Large Steam Sterilizers

Touch & Graphic LCD type

SINCE 1975
HANSHIN MEDICAL CO., LTD.

HANSHIN MEDICAL

The Leading Company of Sterilizers

Research and Development to cherish Human Life, Quality Innovations to practice Social Contribution !

We have been strictly conforming to the relevant international standards including Medical Device Directive (MDD 93/42/EEC) and Quality System Standards (EN ISO 13485) designing and manufacturing the medical sterilizers for several decades and guaranteeing their excellence of quality to our customers by obtaining the CE mark certificate from the reliable certificate authorities in the world such as TÜV NORD for every new developed products.

*The large steam sterilizers of **HANSHIN MEDICAL** are designed and manufactured to comply with the following international directives and standards :*

Medical Devices Directive (MDD 93/42/EEC)

Pressure Equipment Directive (PED 2014/68/EU) (below 350 liters)

CE Medical Device Mark 0044, TÜV NORD CERT GmbH, Germany (PT & SL Series)

EN ISO 13485 : 2016, TÜV NORD CERT GmbH, Germany

EN ISO 14971 : 2019, Risk Management to Medical Devices

European Standard, Safety (EN 61010-1/ EN 61010-2-040)

European Standard, EMC (EN 61326-1)

European Standard, Large Steam Sterilizers (EN 285)

KS, Korea Industrial Standards

KGMP, Korea Good Manufacturing Practice

From Technology to Quality !

EN ISO 13485. KGMP Certified Company

Group A

Pre-vacuum & Gravity Air Removal

Touch Screen LCD type Steam Sterilizer

- HS-2000R / 1500R / 1000R / 700R
- HS-5035R

Group B

Pre-vacuum & Gravity Air Removal

Automatic Sliding Door_Touch Screen LCD type Steam Sterilizer

- HS-5035PT/ 5025PT

Graphic LCD type Steam Sterilizer

- HS-5035 / 5020

Group C

Gravity Air Removal

Digital LED Display type Steam Sterilizer

- HS-5020G

Group D

First Vacuum Air Removal

Graphic LCD type Steam Sterilizer

- HS-85SL / 60SL

Large Steam Sterilizer

Touch Screen LCD type STEAM STERILIZER _ *Pre-vacuum & Gravity Air Removal*

Easy operation and control of sterilizer with light one-touch on Touch Screen LCD monitor.

Easy and convenient operation and control with various cycles and self-diagnostic program.

Cycle execution information of past 11 years can be retrieved at any time as needed.

Remarkable water saving by highly efficient water saving equipment.

These sterilizers use the saturated vapor under high pressure as sterilizing agent supplied from an external steam generator(e.g. building steam supply system) and are the large sterilizers able to sterilize a lot of medical instruments and devices, bulky medical supplies at once. They are equipped with a powerful vacuum system comprised of the water pump, water ejector and heat exchanger, thus the performance of air removal in the chamber and from the loads to be sterilized is excellent, so the sterilizing power and load dryness are enhanced further. They are also less noisy during sterilizing process and durable since strong structurally.

It can easily operate and control all operation of the sterilizer on the touch screen monitor in a one-touch manner. It displays the operation status of the sterilizer in real time automatically and visualizes it, so it can process operation error or trouble quickly.

6 kinds of basic cycle program and 2 kinds of test program are embedded in the sterilizer, moreover user can set program at user' s pleasure and it means that operators can sterilize the variable loads at the optimum condition in any circumstances.

As a unique feature of our sterilizer, at least 11 years of cycle execution records are automatically stored on the SD(secure digital) memory card of the control unit. The user can search and check the results of a cycle performed in the past by input the date performed or cycle count number on the touch screen, and print out the record by the built-in panel printer for using as an evidence data of sterilization quality.

The user can save a considerable amount of water compared to the conventional water consumption amount by installing the newly developed water-saving equipment(option) and reusing the water that has been drained to the outside during the sterilization process. (technology patented)

The double door type sterilizers are able to structurally prevent recontamination because of taking out the sterilized items from the chamber by opening only the rear door in the clean area completely isolated by the bio-seal device with the front door locked.


HS-2000R


HS-1500R


HS-1000R


HS-700R

Touch Screen type Steam Sterilizer Control System

Functions

1. **Program Selection** :
   Various cycle program is embedded in the sterilizer for convenient and easy operating.
   - Basic cycle program (6 programs)
   - Test cycle program (2 programs: Bowie-Dick test, Vacuum leak test)
   - User cycle program (programs can be stored)

2. **Maintenance management** : Self-diagnosis function for the sensors and operating parts.
   - Monitoring for the valves of piping system in real time and displays their operating state graphically.
   - Monitoring for the temperature and pressure of each process in real time and displays them graphically.

3. **Error management** : Monitoring for the error occurrence in real time during operating and displays the error code on the screen, accompanying an audible alarm automatically by the self-diagnosis program, and the information about error is saved for searching the operation history.

4. **Changing and saving (initialize, change, add etc.) of the cycle parameters.**

5. **Searching of the history for the performed sterilization cycle**
   (automatic backup function in the SD card)
   - Searching of the cycle performance record and total numbers of performed cycle.
   - Monitoring of the cycle graph in real time and recording.

6. **Monitoring of the cycle progress**
   (initial, ready, condition, sterilization, exhaust, dry, completion) in real time.

7. **Displaying of the messages** for each process during cycle progressing on the screen.

8. **Displaying of the actual temperature, pressure** in real time on the screen.

9. **Displaying of the present state of chamber door**
   (open, close, lock) on the screen.

10. **Storage** : 2GB of SD memory card (available maximum 4GB)

Large Steam Sterilizer

Touch Screen LCD type STEAM STERILIZER

Pre-vacuum & Gravity Air Removal

HS-2000R/1500R/1000R/700R

Radial Steel Levers Door type - (Front Side)

- Medicine pouches, retort pouch products for food
- Glass bottles, molded containers, canned products
- Blister package products such as contact lenses and medicines etc.

DOUBLE DOOR type

SINGLE DOOR type

- All textiles and metal utensils can be sterilized, so the efficiency of the equipment is high.
- It is highly reliable in sterilization performance because it is manufactured by applying strict European standards.
- Equipped with various sterilization chamber volumes to enhance user selectivity.
- All retort pouch products sterilized at 110℃ do not deteriorate for a long time even at room temperature.
- Optimum pressure control minimizes cooling time while preventing packaging from bursting or deforming.
- Equipped with a dedicated cycle program for perfect and safe sterilization of retort pouches and various molded packaging products.

