

Easy-to-Read & Easy-to-Operate

New HICLAVE

equipped with Color Touch Panel

HICLAVE

HV- II series

HV-25 II / 50 II / 85 II / 110 II

HV-25 II LB / 50 II LB / 85 II LB / 110 II LB

Controlled medical devices (Class II)
LB: for laboratories



Maintenance information is also displayed.

HICLAVE HV- II series autoclaves



HV-50 II

HV-110 II

HV-85 II

HV-25 II



ISO 13485 CERTIFIED

Products shown in this brochure
are manufactured by the company,
ISO 13485 certified.

STERILIZING
SIMPLY AND WELL

HIRAYAMA

HICLAVE HV-II series

Controlled medical devices (Class II)
HV-25 II / 50 II / 85 II / 110 II

For laboratories

HV-25 II LB / 50 II LB / 85 II LB / 110 II LB



The user-friendliness has been enhanced by employing a color touch panel.

Various information is displayed in detail by using characters.

Reliability and safety are provided to users.

We offer the new model autoclaves:
HICLAVE HV-II series autoclaves

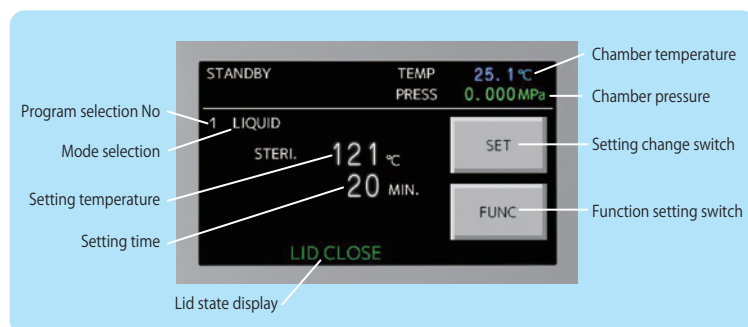


Modest and simple design



Easy-to-Operate with Color Touch panel

A color touch panel allows an operator to select an operation screen at a glance.



A mode selection is easy.

A mode selection is easy. Touch the screen to select a desired mode from five modes shown on the screen, then press the START button.



A color screen is easy to read when setting temperature, time, warming or exhaust.

The setting change of temperature, time, warming or exhaust is easily carried out by means of touch operation while checking a color screen.

The set contents are registered up to 8 patterns. It is convenient when sharing and utilizing them with other people.



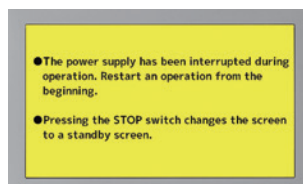
Sterilization temperature setting



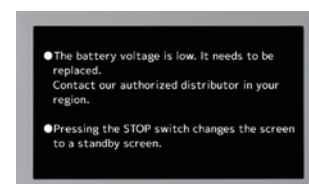
Program registration/selection

Maintenance information is also displayed. Reliable & Safe!

Various information including settings, maintenance, safety or alarms is displayed on a color screen. Detailed contents are provided by the character information.



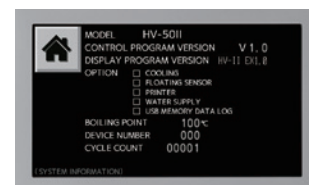
Maintenance information
Notification of periodic self inspection, power failure, cycle count, etc. are displayed.



Alarms



Alarm history
Date of generation, alarm contents, stage ID number are displayed.



System information
Program version No., cycle count, next self inspection date are displayed.

Unique safety functions



Electro-mechanical lid lock system

A lid is locked not by a handle but by a slide lever that can be lightly operated. So, opening / closing of a lid is easy and reliable. In addition, the pressure seal method consisting of an internal pressure type gasket and several lock pins which are inserted from the lid circumference is employed for safety.



Dual interlock mechanism

The dual interlock mechanism which can lock a lid by detecting the chamber pressure and temperature during sterilization is installed. A lock state is maintained even when a cycle is interrupted by power failure or manual stop operation.

※This interlock mechanism keeps operating even after a cycle is interrupted or manually stopped.



Lid lock release temperature

The lid lock release temperature can be set up for each mode or program, so safety at the time of unloading is secured.

LIQUID, AGAR, DISSOL modes : 60 - 95°C
SOLID mode : 60 - 97°C

Functions that support secure sterilization

Dual sensing system for residual air

The residual air which may cause sterilization failure is dually detected to always maintain the sterilization conditions that are appropriate for loads.

※Air removal is performed not only by gravity displacement but also by over-pressure exhaust, and the residual air is detected dually.

Exhaust level is selectable

It is possible to perform the fine exhaust by presetting an exhaust amount. The exhaust level is adjustable during operation.



