

Steam sterilizer

AUTOCLAVE

Laboratory use

CLG series
With vacuum pump~drying
CLG-DVP
series

100~140°C, 54ℓ····· **CLG-32L** & **-LDVP** models

100~137°C, 85ℓ····· **CLG-40M**&-**MDVP**models

100~137°C, 105ℓ · · · · · CLG-40L & - LDV P models



Conversation style operation on LCD screen With multi-functions and more safety!

More reliable sterilization and safety

★Lid Interlock

By the central lock lever, you can easily lock the lid with fingertip.

The lid is interlocked reliably during operation and cooling down to the safe temperature.

★Upward Opening Lid

The lid is lightened up and down by the automatic hinge.

★ 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.

★LCD Display of Conversation style

LCD screen shows set data of temperature, pressure, program and error messages at all stages of the operation process. Also, magnified data of operation temperature and time can be shown by flip-key on the display. Operation is easy conversation style by the key. Usual operation15(16... DVP)programs are memorized by pattern and data.

★ Precise Combined Control by Temperature and Pressure for Saturated Steam

Pulse air purging is repeated until achieving suturated steam when pressure is high compared with temperature.

Also, another air exhaust system controlled only by temperature-time can be selected for simple objects. This enables to shorten the sterilization total time compared with by pulse air purging.

★ Front loading Exhaust Bottle (for CLG models)

The exhaust bottle is provided on the front for easy loading and checking.

★ Cooling Fan as standard

The rapid cooling fan is provided for all models. The autoclave can be perfored in shorter time to safe temperature below 80° C.

★Warming & Dissolving of Culture Medium

Warming after sterilization, and dissolving cold hardened 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 work-start.

★ Temperature Sensor Entry Port as standard

One additional sensor port is provided as standard on the inner lid.

★ Pre-Vacuum(-DVP models)

The triple pulse, pre-vacuum phase by the powerful vacuum pump with a spinning water ring, removes forcibly all the remained air from the chamber and objects, allowing good penetration of saturated steam into the objects, thus ensuring fully effective sterilization.

★ Vacuum Drying(-DVP models)

After sterilization, the objects with wet by steam can be dried clearly and cleanly by the vacuum pump and drying heater through 0.2 μm micro pre-filter.



Automatic Water Supply with Pre-heating

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

And to shorten the heating-up time after start, water in the chamber is always kept near boiling condition.

Exhaust Air Filter...0.2 µm PTFE membrane filter in SUS304 housing

For safety of operators and the environment, this ensures sterilization with safe air exhaust free from high infectious pathogenes. (This does not apply to -DVP models.)

Recorder

For GMP, a hybrid recorder can record $2\sim5$ points of temperatures and 1 pressure in the chamber by temperature sensors and pressure sensor.



Recorder

DEALER OPTION

(able to be equiped later)

Object Temperature Sensor

An object temperature sensor placed in the cold spot of objects gives better sterilization. The timer starts only after the temperature measured by this sensor reaches the set temperature.

Also, by this sensor equipment, unlocking temperature of the lid interlock can be changed in the range $80^{\circ}\text{C}\sim 98^{\circ}\text{C}$. This realizes both of sterilization-reliability and reduction of sterilization total time simultaneously.

When this sensor is not used, it can be put in the holder of inner lid as photo of left page.

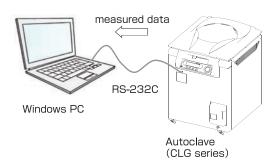
Printer

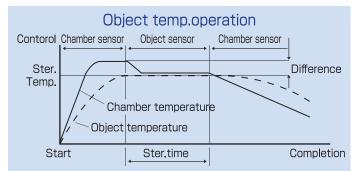
It prints the set data, 2 temperatures of the control sensor and the object sensor, and pressure, in every 1 minute (variable).

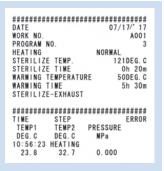
*Printer and RS-232C cannot be equiped at the same time.

Serial Communication Port RS-232C and Data Logging System — ALP-LOGGER –

By RS-232C interface and support soft "ALP-LOGG ER", data of temperature-time, chamber pressure, operation process and abnormal warning are transmitted to PC to back up daily sterilization management. Straged data can be put out as temperature - time graph or can be processed by Microsoft Excel®. A wiring cable between RS-232C and USB is provided as accessory.