HS-2000R HS-1500R HS-1000R HS-700R

Touch Screen LCD type STEAM STERILIZER _ *Pre-vacuum & Gravity Air Removal*

Feature

- High-pressure saturated steam supplied from the outside is used as a sterilization medium, and various retort pouches and blister package products are safely sterilized without damage through a cycle program dedicated to retort.
  In addition, 5 types of basic cycle programs that can sterilize general medical equipment are built-in, and the user can arbitrarily set and sterilize the program according to various situations, so the equipment's effectiveness is high.
- The sterilization process is fully automatically controlled by the microprocessor, and the sterilizer can be easily operated and controlled while viewing the progress of the sterilization cycle directly on the touch screen type color LCD monitor.
  The built-in self-diagnosis program monitors the operation status of the sterilizer in real time and automatically takes safety measures such as sound alarm, cycle stop, and error message display when an abnormality occurs during operation, so that operation errors or malfunctions can be dealt with promptly.
- The touch screen type color LCD allows the user to operate the sterilizer easily by light touching the screen buttons and realizes delicate graphic display.
- As a unique feature of our sterilizer, at least 11 years of cycle execution records are automatically stored in the Flash memory of controller. The user can automatically retrieve the result of the sterilization cycle that was executed in the past as needed and print the contents with the panel printer mounted on the sterilizer, and use the result as an evidence of sterilization quality.
- By printing cycle execution data such as temperature and pressure, sterilization time, drying time, and error by hour in the sterilization process with a panel printer, it can be stored and referred to as sterilization quality data.
- The temperature and pressure are controlled automatically to be suitable for the sterilization condition, their changing values through cycle progressing are displayed on the screen in real time by graph, and saved in the memory device.
- The operating status is diagnosed, displayed and stored in real time, so that an operation error or a trouble can be recovered rapidly.
- The standard language displayed on the screen is Korean language and English (another language can be provided as an optional specification).

Cycle Program

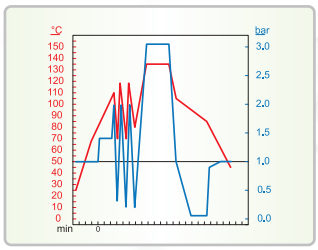
Item	Basic Cycle Program						Test Cycle Program	
Cycle No.	P1	P2	P3	P4	P5	P6	Bowie-Dick Test	Vacuum Leak Test
Exposure Temp.	134℃	134℃	134℃	121℃	121℃	121℃	134℃	134℃
Air Removal	Vacuum	Gravity			Gravity		Vacuum	
Load Type	Wrapped	Wrapped	Non-wrapped	Non-wrapped	Non-wrapped / Liquid	Wrapped / Liquid	Test Pack	N/A
Exposure Time	5 min	15 min	15 min	30 min	30 min	30 min	3.5 min	Dwell : 5 min Test :10 min
Dry Time	15 min	15 min	-	-	-	-	-	
Cooling Time	-	-	-	-	30 min	-	-	

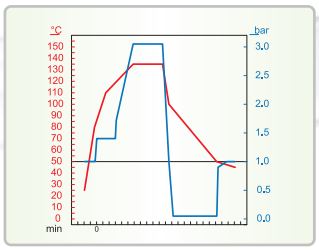
Self-Diagnosis Program

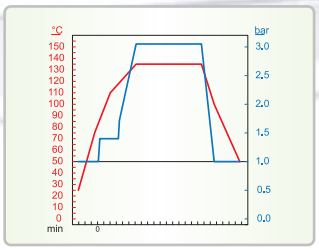
When an abnormality has occurred during operation of the sterilizer, the self-diagnosis program built in the control unit detects it and displays the corresponding error code on the screen with an alarm and stops the cycle in progress automatically for the safety in the workplace.

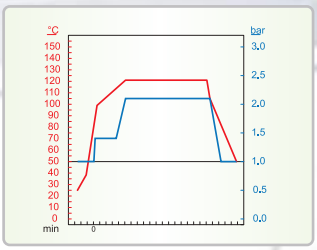
Cycle Graph

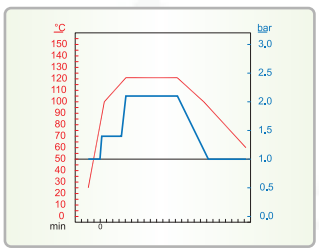
: PRESSURE
: TEMPERATURE

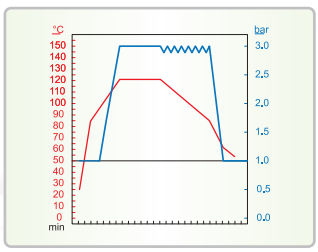

Cycle P1 (Prevacuum Wrapped)

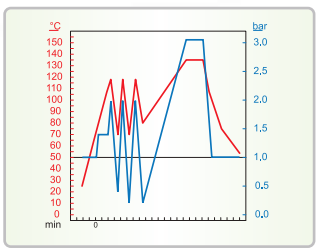

Cycle P2 (Gravity Wrapped)

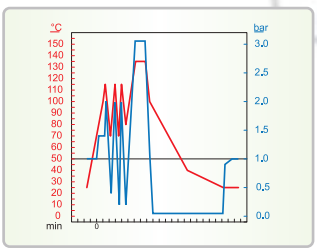

Cycle P3 (Gravity Unwrapped)


Cycle P4 (Gravity Unwrapped)


Cycle P5 (Unsealed Liquid)


Cycle P6 (Sealed Liquid)