Forced cooling device (option)

At the end of sterilization, the chamber temperature is lowered using a forced cooling device (air cooling). It is possible to shorten time to unloading after sterilization.

Functions that improve usability



Air removal time setting

The air removal time that is effective for sterilization of such objects as Durham tubes can be set.

HV-25 II /25 II LB, HV-50 II /50 II LB:

Arbitrary time between 3-9 minutes

HV-85 II /85 II LB, HV-110 II /110 II LB:

Arbitrary time between 6-18 minutes

Memory function

A program which is set for each application can be registered up to 8 patterns.

Programmable auto-start function

The programmable auto-start function that starts an operation at the set time is provided.

Boiling point setting

When it is not possible to use the equipment in standard settings in a place which is more than 800 m from the sea level, you can change a boiling point to use it.

Maximum Effective Capacity : 110 ℓ

Please select the most suitable model that meets your purposes from the following medical devices and laboratory equipment.



HV-25 II /25 II LB



HV-50 II /50 II LB



HV-85 II /85 II LB



HV-110 II /110 II LB






Specifications & Standards

MD: Medical devices, LB:for laboratories

Product name		HICLAVE HV-II															
		HV-25 II		HV-25 II LB		HV-50 II		HV-50 II LB		HV-85 II		HV-85 II LB		HV-110 II		HV-110 II LB	
Classification of MD/LB		MD		LB		MD		LB		MD		LB		MD		LB	
Chamber dimension		φ 240 × D550 mm				φ 300 × D710 mm				φ 420 × D615 mm				φ 420 × D795 mm			
Chamber volume		28 ℓ				54.2 ℓ				98.8 ℓ				123.7 ℓ			
Effective capacity		25 ℓ				50 ℓ				85 ℓ				110 ℓ			
Temp. settings	Sterilization temperature	105 ~ 126°C variable				105 ~ 135°C variable											
	Dissolution temperature									60 ~ 100°C variable							
	Warming temperature									45 ~ 60°C variable							
	Lid lock temperature									LIQUID, AGAR, DISSOL modes: 60 - 95°C variable, SOLID, WASTE modes: 60 - 97°C variable ※							
Time settings	Sterilization timer	1 - 250 min, The remaining time is displayed.															
	Dissolution timer	1 - 60 min, The remaining time is displayed.															
	Auto-start timer	1 min later - 1 week later, A start date and time is set.															
	Air removal time	3 - 9 min variable								6 - 18 min variable							
Mode selection		LIQUID, SOLID, WASTE, AGAR, DISSOL/ 8 programs															
Exhaust settings		3 steps (No exhaust, Fine exhaust, Small amount of exhaust)															
Maximum working pressure		0.186MPa				0.255MPa				0.255MPa				0.255MPa			
Thermometer		Digital display 5.0 ~ 128.9°C								Digital display 5.0 ~ 137.9°C							
Pressure gauge		Digital display 0-0.3 MPa/Analog display 0-0.4 MPa															
Safety devices and alarms		Safety pressure valve, Earth leakage breaker with O.C.protection, Low water cut off device, Alarms: Low water heating, Temperature sensor wire disconnection, Over-temperature, Over-cool, Over-pressure, Abnormality in lid, Abnormality in the lock of lid opening/closing lever															
Outside dimension (in mm)		W485 × D470 × H949				W547 × D532 × H1046				W667 × D652 × H1026				W667 × D652 × H1206			
Weight (approx.)		44 kg				60 kg				83 kg				89 kg			
Pressure vessel category		Simple pressure vessel				Small sized pressure vessel								Small sized pressure vessel			
Chamber material		Stainless steel (SUS 304)															
Power source		AC110/120/220/230/240V, 50/60Hz (specify voltage when ordering)								AC220/230/240V, 50/60Hz (specify voltage when ordering)							
Power consumption		1.5kW				2.0kW				3.0kW				4.0kW			
Power cord connection		Plug with ground terminal pin								Ring terminal (A plug is not supplied.)							
Supplied accessories		Wire basket, Exhaust bottle, Bottom plate, Drainage hose (50 cm), Exhaust hose (50 cm), Drainage collecting bottle, Cable tie, Caster stopper, Operation manual, User inspection procedure, Small sized pressure vessel specifications (excluding HV-25 II and HV-25 II LB)															
Medical device certification number 229AABZX00056000		○	—	○	—	○	—	○	—	○	—	○	—	○	—	○	—
Controlled medical devices (Class II)		○	—	○	—	○	—	○	—	○	—	○	—	○	—	○	—
Controlled medical devices requiring special maintenance		○	—	○	—	○	—	○	—	○	—	○	—	○	—	○	—
EMC compliance JIS C 1806-1:2010		○	—	○	—	○	—	○	—	○	—	○	—	○	—	○	—

※ The upper limit value changes according to the set boiling point.