Printer







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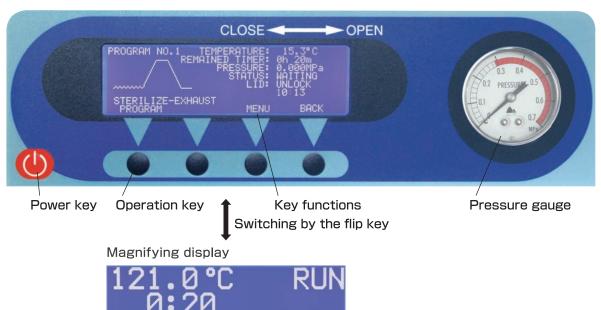
OPERATION PANEL

Easy friendly LCD screen

The LCD display provides all data of setting and operation.

The LCD display shows the present operation process stage by blinking bar.

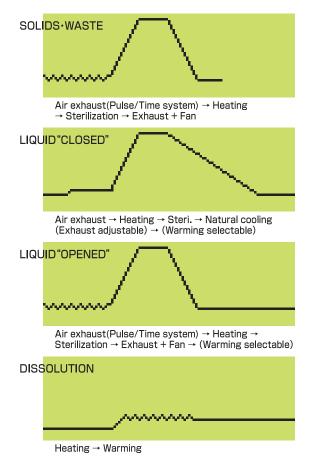
The fault messages are displayed on the LCD screen.



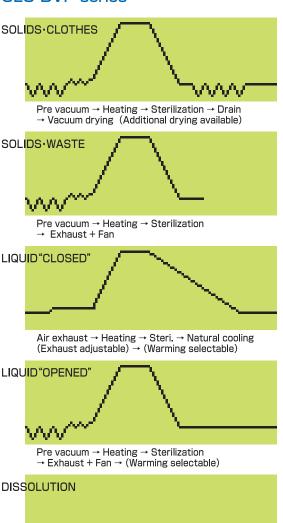
OPERATION PATTERNS

The following display shows pressure on patterns.

CLG series

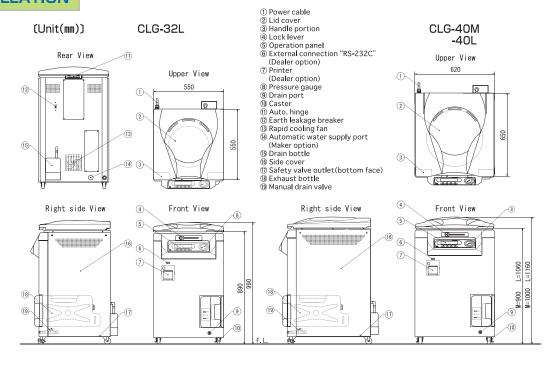


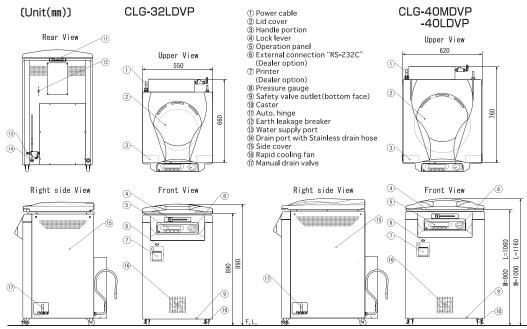
CLG-DVP series



Heating → Warming

INSTALLATION





Loading capacity for laboratory flasks

	100ml	200ml	300ml	500ml	1,000ml	2,000ml	3,000ml	5,000ml
Round flasks Dimension	^{φ66} Δ	126	ф90 ————————————————————————————————————	12 <u>\$\delta\frac{108}{2108}\$</u>	Σ12 φ134	022	305 0190	0ξ φ234
in CLG-40 stainless wire basket	23pcs.	16pcs.	12pcs.	8pcs.	5pcs.	3pcs.	120	100
in CLG-32 stainless	23pcs.	торся.	12pcs.	opcs.	Spes.	Spes.	1pc.	1pc.
wire basket	14pcs.	9pcs.	7 _{pcs} .	5pcs.	3pcs.	1рс.	1рс.	1pc.