Bowie-Dick Test


Vacuum Leak Test

Specifications

Model	HS-2000R		HS-1500R	
Style	Single Door	Double Door	Single Door	Double Door
Overall Size	W1,875 x D2,144 x H1,971 mm	W1,875 x D2,462 x H1,971 mm	W1,385 x D2,280 x H1,894 mm	W1,385 x D2,582 x H1,894 mm
Chamber	W1,067 x D1,676 x H1,219 mm, Vol: 2,180 ℓ, Material: STS 316L		W680 x D1,850 x H1200 mm, Vol: 1,510 ℓ, Material: STS 316L	
Door Operation	Power(Automatic) Operation / Manual Operation			
Loading Unit	Loading Car : W980 x D1,470 x H1,120 mm Transfer Carriage : W780 x D1,820 x H1,032 mm		Loading Car : W600 x D1,735 x H1,072 mm Transfer Carriage : W560 x D2,126 x H 986 mm	
Operating Temp.	110.0℃ ~ 135.0℃			
Air Removal Method	Vacuum / Gravity			
Controls	Microprocessor			
Display	Touch Screen type Color LCD			
Panel Printer	Direct Thermal Printing type, Printing Paper Roll: W58 x Ø40 mm, (length: 13 m)			
Power Source	AC 230V, 1ph, 50/60Hz, 15A			
Steam Source	Saturated Steam (Dry Rate: more than 97%), Pressure: 3.50 ~ 5.00bar, Connection Pipe: Unit Side 1″ FPT, Facility Side 1-1/4″ FPT			
Water Source	Soft Water less than 20℃, Pressure: 2.10 ~ 5.00bar, Connection Pipe: Unit Side 1″ FPT, Facility Side 1-1/4″ FPT			
Air Removal Equip.	Water Ejector & Water Pump			
Drainage	Connection Pipe: Unit Side 1-1/2″ FPT, Exclusive Drainage: 3″ MPT (Metallic Pipe)		Connection Pipe: Unit Side 1-1/2″ FPT, Exclusive Drainage: 2″ MPT (Metallic Pipe)	
Net Weight	Unit: 3,200 kg Loading Car: 108 kg x 1 Carriage: 70 kg x 1	Unit: 3,500 kg Loading Car: 108 kg x 1 Carriage: 70 kg x 2	Unit: 2,212 kg Loading Car: 94 kg x 1 Carriage: 62 kg x 1	Unit: 2,712 kg Loading Car: 94 kg x 1 Carriage: 62 kg x 2
Environment Conditions (IEC 61010-1)	* Altitude up to 2,000 m. * Temperature range of +5℃ to +40℃. * Maximum relative humidity of 80% for temperature up to 31℃ decreasing linearly to 50% relative humidity at 40℃. * Main supply voltage fluctuation of ±10% of nominal. * Installation Category (Overvoltage Category) II, Pollution Degree: 2.			

Model	HS-1000R		HS-700R	
Style	Single Door	Double Door	Single Door	Double Door
Overall Size	W1,385 x D1,705 x H1,894 mm	W1,385 x D2,036 x H1,894 mm	W1,255 x D1,652 x H1,880 mm	W1,255 x D1,984 x H1,880 mm
Chamber	W680 x D1,286 x H1200 mm, Vol: 1,049 ℓ, Material: STS 316L	W680 x D1,316 x H1200 mm, Vol: 1,073 ℓ, Material: STS 316L	W610 x D1,286 x H914 mm, Vol: 717 ℓ, Material: STS 316L	W610 x D1,316 x H914 mm, Vol: 734 ℓ, Material: STS 316L
Door Operation	Power(Automatic) Operation / Manual Operation			
Loading Unit	Loading Car : W600 x D1,200 x H1,072 mm Transfer Carriage : W560 x D1,490 x H 986 mm		Loading Car : W525 x D1,200 x H 822 mm Transfer Carriage : W485 x D1,490 x H1,170 mm	
Operating Temp.	110.0℃ ~ 135.0℃			
Air Removal Method	Vacuum / Gravity			
Controls	Microprocessor			
Display	Touch Screen type Color LCD			
Panel Printer	Direct Thermal Printing type, Printing Paper Roll: W58 x Ø40 mm, (length: 13 m)			
Power Source	AC 230V, 1ph, 50/60Hz, 15A			
Steam Source	Saturated Steam (Dry Rate: more than 97%), Pressure: 3.50 ~ 5.00bar, Connection Pipe: Unit Side 3/4″ FPT, Facility Side 1″ FPT			
Water Source	Soft Water less than 20℃, Pressure: 2.10 ~ 5.00bar, Connection Pipe: Unit Side 1″ FPT, Facility Side 1-1/4″ FPT			
Air Removal Equip.	Water Ejector & Water Pump			
Drainage	Connection Pipe: Unit Side 1-1/4″ FPT, Exclusive Drainage: 2″ MPT (Metallic Pipe)		Connection Pipe: Unit Side 1″ FPT, Exclusive Drainage: 2″ MPT (Metallic Pipe)	
Net Weight	Unit: 1,656 kg Loading Car: 58 kg x 1 Carriage: 52 kg x 1	Unit: 2,279 kg Loading Car: 58 kg x 1 Carriage: 52 kg x 2	Unit: 1,306 kg Loading Car: 46 kg x 1 Carriage: 56 kg x 1	Unit: 1,790 kg Loading Car: 46 kg x 1 Carriage: 56 kg x 2
Environment Conditions (IEC 61010-1)	* Altitude up to 2,000 m. * Temperature range of +5℃ to +40℃. * Maximum relative humidity of 80% for temperature up to 31℃ decreasing linearly to 50% relative humidity at 40℃. * Main supply voltage fluctuation of ±10% of nominal. * Installation Category (Overvoltage Category) II, Pollution Degree: 2.			

Touch Screen LCD type STEAM STERILIZER _ *Pre-vacuum & Gravity Air Removal*

Feature

Touch Screen Panel

This panel allows the user to operate and control the sterilizer by one-touch manner, and to monitor a cycle progress through the LCD screen.

Chamber / Jacket Pressure Gauge

This gauge displays the actual pressure of the chamber and jacket during operation.

Water in / Steam in Pressure Gauge

This gauge displays the actual pressure of the water and steam supplied from the sources during operation.

Control Box

The control device plays an important role like the brain of the sterilizer, so if it does not respond quickly, it will cause a huge disruption to hospital work. The control box of this sterilizer is a compact component that can be replaced quickly and conveniently.

Air Filter

The bacteria-retentive filter which can filter out 99.999% of 0,3㎛ particles filters the outside air introduced into the chamber during the venting and drying process, and prevents the sterilized items from recontamination in the chamber by the bacteria in the air.

