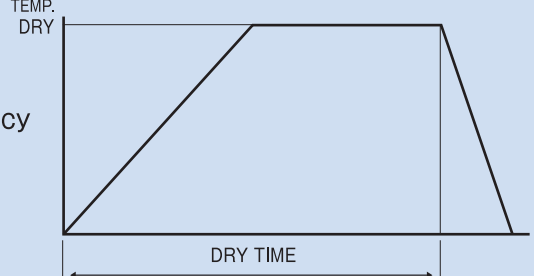


Insufficiency



Equipped with Drying devices (-DP)  
**For Additional Drying**

⑤ E : Drying

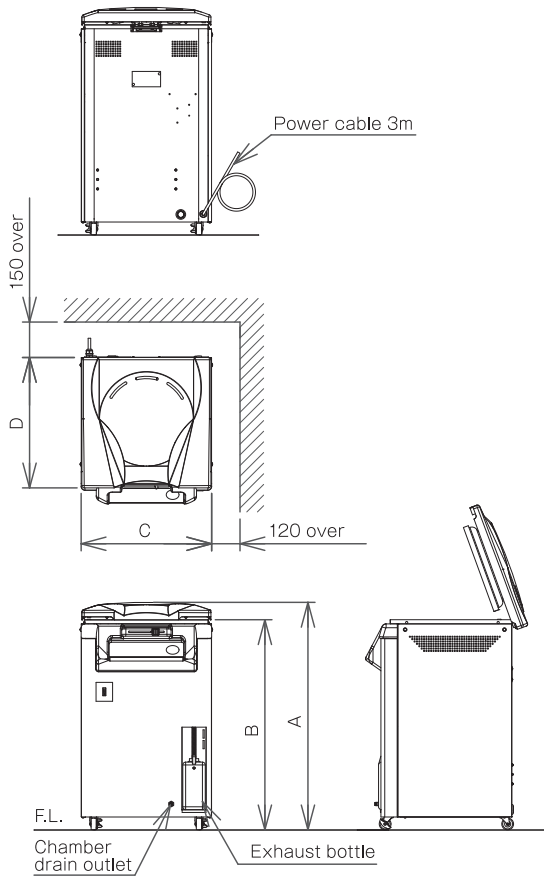


# INSTALLATION

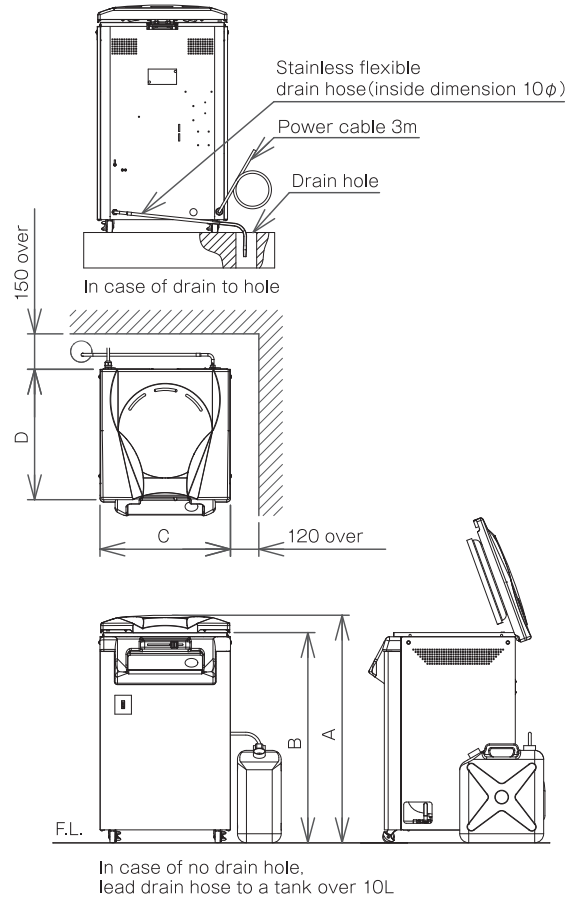
unit(mm)

Model	Total height A	Loading height B	Total width C	Total depth D
CL-32S, CL-32SDP	870	770	550	550
CL-32L, CL-32LDP	990	890	550	550
CL-40S, CL-40SDP	880	780	620	650
CL-40M, CL-40MDP	1000	900	620	650
CL-40L, CL-40LDP	1160	1060	620	650