SPECIFICATIONS

Vertical Autoclaves CLG/CLG-DVP series

Mod	Sta	ndard (Sterilization only)	CLG-32L CLG-40M		CLG-40L					
Mod	Pre	-vacuum~Vacuum drying	CLG-32LDVP	CLG-40MDVP	CLG-40LDVP					
Chamber(Usable inner dia. × depth)			φ320×676mm	φ400×672mm	φ400×832mm					
Capacity (Liters)			54 <i>l</i>	85 <i>l</i>	105ℓ					
Op	Operating Sterilization		100~140°C 100~137°C							
tem	perature	Dissolution / Warming	Dissolution : 40~99°C, Warming : 40~60°C							
N	1aximun	operating pressure	0.270MPa 0.250MPa							
Ster	ilization	/ Dissolution / Warm time	Sterilization/Dissolution: Omin.~48hrs. 00min.(& continuous), Warming: Omin.~48hrs.00min.							
	Air	exhaust system	Gravity substitution: Pulse air purge by temp. & press. sensing, or Timed free steaming(Time: adjustable), selectable							
	Ope	ration language	English							
	Mem	orized programs	15(16···DVP) programs available by operation pattern and data							
		Vacuum pump	Water sealed vacuum pump							
<u>s</u>		Pre-vacuum	Triple pulse vacuum system							
ode		Vacuum drying	Alternate operation of vacuum and suction, or continuous vacuum operation							
M		Heating method	Electrically heated chamber outside							
-DVP Models	Dryir	ng temperature range	60 to 150℃							
무		Drying time	Omin.~100hrs.00min.							
		Suction air filter	0.2μm micro cartridge filter							
		Start timer	Able to set operation-start by calendar ··· month, day, hour and minute.							
		Drain valve	CLG models : Manual value, CLG-DVP models : Automatic valve & manual valve							
۾	Α	uto. water supply	Automatic water supply system from city-water-faucet by level sensor & controller							
Option		Pre-heat system	To shorten the come-up time, 40~75°C. Provided only with auto.water supply							
0		Exhaust air filter	PTFE membrane filter (Bore $0.2\mu m$) in stainless housing on front outer panel							
		Safety devices	Lid 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		Safety valve	0.290MPa 0.270MPa							
		Hydrostatic test	0.538MPa 0.499MPa							
		Dunnauma mauma	0~0.7MPa							
		Pressure gauge	-0.1~0.6MPa							
	Pressure sensor		−0.1~0.5MPa							
Material of chamber			SUS304 Stainress steel							
Material of enclosure			Steel with melamin resin/Heat-resistant plastic							
Power regirement		wer regirement	AC220/230/240V, Single phase, 50/60Hz							
	Current rating		12A 18A							
Currentrating		urrentrating	15A 21A							
Heat output			2.6/2.8/2.9kW 4.0/4.1/4.3kW							
Outer dimensions (WXDXH)/Woight		nsions (WXDXH)/Weight	550×550×990mm/65kg	620×650×1000mm/83kg	620×650×1160mm/89kg					
Juli	Outer dimensions (W×D×H)/Weight		550×660×990mm/109kg	620×760×1000mm/127kg	620×760×1160mm/133kg					
C+-	andard	Stainless wire basket	φ300×300mm, 2pcs. φ380×300mm, 2pcs. φ380×400mm, 2pcs.							
	essories	Stailliess Wile basket	Option for -DVP models							
	Others		Exhaust bottle(CLG models), Drain hose & water supply hose(CLG-DVP models)							
Optional accessories		onal accessories	Object temperature sensor, Printer or RS-232C, Recorder, Basket with pan, Bucket, Dressing drum							

[•] Specifications on light blue shows CLG models, and yellow shows CLG-DVP models. • Specifications subject to change without notice for improvement.

STANDARD / OPTIONAL ACCESSORIES

For standard CLG models, 2 baskets are equiped as standard accessories.

Stainless wire basket



for CLG-32L ϕ 300 × 200mm ϕ 300 × 300mm



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

Basket with pan



for CLG-32L f φ270×400mm φ270×600mm

for CLG-40M/L φ370×400mm φ370×600mm

Stainless bucket



for CLG-32L ϕ 270×270mm for CLG-40M/L ϕ 360×300mm

Stainless dressing drum



for CLG-32L φ270×180mm



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