Optional devices for upgrading a system

					• Software available
Recorder / Printer for data collection	Floating sensor A sterilization timer is activated after the material to be sterilized reaches the set temperature.	Forced cooling device (air cooling) Time to unloading after sterilization is shortened.	Automatic water supply system Water is automatically supplied without troublesome water supply work.	USB interface port	

Optional accessories

						• Sterilization tape, label, bag, etc. Ask us for details
Round wire basket Stainless steel	Sterilization bucket Stainless steel	Round wire basket with bottom plate Stainless steel	Special sterilization bucket for medical wastes treatment	Deodorizer for autoclaves	Detergent for autoclaves	

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ISO 13485 CERTIFIED
Manufactured under ISO 13485

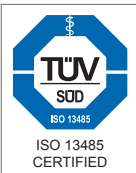
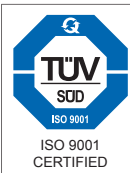
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http://www.hirayama-hmc.co.jp/

Distributor :

*Debut of a new autoclave
with outstanding features*

HI CLAVE
HG-II series

HG-50 II / HG-80 II



Products shown in this brochure are manufactured by the company, ISO 9001 / 13485 certified.

HG-50 II

HG-80 II

For safer and more reliable medical
and laboratory equipment

HIRAYAMA

Just push the button, the lid opens, shuts and

A new-generation autoclave that features the advanced function and the enhanced user-friendliness as well as the automated lid operation system is born.



HICLAVE HG-II series HG-50 II /HG-80 II

Capable of opening or closing the lid with one switch

HG series autoclave is equipped with a newly developed unique opening and closing system of the lid. The opening and closing of the lid or the lock of the lid can be carried out easily with only one finger. Since an operator does not need to come near to the opening of the chamber when operating the lid, safety becomes still higher.



Electromechanical locking system

The electromechanical lid operation system can open, shut and lock the lid automatically. The lid lock plates with lock holes are attached to the lid, while, the lid lock plate guides with lock holes are welded to the body of the chamber and the high rigid locking pins are mounted on the outer ring which rotates around the chamber. When closing the lid, the lid lock plates are inserted into the lid lock plate guides. Then, the locking pins are inserted into the lock holes of these parts when the outer ring which is driven by a motor rotates, the lid is securely locked thereby. Since the lid is locked firmly the higher safety is assured.

Highly secure locking system

When an operation stops in the course of the cycle as well as during sterilization, the safety interlock system which is capable of locking the lid by detecting both pressure and temperature of the chamber operates. It also enhances safety of the equipment.

User-settable lid lock release temperature

Since a user can set the lid lock release temperature for every mode or program within the range of 60°C-97°C*, it ensures safety and improves user-friendliness further.

*Setting range of the lid lock release temperature

Mode	HG-50	HG-80
LIQUID, AGAR, DISSOLUTION	60-95°C (Default 80°C)	60-95°C (Default 65°C)
SOLID	60-97°C (Default 97°C)	60-97°C (Default 97°C)

locks automatically!!

Reservation timer

The reservation timer which can start operation at the desired time in the range of 1 - 99 hours is provided.

Dissolution cycle is a standard feature

Dissolution cycle which dissolves coagulated agar medium is a standard feature.

Body is compact and easy to use

Appearance has functional beauty and is compact. HG-50 is a space-saving model that reduced the size of width and height compared with conventional HV type autoclaves. The height of the lid to take out the load is designed to about 751mm so that the handling of the load becomes easier.

Double sensing system for air removal

Air in the chamber which may cause insufficient sterilization is detected by the double sensing system and the appropriate sterilization condition in accordance with the load condition is maintained.

The memory function which can save the setting for each cycle

The memory function which can save 3 kinds of settings for each cycle is provided.

The loading capacity was increased by enlarging the chamber diameter

As the diameter of the chamber was enlarged, 2 sets of 50-hole tube racks for 18mm test tubes can be placed in the wire basket and the 2 wire baskets can be stacked (HG-80:stackable up to 3 steps). Moreover, four 1L flasks can be put .

Air removal time can be freely set

Initial setting : 5 min. (HG-50- II , 3kW)
4 min. (HG-50- II , 2kW)
8 min. (HG-80- II)
Setting range : 5~10 min. (HG-50- II , 3kW)
3~ 9 min. (HG-50- II , 2kW)
8~16 min. (HG-80- II)

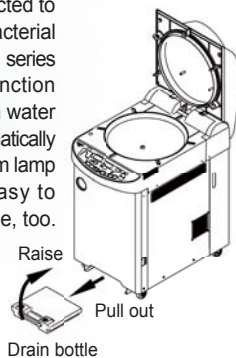
This function is useful when sterilizing a Durham tube, etc.