Exhaust & Vacuum System

The sterilizer performs sterilization(pre-vacuum) and drying(post-vacuum) process rapidly and effectively by the vacuum system composed of the water pump, ejector and heat exchanger. This vacuum system accomplishes powerful vacuum performance and minimizes noise and troubles occurred during progressing the vacuum process.

Door Driving Unit

The power door driving unit is consisted of the open/close and lock/unlock devices and is operated automatically by using the 〈POWER DOOR〉 or the 〈START/STOP〉 key except the case of operating manually using the hand wheel. Door locking is accomplished by the radial steel levers installed in the door plate, chamber sealing and safety during sterilizing is excellent. If the power door is out of order or power failure during operating, the operator can operate the door manually without any special tool or procedure by using the hand wheel.

Loading Equipment

The loading equipment consists of the loading car and transfer carriage. The loading car is placed on the rails of the transfer carriage, and the items to be sterilized are loaded on the shelf, and can be moved or loaded in the chamber by dragging or pushing it by people. It is made of stainless steel and has excellent corrosion resistance. The height of transfer carriage and shelves of loading car can be adjusted as necessary.

Panel Printer

The built-in panel printer prints out the two types of cycle data performed for a reference or evidence of the sterilized loads, the one is the "Temperature and Pressure Graph" which is drawn the changes of temperature and pressure inside chamber during progressing a cycle, and the other is the "Cycle Performance Record" which is the total data of cycle process described by letter such as the required time of each phase, the change of temperature and pressure etc.

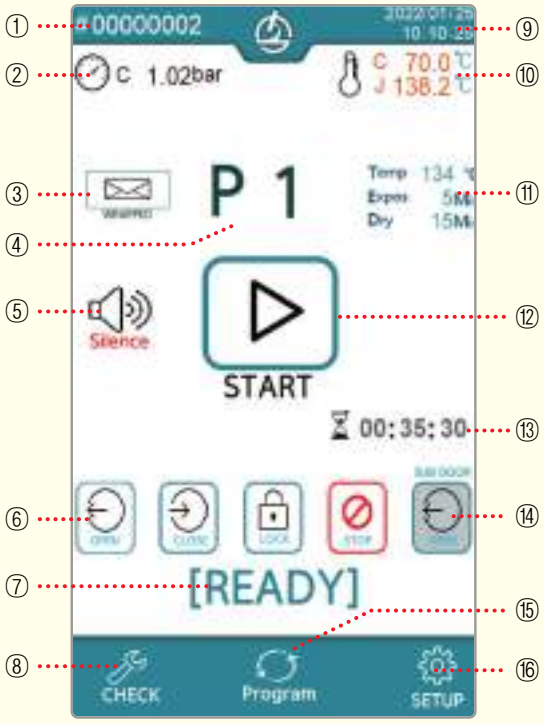
Touch Screen LCD type STEAM STERILIZER _ *Pre-vacuum & Gravity Air Removal*

Control Panel

The control system with a built-in microprocessor controls all programs automatically including sterilization cycle, digital display, self-diagnosis and record printing.

- *The control system is highly compact and the cycle process including condition, sterilize, venting, drying, completion, printing and door unlock is progressed automatically after the chamber door has been locked.*
- *The actual temperature, pressure, time etc. are measured automatically, controled and displayed by numeric during operation of the sterilizer.*
- *The RTC(real time clock) driven by its own backup battery keeps displaying the present year, month and time during power failure.*
- *If a cycle in progress is aborted due to power failure or cut off the power forcibly, the cycle would be continued in succession from the stopped process after restoring power supplying by the resume function of sterilizer. But the change of pressure, temperature etc. while cycle stop may cause an error occurrence after power restoration.*