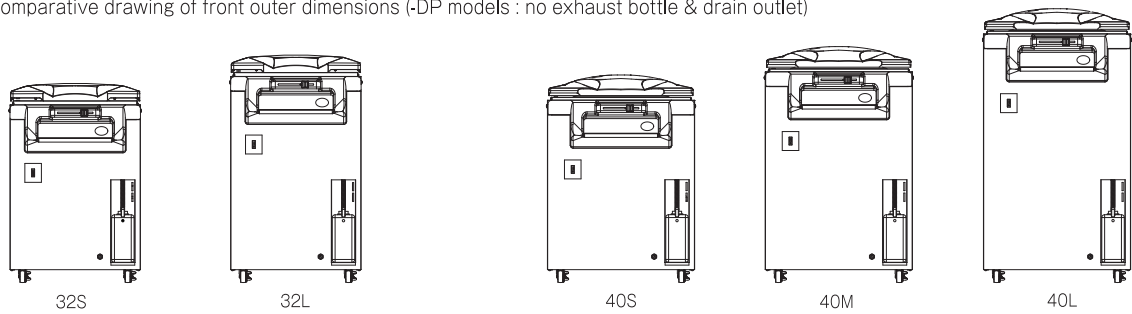
## CL models



## CL-DP models



● Comparative drawing of front outer dimensions (-DP models : no exhaust bottle & drain outlet)



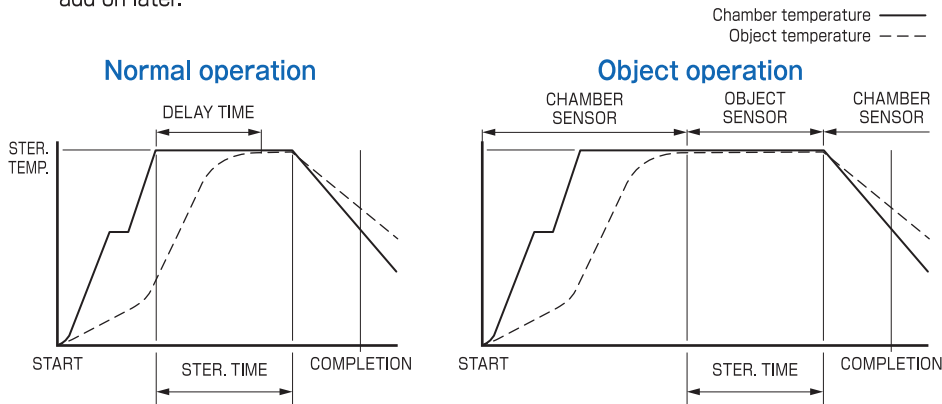
# LOADING CAPACITY FOR LABORATORY FLASKS

	100ml	200ml	300ml	500ml	1,000ml	2,000ml	3,000ml	5,000ml
Round flasks Dimension	102 φ66	126 φ80	148 φ90	171 φ108	215 φ134	270 φ172	305 φ190	330 φ234
in CL-40 stainless wire basket	23pcs.	16pcs.	12pcs.	8pcs.	5pcs.	3pcs.	1pc.	1pc.
in CL-32 stainless wire basket	14pcs.	9pcs.	7pcs.	5pcs.	3pcs.	1pc.	1pc.	1pc.

## OPTIONAL FUNCTIONS

### Object Temperature Sensor (For reliable sterilization)

Object temperature will come up more slowly than temperature in the chamber, so sterilization time be added delay time to set time. It aids reliable sterilization that the timer begins to move only after the temperature measured by the object temperature reaches the set temperature. Necessary for objects which prevent penetration of steam. It will be able to add on later.



### Automatic Water Supply (To save your manual water supply)

In stead of troublesome check and manual supply of water before operation, proper quantity of water is automatically supplied.

### Pre-Heating (To shorten the heating-up time)

The water for steam generation is always kept near boiling condition. (Option with automatic water supply)

### Rapid Cooling (To shorten the cooling time)

When the sterilization process is completed, the cooling fan is operated to cool the chamber. The cooling time which occupies the majority in all the process can be much reduced. (To about 1/3 ... at no load test)

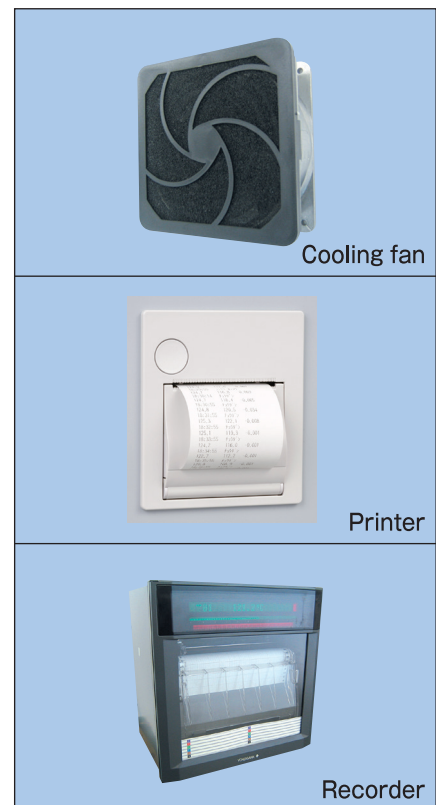
### Printer

It prints out the date and time of operation start, and 2 temperatures of the sensor in the chamber and the object temperature sensor, in every 1 minute, through the main controller.