The forced air cooling system can reduce the cooling time

The forced air cooling system that lowers the pressure of the chamber by air cooling is a standard feature. Since it is possible to reduce time until the load is taken out after sterilized, the total working hour is decreased.

High water alarm for the drain bottle

We are apt to forget discharge of water which is collected to the drain bottle (antibacterial treatment bottle). HG- II series autoclaves have a function which detects the high water of the drain bottle automatically and warns with an alarm lamp and a sound. It is easy to remove the drain bottle, too.



Automatic exhaust system that can select the exhaust level

Fine exhaust is automatically performed by setting the exhaust level (4-step) in advance. In addition, fine exhaust adjustment is possible also during exhaust.

The vapor condensing system improves working environment

The vapor during exhaust is condensed by the water cooling unit. Working environment is improved by controlling leakage of unpleasant vapor to the room.

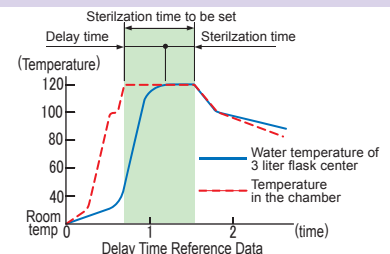
Point for perfect sterilization

●When sterilizing liquid, set a longer sterilization time, taking delay time into account and referring to the table below. In case that there is 3 liters of water in the flask, it takes nearly 30 minutes (delay time) for the water temperature of the flask center to reach to the set sterilization temperature after the temperature in the chamber has reached the sterilization temperature. Therefore, set the sterilization time 30 minutes longer for perfect sterilization of liquid.

Sterilization time to be set (50 minutes) = Delay time (30 min.) + Sterilization time (20 min.)

Reference Values of Delay Time

Liquid Volume(per flask)	Delay Time
3 liters	30 minutes
2 liters	25 minutes
1 liter	15 minutes



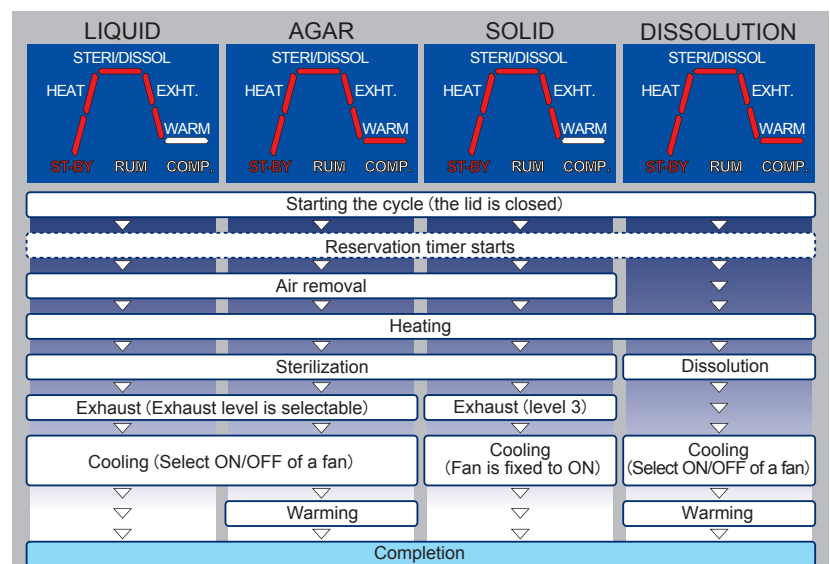
Large operation panel

The new large operation panel is employed. The ongoing process is easily understood just by looking at the stage display and the operation cycle which is selected according to the load is indicated with the lamps. As the size of switches and display window became larger, the operation panel is very easy to use.



Selecting the sterilization cycle

Select the sterilization cycle from LIQUID, AGAR, SOLID or DISSOLUTION cycle according to the purpose. The stage display by which the state of progress can be easily understood just by looking is employed.