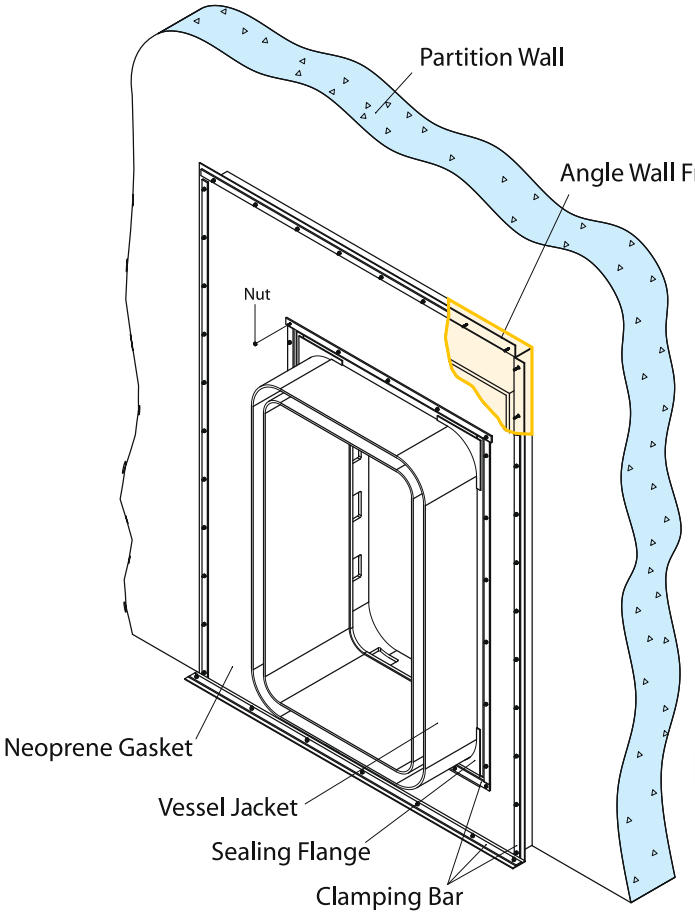
Touch Screen

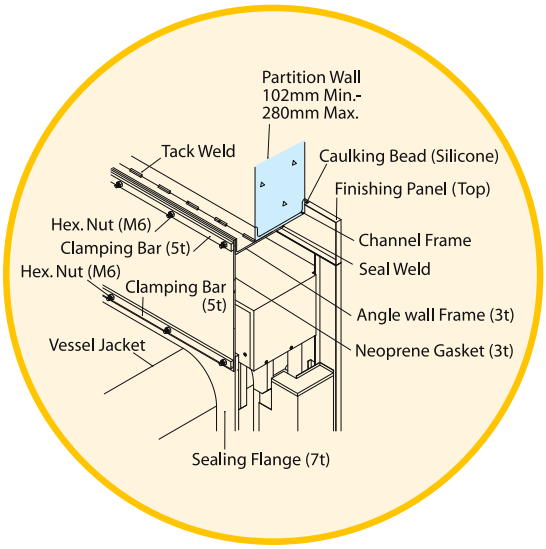


No.	Name	Function
①	Cycle Count Indication	The total number of cycle times is displayed.
②	Pressure Indication	The actual chamber pressure is displayed.
③	Load Type	The load type is displayed according to the selected cycle program.
④	Cycle Program Number Indication	The currently selected cycle program is displayed.
⑤	〈Silence〉 Button	It is used for stopping an alarm sound.
⑥	〈Main Door〉 Button	It allows the user to change the status of door.
⑦	Cycle Progressing Indication	The currently progressing cycle phase is displayed.
⑧	〈Check〉 Button	It allows the user to check the maintenance status and cycle history.
⑨	Date & Time Indication	The current date and time is displayed.
⑩	Temperature Indication	The actual temperature of jacket and chamber are displayed.
⑪	Cycle Program Indication	The parameters of selected cycle program are displayed.
⑫	〈START/STOP〉 Button	It starts the selected cycle or stops it in progress.
⑬	Cycle Remaining Time Indication	The expected remaining time of a cycle is displayed while running.
⑭	Sub Door Status Icon	For the double door type sterilizer, the currently sub door(rear side, clean area) status is indicated.
⑮	〈Program〉 Button	It allows the user to set and save a user' s cycle program by selecting a basic cycle program.
⑯	〈Setup〉 Button	It is used for resetting the operating parameters of sterilizer.

Bio-Seal Device for Double Door Steam Sterilizers

- For the double door steam sterilizer used in hospitals, research institutes, pharmaceutical companies and other industrial facilities, it is necessary to separate the work area to control biohazard stringently. The Bio-Seal Device is a system of intercepting the route of contamination for the sterilized medical devices in conjunction with the Door Interlock Device. For less stringent applications, only the Door Interlock Device may be used.
- The Bio-Seal Device is installed at the non-operating end of the sterilizer as a biological barrier to prevent the transmission of airborne microorganisms through the gap between the vessel and the partition wall. The gap between the sealing flange and the partition wall is filled with the heat-resistant neoprene gasket. Both edges of the gasket are fitted to the sealing flange and wall and fixed with a clamping bar.
- The Door Interlock Device prevents the transmission of airborne microorganisms or particular matters from one work area to another through the chamber. As the both doors, the front and the rear, of the sterilizer are not opened simultaneously, the air circulation between the contaminated area(loading area) and the clean area(unloading area) is blocked. While the front door is opened or the sterilizing cycle is in progress, the rear door is not opened. The rear door is opened only after the cycle is completed successfully, then the operator can take out the items sterilized from the chamber.





Large Steam Sterilizer

Touch Screen LCD type STEAM STERILIZER

Pre-vacuum & Gravity Air Removal

HS-5035R

- Medicine pouches, retort pouch products for food
- Glass bottles, molded containers, canned products
- Blister package products such as contact lenses and medicines etc.

Cycle Program

Item	Basic Cycle Program						Test Cycle Program	
Cycle No.	P1	P2	P3	P4	P5	P6	Bowie-Dick Test	Vacuum Leak Test
Exposure Temp.	134℃	134℃	134℃	121℃	121℃	121℃	134℃	134℃
Air Removal	Vacuum	Gravity			Gravity		Vacuum	
Load Type	Wrapped	Wrapped	Non-wrapped	Non-wrapped	Non-wrapped / Liquid	Wrapped / Liquid	Test Pack	N/A
Exposure Time	5 min	15 min	15 min	30 min	30 min	30 min	3.5 min	Dwell : 5 min Test :10 min
Dry Time	15 min	15 min	-	-	-	-	-	
Cooling Time	-	-	-	-	30 min	-	-	

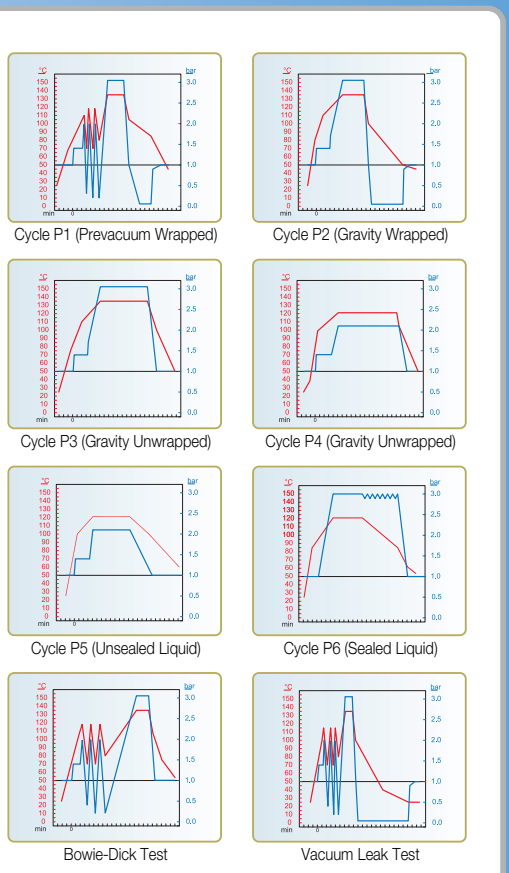
- All textiles and metal utensils can be sterilized, so the efficiency of the equipment is high.
- It is highly reliable in sterilization performance because it is manufactured by applying strict European standards.
- All retort pouch products sterilized at 110℃ do not deteriorate for a long time even at room temperature.
- Optimum pressure control minimizes cooling time while preventing packaging from bursting or deforming.
- Equipped with a dedicated cycle program for perfect and safe sterilization of retort pouches and various molded packaging products.

