



ALP Co.,Ltd.
TOKYO JAPAN
SINCE 1976

Automatic **AUTOCLAVE**

for Medical use

CLM

series

100~138°C, 54ℓ …… **CLM-32L** model

100~135°C, 85ℓ …… **CLM-40M** model

100~135°C, 105ℓ …… **CLM-40L** model



CLM-32L model

CLM-40L model

Quick lock lid
Light lid -up -down
Exhaust cooling system

Vertical space-saving autoclave for medical working room.

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 System

The lid is locked reliably during operation and till cooling down to the safe temperature (80°C···adjustable by parameter). Also, the lid is locked at power failure or OFF to prevent operator from contamination by contacting un-sterilized objects. Locking is released on standby state in 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.

Water Cooling System of Exhaust-steam

For no exhaust-steam to your working room during air exhaust process or at operation end, the water cooling system with enough ability of steam condensation is provided. Condensed water flow into the exhaust bottle in the front of main body.

All-Front Access Operation

Besides usual sterilization operation, also exhaust bottle or drainage of chamber (by opening the drain cock at inner side of exhaust bottle), can be all handled in the front side. This brings shortening of operation and space of your working room because the autoclave can be installed between other instruments or wall.

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.

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.

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

Through this mouth boss, one sensor for operation-start by temperature measurement in the chamber can be set later (by option) with use of fitting accessory.

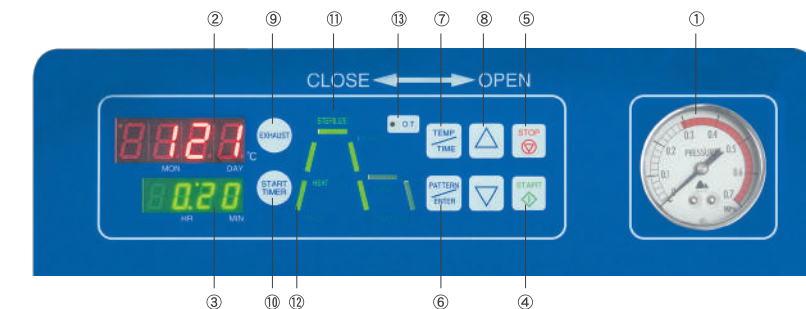
Optional Measuring Instruments

Object sensor and printer can be set as option for validation and routine control of a sterilization process for medical devices, based on ISO 17665-1.

Option for Shortening of Operation Time

To shorten a operation process, "Automatic water supply with pre-heating" and "Rapid cooling" are available as factory shipment option.

OPERATION PANEL



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

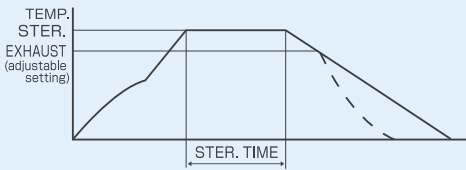


Printer : option

OPERATION PATTERNS

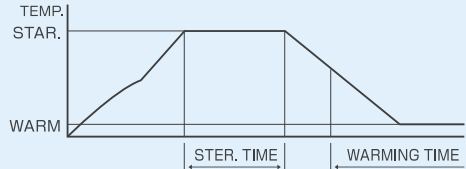
Sterilization of Solids / Instruments

① Ster. (with auto. exhaust)



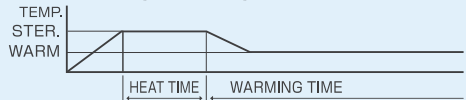
Sterilization of Solids with Warming

② Ster. / Warming (with auto. exhaust)



Dissolving of Culture medium

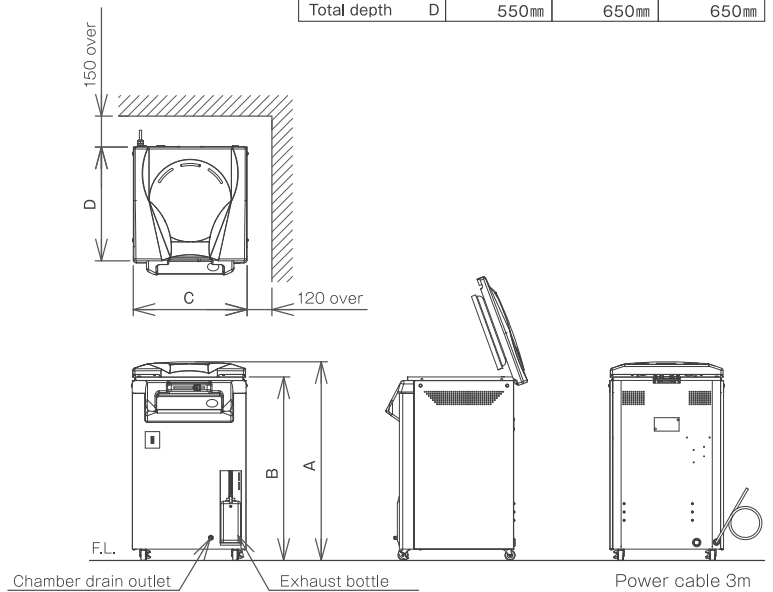
③ Dissolving / Warming



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

INSTALLATION

	CLM-32L	CLM-40M	CLM-40L
Total height A	990mm	1000mm	1160mm
Loading height B	890mm	900mm	1060mm
Total width C	550mm	620mm	620mm
Total depth D	550mm	650mm	650mm