● Main Specifications of HGseries Autoclaves

Model	HG-50 II	HG-80 II	
Outside dimensions	455W x 691D x 890H mm	455W x 691D x 1030H mm	
Chamber size (Volume)	364Φ x 482H mm (Effective volume 50.2 liter)	364Φ x 730H mm (Effective volume 76 liter)	
Net weight (Approx.)	62 kg	73 kg	
Power source	AC110V / 120V / 220V / 230V / 240V 50 / 60 Hz (Specify the voltage when ordering)	AC220V / 230V / 240V 50 / 60 Hz (Specify the voltage when ordering)	
Power consumption	3kW (2kW for AC110V / 120V / 220V)	3.8kW	
Category of pressure vessel	Small sized pressure vessel		
Chamber material	Stainless steel (SUS 304)		
Setting Range	Sterilization temperature 105 - 135°C Variable		
	Sterilization timer 1 - 300 minutes Remaining time is displayed		
	Dissolution temperature 60 - 100°C Variable		
	Dissolution timer 1 - 60 minutes Display the remaining time		
	Warming temperature 45 - 60°C Variable		
	Exhaust level Level 0 - 3, 4-steps Variable		
	Fan cooling ON or OFF		
	Reservation timer 1 - 99 hour, Setting the operation start-up time		
	Air removal time (3kW) 5 - 10 minutes variable (Default 5 min.) (2kW) 3 - 9 minutes variable (Default 4 min.)		8 - 16 minutes variable (Default 8 min.)
	Lid lock temperature Liquid, Agar, Dissolution : 60 - 95°C (Default 80°C) Solid : 60 - 97°C (Default 97°C)		Liquid, Agar, Dissolution : 60 - 95°C (Default 65°C) Solid : 60 - 97°C (Default 97°C)
Selectable mode	LIQUID, AGAR, SOLID, DISSOLUTION mode, (Three kinds of operating conditions can be set for each mode)		
Exhaust treatment	Vapor condensation by water cooling		
Drain bottle (when full)	Built-in 2 liter bottle (Indication lamp blinks when filled with water)		
Safety valve operating pressure	0.26 MPa		
Thermometer	5.0 - 137.9°C (Resolution: 0.1°C)		
Pressure gauge	Digital display: 0 - 0.3MPa, Analog display: 0 - 0.4MPa		
Safety devices	Pressure safety valve, Earth leakage and over current breaker, Low water cut off device, Error display (Boil-dry, Disconnection of temperature sensor wire, Over-temperature, Over-cooling, Over-pressure, Abnormality in the lid, Abnormality in the exhaust valve, Abnormality in the heater)		
Supplied accessories	Wire basket (HG-50 II : 2, HG-80 II : 3), Drain bottle, Bottom plate, Caster stopper(2), Support bracket and bolt (2)		
Power cord connection	Ring terminal (Plug is not attached)		
Medical device classification	Controlled medical device (Class II), Specifically designated maintenance medical device, (by Japan PAL)		

※When this autoclave is used in a place which is more than 800 m higher than sea level (low-pressure condition in a mountainous area), change of specifications is necessary. Please be sure to inform of it when inquiring.

Options

- Options:** 1) Floating sensor – measures the load temperature. (The sterilization timer begins counting only when the load temperature reaches the set temperature).
 2) Automatic water feeder
 3) Recorder
 4) 2kW heater for HG-50 II
 5) Digital Printer (for CE version)
 6) Pt 100Ω sensor (for CE version)
 7) Auto starter (for CE version)

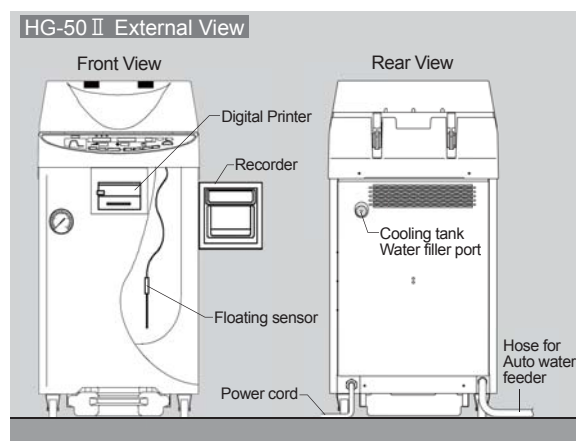
Optional Accessories



Mesh Wire Basket
338 φ x 220H mm
(inside dimension)

Pail with solid bottom
HG-50
330 φ x 185H mm
330 φ x 185H(perforated)
HG-80
330 φ x 270H mm
330 φ x 270H(perforated)

Basket with solid bottom
For HG-50
330 φ x 450H mm
For HG-80
330 φ x 690H mm



Specifications and appearance are subject to change without notice due to continuous product improvement.