Front Side

Rear Side

Cycle Graph

: PRESSURE
: TEMPERATURE



Cycle P1 (Prevacuum Wrapped)

Cycle P2 (Gravity Wrapped)

Cycle P3 (Gravity Unwrapped)

Cycle P4 (Gravity Unwrapped)

Cycle P5 (Unsealed Liquid)

Cycle P6 (Sealed Liquid)

Bowie-Dick Test

Vacuum Leak Test

Specifications

Model	HS-5035R	
Style	**Single Door**	**Double Door**
Overall Size	W872 x D1,300 x H1,971 mm	W872 x D1,350 x H1,973 mm
Chamber	W500 x D1,000 x H700 mm, Vol: 350ℓ, Material: STS 316L	
Door Operation	Power(Automatic) Operation / Manual Operation	
Loading Unit	Loading Car : W460 x D 950 x H 598 mm Transfer Carriage : W450 x D1,453 x H1,143 mm	
Operating Temp.	110.0℃ ~ 135.0℃	
Air Removal Method	Vacuum / Gravity	
Controls	Microprocessor	
Display	Touch Screen type Color LCD	
Panel Printer	Direct Thermal Printing type, Printing Paper Roll: W58 x Ø40 mm, (length : 13 m)	
Power Source	Built-in Steam Generator : AC 230V, 3phase 3wire, 50/60Hz, 55A or AC 380V, 3phase 4wire, 50/60Hz, 32A	
	Use External Steam : AC 230V, 50/60Hz, 10A	
Steam Source	Saturated Steam (Dry Rate: more than 97%), Pressure: 3.50 ~ 5.00bar, Connection Pipe: Unit Side 1/2″ FPT, Facility Side 3/4″ FPT	
Water Source	Soft Water less than 20℃, Pressure: 2.10 ~ 5.00bar	
Air Removal Equip.	Water Ejector & Water Pump	
Drainage	Connection Pipe: Unit Side 3/4″ FPT, Exclusive Drainage: 2″ MPT (Metallic Pipe)	
Net Weight	803 kg	982 kg
Environment Conditions (IEC 61010-1)	* Altitude up to 2,000 m. * Temperature range of +5℃ to +40℃. * Maximum relative humidity of 80% for temperature up to 31℃ decreasing linearly to 50% relative humidity at 40℃. * Main supply voltage fluctuation of ±10% of nominal. * Installation Category (Overvoltage Category) Ⅱ, Pollution Degree: 2.	

Large Steam Sterilizer

Touch Screen LCD type STEAM STERILIZER

Pre-vacuum & Gravity Air Removal

HS-5035PT/5025PT

Automatic Vertical Sliding Door - (Front Side)

Double Door - Front View

- *A New Selection for Large Steam Sterilizer*
- *Realization of Ergonomic Design Maximizing User Safety and Convenience*

Touch Screen for Convenient Operating

Operation of the sterilizer is very easy and convenient with the touch screen buttons, and the state of cycle progressing can be monitored in real time on the LCD monitor.

Full Automatic Vertical Sliding Door

The door operates up and down automatically by a motor, and the upper and lower limits of open and close is detected and controlled by the limit switch and the stopper, the door gasket seals the sterilization chamber airtightly.

Convenient Loading Equipment

The loading equipment is consisted of the transfer carriage and loading car, the loading car is put on the transfer carriage rail and fixed with the carriage. The loading car containing the items to be sterilized is loaded inside chamber conveniently by pushing it slightly along the chamber rail after adjusting the height of loading car horizontally with the chamber rail.

Preventive Safety Devices

Preventive safeguards such as chamber overpressure relief valve, boiler over temperature thermostat, door interlock pressure switch, circuit breakers for controller are all fitted to ensure safety of operators and work places when operating the sterilizer.

Panel Printer of Thermal Printing type

The built-in panel printer prints out the cycle performance record for analysing the results of sterilization after completing the cycle, and is used for the evidence of the sterilization quality.

Touch Screen LCD type STEAM STERILIZER _ *Pre-vacuum & Gravity Air Removal*

Feature

- The touch screen type color LCD allows the user to operate the sterilizer easily by light touching the screen buttons and real time situation of cycle in progress can be conveniently monitored.
- As a unique feature of our sterilizer, at least 11 years of cycle execution records are automatically stored in the Flash memory of controller. The user can automatically retrieve the result of the sterilization cycle that was executed in the past as needed and print the contents with the panel printer mounted on the sterilizer, and use the result as an evidence of sterilization quality.
- The user can open and close the sliding type automatic door smoothly up and down at a time by one-touch the screen button, thus making it much more convenient and safer than conventional large-volume sterilization, and saving the space required for installing a sterilizer.

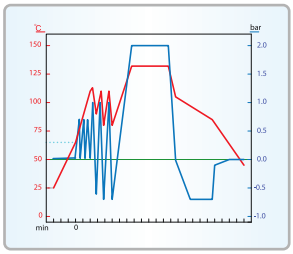
Cycle Program

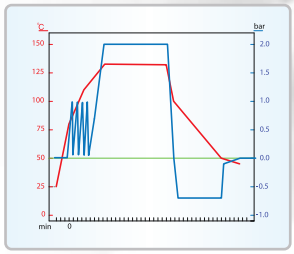
Item	Basic Cycle Program					Test Cycle Program	
Cycle No.	P1	P2	P3	P4	P5	Vacuum Leak Test (L.T)	Bowie-Dick Test (B.D)
Air Removal	Vacuum	Gravity				Vacuum	
Load Type	Wrapped		Non-wrapped		Liquid	N/A	Test Pack
Exposure Temp.	134℃	134℃	134℃	121℃	121℃	134℃	134℃
Exposure Time	5 min	15 min	15 min	30 min	30 min	3 min	3.5 min
Dry Time	5 min	15 min	-	-	-	Dwell : 5 min Test :10 min	-
Cooling Time	-	-	-	-	30 min		

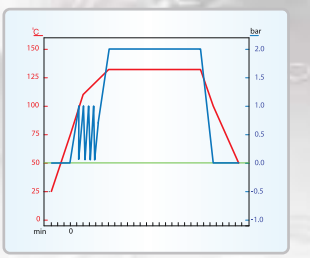
Self-Diagnosis Program

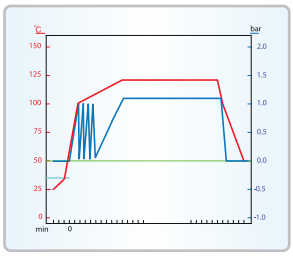
If a trouble has occurred during progressing a cycle, the error code is displayed on the touch screen monitor, an audible alarm is generated and the cycle in progress is aborted automatically by the self diagnostic program for the safety.