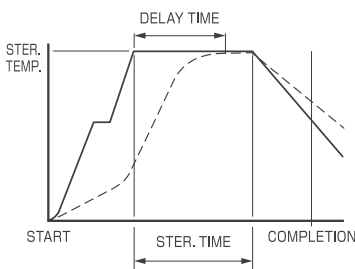


OPTIONAL FUCTIONS

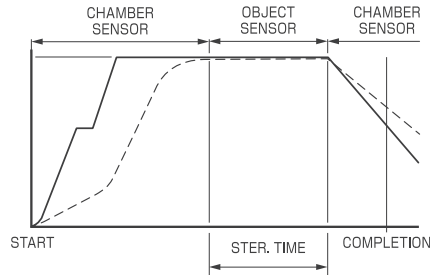
Object Temperature Sensor 《For reliable sterilization》

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 sensor reaches the set temperature. Necessary for objects which prevent penetration of steam. It will be able to add on later.

Normal operation



Object operation



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》

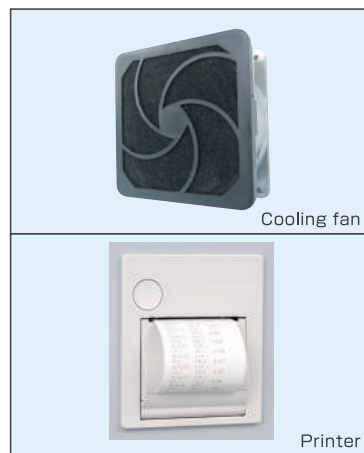
The water for steam generation is always kept near boiling condition. (Option with automatic water supply)

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 (1 sec.~600 sec. adjustable), through the main controller.



SPECIFICATIONS

Autoclave for Medical use **CLM** series

Model	CLM-32L	CLM-40M	CLM-40L	
Chamber (usable inner size) Effective capacity	φ320×676mm 54ℓ	φ400×672mm 85ℓ	φ400×832mm 105ℓ	
Usable max. temp./pressure	138°C/0.26MPa			
Usable temperature	Sterilization :100~138°C		Sterilization :100~135°C	
	Dissolving :40-99°C Warming :40-60°C			
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	① : Heating → Sterilization → Exhaust(adjustable) ② : Heating → Sterilization → Exhaust(adjustable) → Warming ③ : Dissolving → Warming			
Start timer	Able to set operation-start by calendar...month, day, hour and minute.			
Air exhaust device	Timed free steaming system, which means closing solenoid valve by temperature sensing/time control(adjustable)			
Exhaust cooling system	Water storage tank with cooling coil & Exhaust (drain receiver) bottle			
Drain valve	Manual valve at inner side of exhaust bottle			
Option	Auto. water supply	Automatic water supply system from city-water-faucet by level sensor		
	Pre-heat system	To shorten the come-up time, at 60°C. Provided only with auto. water supply.		
	Rapid cooling system	Chamber cooling system by one or two fan units		
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, single-phase, 50/60Hz			
Power consumption	2.6kW, 12A	4.0kW, 18A		
Power connector	Non, only wires are stripped from power cable			
Outer dimensions W×D×H	550×550×990mm	620×650×1000mm	620×650×1160mm	
Weight	71kg	87kg	90kg	
Accessories	Stainless wire basket	φ300×300mm×2pcs.	φ380×300×2pcs.	φ380×400×2pcs.
	Others	Exhaust bottle (3ℓ), Chamber drain tray		
Optional accessories	Object temperature sensor, Printer, Basket with pan, Bucket, Dressing drum			
Standards	ISO13485, ISO9001, Japanese MHLW Ordinance #169, JIS T 7324			

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

STANDARD / OPTIONAL ACCESSORIES

Stainless wire basket



for CLM-32L for CLM-40M/L
 φ 300×200mm φ 380×200mm
 φ 300×300mm φ 380×300mm
 φ 380×400mm

Basket with pan



for CLM-32L for CLM-40M/L
 φ 270×400mm φ 370×400mm
 φ 270×600mm φ 370×600mm

Stainless bucket



for CLM-32L for CLM-32L
 φ 270×270mm φ 240×240mm
 for CLM-40M/L for CLM-40M/L
 φ 360×300mm φ 330×270mm

Stainless dressing drum



for CLM-32L
 φ 270×180mm



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ISO9001



ISO13485