Manufactured under
ISO 9001 / 13485

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Distributor :

Specifications

	HLM-36EF	HLM-36ELB
Outside dimension	W602 x D679 x H1064	
Inside dimension	Φ360 x D620 (Effective volume : 63 liters)	
Net weight (approx)	120kg	
Power supply (heat source)	AC200V Single phase 5kW (25A)	
Pressure vessel category	Small sized pressure vessel	
Chamber material	Stainless steel (SUS304)	
Sterilization temp. range	Mode 1 : 100 - 125°C Variable Mode 2 and 3 : 70 - 125°C Variable	Mode 1 : 105 - 134°C Variable Mode 2 and 3 : 105 - 125°C Variable
Sterilization timer	1 - 125 min. The remaining time is displayed	
F-value setting range	1 - 99 Addition system (Mode 1)	—
Cooling timer	10 - 250 min. The remaining time is displayed	
Programmable auto-start	Settable range: from 1 min. to 1 week The start time is set	
Operating mode	Mode 1 : Standby→Heating/Pressurization→Sterilization(Cooking)→F-value with F-value control →Shower cooling→Drainage→Completion Mode 2 and 3 : Standby→Heating/Pressurization→Sterilization(Cooking) →Shower cooling→Drainage→Completion	Mode 1 : Standby→Heating→Sterilization(Cooking)→Natural cooling→Warming→Completion Mode 2 : Standby→Heating→Sterilization(Cooking)→Shower cooling→Drainage→Completion Mode 3 : Standby→Heating/Pressurization→Sterilization(Pressure cooking) →Shower cooling→Drainage→Completion
Working pressure of safety valve	0.235MPa	
Thermometer	Chamber temp. : 5 - 129°C / Core temp. : 45 - 129°C	Chamber temp. : 5 - 136°C
Pressure gauge	0 - 0.4 MPa	
Clock	24-hour clock Date and time are alternately displayed	
Safety devices and alarms	Pressure safety valve, Earth leakage breaker, Low water cut off device Error display: Low water heating, Temperature sensor wire disconnection, Over temperature, Over pressure, Abnormality in the lid lock	
Supplied accessories	Adapter for pack (5), Packing for adapter (100), Gasket for adapter (5), Stainless steel wire basket (3) Bottom plate (1)	Stainless steel wire basket (3) Bottom plate (1)
Power supply terminal	Ring terminal 	

Installation requirements

- Power supply: AC200V, Single phase, 25A or more
- Water supply : Water supply port : 3/8" female thread
Connect it to the water supply facility having water pressure of 0.23-0.40MPa and flow rate of 6 ℓ / min or more
- Drainage : Drain outlet : 3/8" female thread
Connect it to drainage facility with a heat-resistant and pressure-resistant hose
※Exhaust and drainage are hot and high pressure, be careful of burns.
※Connect the hose so that exhaust and drainage are not disturbed.

* A crimp terminal is attached to the power cord. Please note that a plug is not supplied.
* When the apparatus is used at a place which is more than 800 m above sea level (low atmospheric condition in the mountainous area), please contact us or our distributor before using. The specification change is necessary.

Optional devices and accessories



① Printer
The elapsed time from a start, chamber temp. core temp. chamber pressure and F-value are printed. (With printer cable)

② Core-temperature sensor



Round wire basket (SUS)
① Φ330xH195 (I.D.)
② Φ330xH270 (I.D.)
※① standard



Bucket (SUS)
Φ330xH270 (I.D.)



Tray (SUS)
① Tray : type38
Φ320xH 38 (I.D.)
② Tray : type38
Φ320xH 38 (I.D.)
15 sets,
for standard basket
③ Tray : type48
Φ320xH 48 (I.D.)
④ Tray : type48
Φ320xH 48 (I.D.)
12 sets,
for standard basket

Specifications and appearance are subject to change without notice due to continuous product improvement.



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Distributor :



ISO 13485 CERTIFIED
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ISO 13485 certified.

Applicable to a wide range from High Temperature Vacuum Cooking to Retort Food Processing

Capable of heating, cooking and sterilizing foods while maintaining the good taste
As it is reliable food safety management with F-value control
Usable as a retort sterilizer as well as a high temperature vacuum cooker

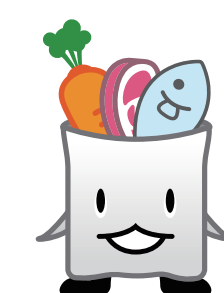


HLM-36EF
equipped with
F-value control



HLM series

HLM-36EF with F-value control
HLM-36ELB



Heating, Cooking and Sterilization
COMPACT RETORT COOKER

Usable for high temperature vacuum cooking as well as retort food processing
**STERILIZING
SIMPLY AND WELL**
HIRAYAMA

A variety of foods can be cooked easily with high-pressure steam generated in a pressure vessel !!

High temperature vacuum cooking or retort processing to develop and sell retort foods becomes possible at low cost



Foods are heated, cooked and sterilized while the delicious taste is kept

Suitable for small lot production.

Foods can be preserved for a long period, so it becomes possible to reduce the cost by selling products as scheduled.