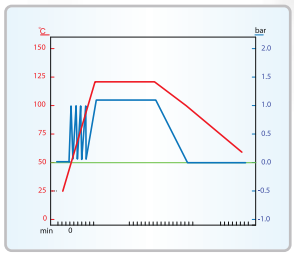
Cycle Graph

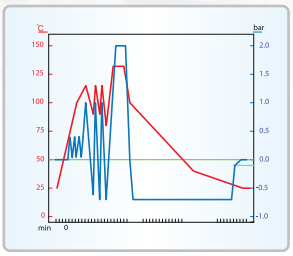

Cycle No.1 Pre-Vacuum Wrapped

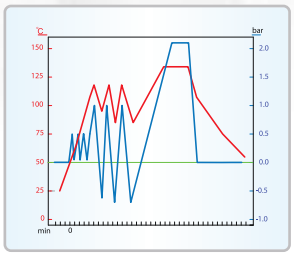

Cycle No.2 Gravity Wrapped


Cycle No.3 Gravity Unwrapped


Cycle No.4 Gravity Unwrapped


Cycle No.5 Gravity Liquid


Vacuum Leak Test


Bowie-DickTest

Specifications

Model	HS-5035PT	
Style	**Single Door**	**Double Door**
Overall Size	W872 x D1,300 x H1,971 mm	W872 x D1,350 x H1,973 mm
Chamber	W500 x D1,000 x H700 mm, Vol: 350 ℓ, Material: STS 316L	
Loading Unit	Loading Car : W460 x D 950 x H 598 mm Transfer Carriage : W450 x D1,453 x H1,143 mm	
Operating Temp.	121.0℃ ~ 135.0℃	
Air Removal Method	Vacuum / Gravity	
Air Removal Equip.	Water Ejector, Water Pump / Optional : Watering Vacuum Pump	
Controls	Microprocessor	
Display	Touch Screen type Color LCD	
Panel Printer	Direct Thermal Printing type, Printing Paper Roll: W58 x Ø40 mm, (length: 13 m)	
Power Source	Built-in Steam Generator : AC 230V, 3phase 3wire, 50/60Hz, 55A or AC 380V, 3phase 4wire, 50/60Hz, 32A	
	Use External Steam : AC 230V, 50/60Hz, 5A	
Steam Source	Built-in Steam Generator : Heater 20 kW, Water Pump	
	External Steam System : Saturated Steam of 97% Dryness, Pressure: 3.50 ~ 5.00bar, Connection Pipe: Unit Side 1/2″ FPT, Facility Side 3/4″ FPT	
Water Source	Soft Water less than 20℃, Pressure: 2.10 ~ 5.00bar, Connection Pipe: Unit Side 1/2″ FPT, Facility Side 3/4″ FPT	
Drainage	Connection Pipe: Unit 3/4″ FPT, Exclusive Drainage: 2″ MPT (Metallic Pipe)	
Net Weight	Unit: 803 kg Loading Car: 36 kg Carriage: 30 kg	Unit: 982 kg Loading Car: 36 kg Carriage: 30 kg x 2
Environment Conditions (IEC 61010-1)	* Altitude up to 2,000 m. * Temperature range of +5℃ to +40℃. * Maximum relative humidity of 80% for temperature up to 31℃ decreasing linearly to 50% relative humidity at 40℃. * Main supply voltage fluctuation of ±10% of nominal. * Installation Category (Overvoltage Category) II, Pollution Degree: 2.	

Model	HS-5025PT	
Style	**Single Door**	**Double Door**
Overall Size	W872 x D1,300 x H1,801 mm	W872 x D1,350 x H1,803 mm
Chamber	W500 x D1,000 x H500 mm, Vol: 250 ℓ, Material: STS 316L	
Loading Unit	Loading Car : W460 x D 950 x H 398 mm Transfer Carriage : W450 x D1,453 x H1,213 mm	
Operating Temp.	121.0℃ ~ 135.0℃	
Air Removal Method	Vacuum / Gravity	
Air Removal Equip.	Water Ejector, Water Pump / Optional : Watering Vacuum Pump	
Controls	Microprocessor	
Display	Touch Screen type Color LCD	
Panel Printer	Direct Thermal Printing type, Printing Paper Roll: W58 x Ø40 mm, (length: 13 m)	
Power Source	Built-in Steam Generator : AC 230V, 3phase 3wire, 50/60Hz, 55A or AC 380V, 3phase 4wire, 50/60Hz, 32A	
	Use External Steam : AC 230V, 50/60Hz, 5A	
Steam Source	Built-in Steam Generator : Heater 20 kW, Water Pump	
	External Steam System : Saturated Steam of 97% Dryness, Pressure: 3.50 ~ 5.00bar, Connection Pipe: Unit Side 1/2″ FPT, Facility Side 3/4″ FPT	
Water Source	Soft Water less than 20℃, Pressure: 2.10 ~ 5.00bar, Connection Pipe: Unit Side 1/2″ FPT, Facility Side 3/4″ FPT	
Drainage	Connection Pipe: Unit 3/4″ FPT, Exclusive Drainage: 2″ MPT (Metallic Pipe)	
Net Weight	Unit: 710 kg Loading Car: 28 kg Carriage: 30 kg	Unit: 860 kg Loading Car: 28 kg Carriage: 30 kg x 2
Environment Conditions (IEC 61010-1)	* Altitude up to 2,000 m. * Temperature range of +5℃ to +40℃. * Maximum relative humidity of 80% for temperature up to 31℃ decreasing linearly to 50% relative humidity at 40℃. * Main supply voltage fluctuation of ±10% of nominal. * Installation Category (Overvoltage Category) II, Pollution Degree: 2.	

Large Steam Sterilizer

Graphic LCD type STEAM STERILIZER

Pre-vacuum & Gravity Air Removal

HS-5035/5020

Radial Steel Levers Door type - (Front Side)

- *Practical Chamber Capacity, Convenient Control System*
- *Effective Vacuum Sterilizing and Excellent Drying Performance*
- *Sufficient Safety Devices for Preventing Danger in the Workplace*

DOUBLE DOOR type

SINGLE DOOR type

The door is locked to seal the chamber airtightly by the steel levers of radial type and especially in the double door style sterilizer, recontamination after sterilization can be prevented structurally by unloading the sterilized items in the clean area where is blocked by the bio-seal device and interlocking system.

