

*Debut of a new autoclave with outstanding features*

**HI CLAVE**  
**HG-II series**

HG-50 II / HG-80 II



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

STERILIZING  
SIMPLY AND WELL

**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)

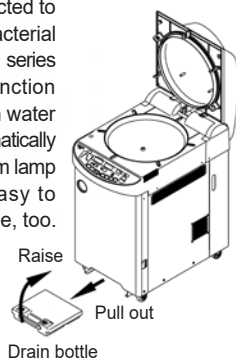
This function is useful when sterilizing a Durham tube, etc.

## 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.

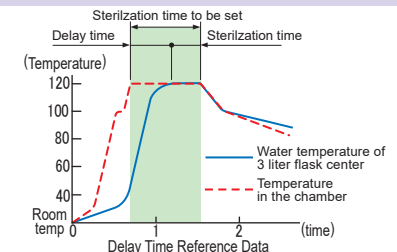
## Point for perfect sterilization

●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



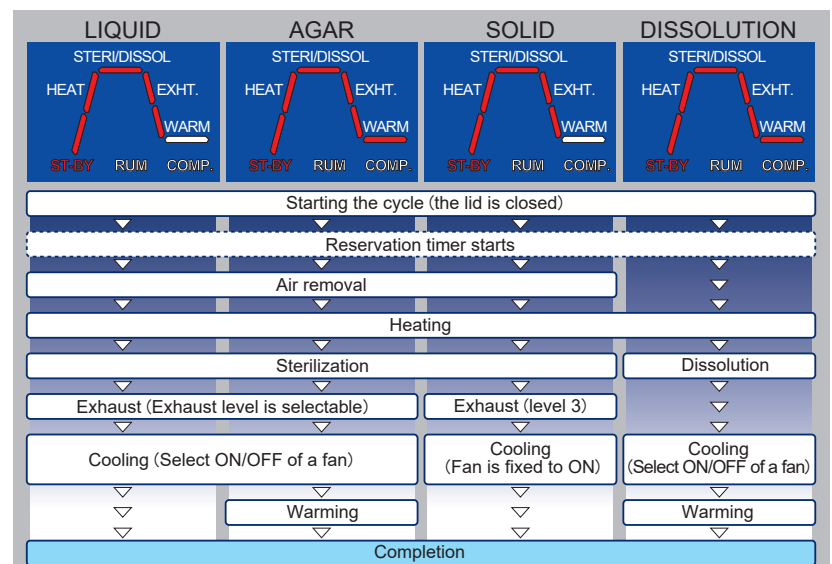
## Large operation panel

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	W455 x D691 x H890 mm	W455 x D691 x H1030 mm
Chamber size (Volume)	Φ364 x H482 mm (Effective volume 50.2 liter)	Φ364 x H730 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  
 6) Pt 100Ω sensor  
 7) Auto starter

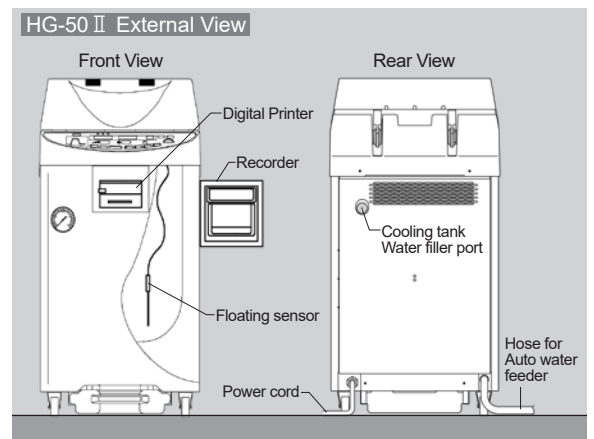
## Optional Accessories



Mesh Wire Basket  
 φ 338xH220 mm  
 (inside dimension)

Pail with solid bottom  
 HG-50  
 φ 330xH185 mm  
 φ 330xH185(perforated)  
 HG-80  
 φ 330xH270 mm  
 φ 330xH270(perforated)

Basket with solid bottom  
 For HG-50  
 φ 330xH450 mm  
 For HG-80  
 φ 330xH690 mm



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



ISO 13485 CERTIFIED  
 Manufactured under  
 ISO 13485

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