The Purpose of this compact retort cooker is to manufacture the tasty food easily, such as the original food of local specialty, or sample food which is made in a food manufacturer.

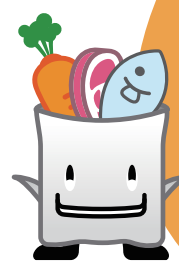
Advantages when this compact retort cooker is introduced

- Small lot production
- Manufacturing the original food products of local specialty
- Sample food production in a food manufacturer
- Developing the processed foods
- Developing the safe foods in which additives or preservatives is not used
- Long term preservation
- Reduction of disposal loss

Users

- Agricultural and livestock industry, Fishery industry, Household dish producer
- School food service provider, Lunch manufacturer
- Food service provider for hospitals, nursing homes, and medical care sanatoriums
- Hotel, Restaurant
- University, Cooking school, etc.

You can easily cook a variety of foods with this retort cooker



HLM-36EF
with F-value control

Setting F-value is easy, so the safe food supply is ensured.



Cooking procedure and mode selection

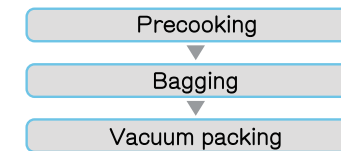
Once a mode is selected, cooking is performed automatically. User-friendly setting with microcomputer control.

HLM-36EF

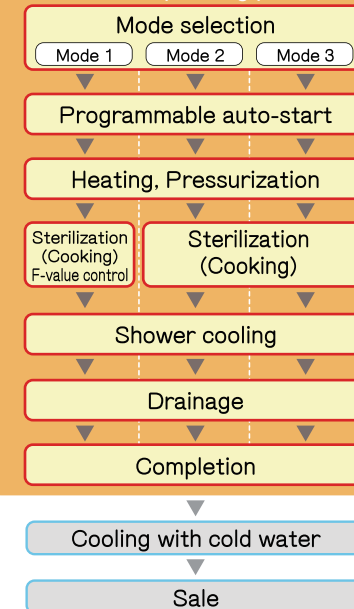
Setting F-value is easy. Food safety is secured.

with F-value control

Mode No.	Temperature setting range
Mode 1	100°C - 125°C
Mode 2 / Mode 3	70°C - 125°C



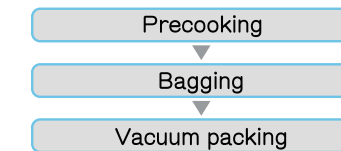
HLM-36EF Operating processes



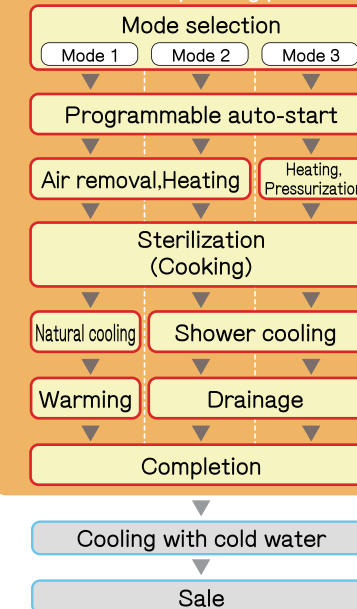
HLM-36ELB

All stages from pressurization to sterilization (cooking), cooling and warming are carried out automatically. The most appropriate apparatus for high temperature vacuum cooking.

Mode No.	Temperature setting range
Mode 1	105°C - 134°C
Mode 2 / Mode 3	105°C - 125°C



HLM-36ELB Operating processes



Cooked food samples

Original foods which were made easily by using high temperature vacuum cooking and retort processing



Indian curry (Retort pouch)



Boiled pork (Retort pouch)



Rice (Heat-resistant bag)

Features

► F-value control (HLM-36EF)

- F-value which is important for the retort sterilization is calculated and controlled.
- The sterilizing condition of retort foods is controlled safely with the simple setting.

About F-value

F-value shows the safety of retort foods. When the core-temperature of foods is kept at 121°C for one minute, F-value is assumed to be 1. The Food Sanitation Act in Japan prescribes that F-value of retort foods shall be 4 or more.

► Core-temperature sensor (HLM-36EF)

- The internal temperature of foods is measured with a core-temperature sensor and F-value is calculated and displayed.
- It is possible to terminate the sterilization (cooking) process when temperature of a core-temperature sensor reaches the target F-value. (In case of the Mode-1)
- It is possible to print data by connecting an optional printer.



Core-temperature sensor

The core temperature of a food pack is measured. When temperature reaches the set temperature, sterilization (cooking) is started.