### Recorder (To check temperature distribution)

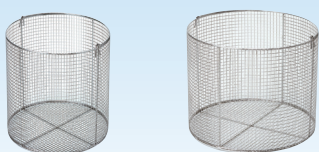
The temperature distribution in the chamber can be measured in the combination with 3 object temperature sensors. It is the hybrid type which can be recorded up to 5 temperature and 1 pressure.

We can submit documents for GMP/GLP requirements.



## STANDARD / OPTIONAL ACCESSORIES

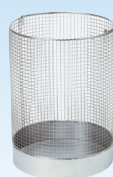
### Stainless wire basket



for CL-32 series  
 $\phi$  300×200mm  
 $\phi$  300×300mm

for CL-40 series  
 $\phi$  380×200mm  
 $\phi$  380×300mm  
 $\phi$  380×400mm

### Basket with pan



for CL-32 series  
 $\phi$  270×400mm  
 $\phi$  270×600mm

for CL-40 series  
 $\phi$  370×400mm  
 $\phi$  370×600mm

### Stainless bucket



for CL-32 series  
 $\phi$  270×270mm

for CL-40 series  
 $\phi$  360×300mm

### Stainless dressing drum



for CL-32 series  
 $\phi$  270×180mm

# SPECIFICATIONS

## Autoclave for Laboratory use **CL/CL-DP** series

Model	Basic	CL-32S	CL-32L	CL-40S	CL-40M	CL-40L
	With warm air drying	CL-32SDP	CL-32LDP	CL-40SDP	CL-40MDP	CL-40LDP
Chamber(usable inner size) Capacity		φ320×420mm 34ℓ	φ320×676mm 54ℓ	φ400×478mm 60ℓ	φ400×672mm 85ℓ	φ400×832mm 105ℓ
Usable max.temperature Usable max.pressure		140℃ 0.27MPa		137℃ 0.25MPa		
Usable temperature		Sterilization : 100~140℃		Sterilization : 100~137℃		
		Dissolving : 40~99℃, Warming : 40~60℃				
Usable time		Sterilization, Dissolving : 0min.~48hrs. 00min. and continuous, Warming : 0min.~48hrs.00min				
Controller		Microprocessor controller, graphic display Temperature...3digits, PID control Timer...2digits hours : 2digits minutes, down count (Temperature/Time integration system)				
Operation pattern		A : Heating → Sterilization → Exhaust(adjustable) B : Heating → Sterilization → Exhaust(adjustable) → Warming C : Dissolving → Warming				
-DP models	Operation pattern with drying	D : Heating → Sterilization → Drain → Drying (Full automatic operation) E : Only drying				
	Drying devices	Hot air circulating and discharge by electric heater and air pump through 0.2 μm micro cartridge filter of uptake passage Temperature range : 60~150℃, Timer range : 0min.~99hrs.59min. and continuous				
Air exhaust device		Temperature(99℃...adjustable) sensing · time(3min.~adjustable) control & solenoid valve (Timed free steaming system)				
Exhaust cooling system		Water storage tank with cooling coil & Exhaust drain receiver bottle				
Drain valve		Manual valve at inner side of exhaust bottle : CL models Manual & automatic valve : CL-DP models				
Option	Auto. water supply	Automatic water supply system from city-water-faucet by level sensor-controller				
	Pre-heat system	To shorten the come-up time, at 60℃ . Provided only with auto. water supply.				
	Rapid cooling system	Chamber cooling system by 1~2 fans				
Safety	Safety devices	Interlock system, Electro mechanical lock system Double check system of lid close, Over pressure detector Over temperature detector, Water lack preventor, Sensor break indicator Abnormal time indicator, Memory of power failure, Safety valve Breaker for slight leakage, over current & short circuit				
	Safety valve operation	0.29MPa		0.27MPa		
	Water test pressure	0.58MPa		0.54MPa		
Material	Chamber & lid	Stainless steel SUS304, shiny polished. Molded silicon rubber lid gasket (self-seal system)				
	Outer panel	Steel with baked melamine finish. Top panel : Heat-resisting molded resin				
Power demand (50/60Hz)		AC220 / 230 / 240V, 1 phase, 50/60Hz				
		2.6kW, 12A		4.0kW, 18A		
Outer dimensions W×D×H		550×550×870mm	550×550×990mm	620×650×880mm	620×650×1000mm	620×650×1160mm
Weight		56kg	60kg	72kg	78kg	84kg
Accessories	Stainless wire basket	φ300×200mm×2pcs.	φ300×300mm×2pcs.	φ380×200mm×2pcs.	φ380×300mm×2pcs.	φ380×400mm×2pcs.
	Others	Standard for CL models as above. Optional for all CL-DP models. Exhaust bottle & chamber drain tray (for CL models). Stainless flexible drain hose (for CL-DP models)				
Optional accessories		Object temperature sensor, Printer, Recorder, Basket with pan, Bucket, Dressing drum				

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



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ISO9001



ISO13485