► Functions and Features

- The appropriate pressure control and shower cooling prevent a retort pouch from being damaged.
- The equipment is controlled by microcomputer, so settings of temperature, time, F-value, etc. are easy.
- All stages from pressurization to sterilization (cooking), cooling and warming (HLM-36ELB only) are performed automatically.
- The vacuum cooking is performed safely by the equipped various safety mechanisms.
- When the optional printer is connected, data such as the elapsed time from a start, chamber temperature, core temperature, chamber pressure, F-value are printed.
- Compact design for space-saving and cost reduction
- Installation is completed by connecting the power supply source, water supply port and drainage port only.
- Qualifications to operate a boiler or pressure vessel are unnecessary.

Capacity

Pouch volume	Loading capacity (pouches)
250 - 300 cc	30 - 45P
400 - 500 cc	15 - 30P
1000 cc	15P



A wide opening for easy loading and unloading of objects



Wire basket (Standard, 3 pcs)



Tray (Option)

To a person who is interested in the advancement of primary industry

We recommend this retort cooker as one of the most useful food processing apparatus to a person who is engaged in the food manufacturing industry, agricultural industry or fishery industry, and is interested in the advancement of primary industry.

HICLAVE

HVE-50

New autoclave. Easy operation.

More safety and more user-friendly features!



6 Primary Features

1. Electromechanical lock system (patent pending).

By only using a one-touch lever, you can easily and safely open the lid chamber.

2. Dual-sensing interlock mechanism.

Safety system locks the lid by detecting the inner pressure and the temperature of the chamber. This dual-sensing system assures greater safety.

3. Pulse Exhaust System.

This is for safe and quick sterilization of liquids. Pulse Exhaust System enables the chamber to exhaust quickly so that culture media can be cooled down and can be removed without the risk of boiling over.

4. Memory function (Program your own).

You can change the parameters for sterilization. Once changed, they are retained. You can start simply.

5. Space-saving design.

The chamber lid opens vertically upwards. This design saves space compared to models in which the lid swings out horizontally.

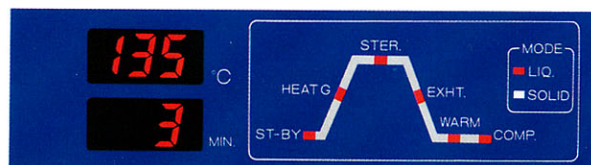
6. Process status display.

The current status of the sterilization process is indicated by means of a set of flashing lights.

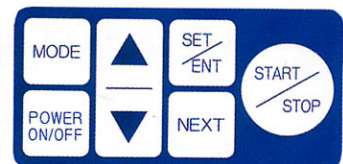


Products shown in this brochure are manufactured by the company, ISO 9001 certified

[Display]



[HVE-50]



HICLAVE HVE-50

◎Main specifications

Model No.	HVE-50	
Product name	"HICLAVE" Autoclave	
Outer Dimensions (Height with lid open)	540W×1040H×530Dmm (1370Hmm)	
Chamber size (Capacity)	300φ×710Dmm (50ℓ)	
Power source	AC110V/120V/220V/230V/240V, 50/60Hz (Please specify voltage when ordering)	
Power consumption	2.0KW	
Net weight (approx.)	57kg	
Sterilization temperature range	105 to 135℃	
Maximum allowable pressure (Gauge pressure)	0.26Mpa	
Temperature display range	5 to 137℃	
Warming temperature range	45 to 60℃	
Chamber material	Stainless steel (SUS304)	
Sterilization timer	1 to 250 minutes	
Pressure gauge	0 to 0.4 Mpa	
Selective mode	Sterilization of agar (with Warming)	Preparation ⇨ Heating ⇨ Sterilization ⇨ Exhaust ⇨ Warming ⇨ Completion (pulse)
	Sterilization of liquids:	Preparation ⇨ Heating ⇨ Sterilization ⇨ Exhaust ⇨ Completion (pulse)
	Sterilization of solids/ medical instruments	Preparation ⇨ Heating ⇨ Sterilization ⇨ Exhaust ⇨ Completion
Safety devices/ Warning alarms	<ul style="list-style-type: none"> * Double sensing inter lock mechanism * Over-pressure power cut-off * Over-temperature power cut-off * Sterilizing time counting timer * Heater malfunction checker * Temperature sensor wire breakage detector * Securely closed lid check function * Exhaust bottle ready-to-use check system * Lack-of-water prevention device Electric leakage breaker and over current detector Pressure safety valve (Note: The * marked functions show ERROR indication on the display when it works) 	
Standard accessories	Stainless steel wire baskets, Heater cover, Drain hose, Exhaust bottle, Caster stoppers.	
Optional accessories	Stainless steel wire baskets, Stainless steel buckets.	

※ Chart recorder is an option.

* Specifications subject to change without notice due to continuous improvement.



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