HS-5035

HS-5020

Graphic LCD type STEAM STERILIZER _ *Pre-vacuum & Gravity Air Removal*

Feature

- The control system with a microprocessor carries out all the process of cycle automatically and controls displaying of the cycle informations in real time on the message center(LCD), and detects an abnormality occurred during operation the sterilizer and take an safety action automatically with the self-diagnosis program in it.
- As a unique feature of our sterilizer, at least 11 years of cycle execution records are automatically stored in the Flash memory of controller. The user can automatically retrieve the result of the sterilization cycle that was executed in the past as needed and print the contents with the panel printer mounted on the sterilizer, and use the result as an evidence of sterilization quality.
- The vacuum system is composed of the water pump, ejector and heat exchanger for exhausting the air or vapor in the chamber and the sterilizing and drying effect have been improved excellently by powerful vacuum performance, furthermore the noise and troubles occurred during vacuum process have been minimized. User can also use a water-ring vacuum pump as an option.
- The panel printer prints and outputs cycle execution records that can review, analyze, and store sterilization results for follow-up management after the current cycle is completed.

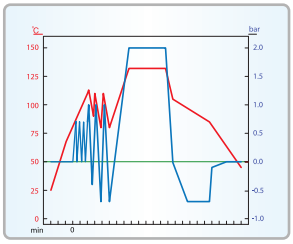
Cycle Program

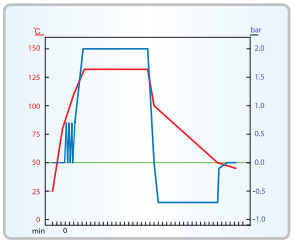
Item	Basic Cycle Program					Test Cycle Program	
Cycle No.	1	2	3	4	5	Vacuum Leak Test (L.T)	Bowie-Dick Test (B.D)
Air Removal	Vacuum	Gravity				Vacuum	
Load Type	Wrapped		Non-wrapped		Liquid	N/A	Test Pack
Exposure Temp.	134℃	134℃	134℃	121℃	121℃	134℃	134℃
Exposure Time	5 min	15 min	15 min	30 min	30 min	3 min	3.5 min
Dry Time	5 min	15 min	-	-	-	Dwell : 5 min Test :10 min	-
Cooling Time	-	-	-	-	30 min		

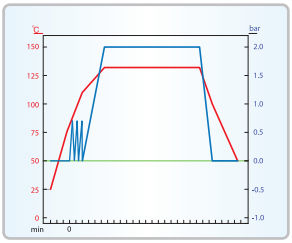
Self-Diagnosis Program

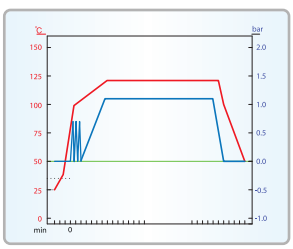
If a trouble has occurred during progressing a cycle, the error code is displayed on the LCD monitor, an audible alarm is generated and the cycle in progress is aborted automatically by the self diagnostic program for the safety.

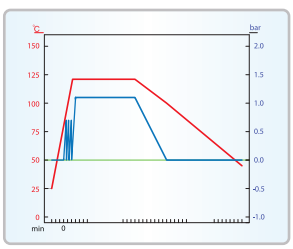
Cycle Graph

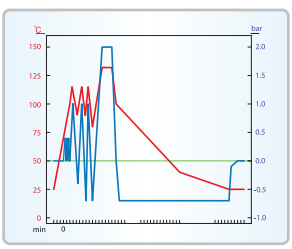

Cycle No.1 Pre-Vacuum Wrapped

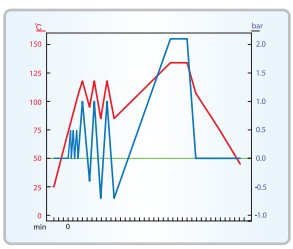

Cycle No.2 Gravity Wrapped


Cycle No.3 Gravity Unwrapped


Cycle No.4 Gravity Unwrapped


Cycle No.5 Gravity Liquid


Vacuum Leak Test


Bowie-DickTest

Specifications

Model	HS-5035	
Style	**Single Door**	**Double Door**
Overall Size	W1,010 x D1,349 x H1,715 mm	W1,010 x D1,460 x H1,715 mm
Chamber	W500 x D1,000 x H700 mm, Vol: 350 ℓ, Material: STS 316L	
Loading Unit	Loading Car : W460 x D 950 x H600 mm Transfer Carriage : W450 x D1,270 x H800 mm	
Operating Temp.	121.0℃ ~ 135.0℃	
Air Removal Method	Vacuum / Gravity	
Air Removal Equip.	Water Ejector, Water Pump / Optional : Waterring Vacuum Pump	
Controls	Microprocessor	
Display	Graphic LCD (LED back-light)	
Panel Printer	Direct Thermal Printing type, Printing Paper Roll: W58 x Ø40 mm, (length: 13 m)	
Power Source	Built-in Steam Generator : AC 230V, 3phase 3wire, 50/60Hz, 55A or AC 380V, 3phase 4wire, 50/60Hz, 32A	
	Use External Steam : AC 230V, 50/60Hz, 5A	
Steam Source	Built-in Steam Generator : Heater 20 kW, Water Pump	
	External Steam System : Saturated Steam of 97% Dryness, Pressure: 3.50 ~ 5.00bar, Connection Pipe: Unit Side 1/2″ FPT, Facility Side 3/4″ FPT	
Water Source	Soft Water less than 20℃, Pressure: 2.10 ~ 5.00bar, Connection Pipe: Unit Side 1/2″ FPT, Facility Side 3/4″ FPT	
Net Weight	Unit: 770 kg Loading Car: 36 kg Carriage: 27 kg	Unit: 890 kg Loading Car: 36 kg Carriage: 27 kg x2
Environment Conditions (IEC 61010-1)	* Altitude up to 2,000 m. * Temperature range of +5℃ to +40℃. * Maximum relative humidity of 80% for temperature up to 31℃ decreasing linearly to 50% relative humidity at 40℃. * Main supply voltage fluctuation of ±10% of nominal. * Installation Category (Overvoltage Category) II, Pollution Degree: 2.	

Model	HS-5020
Style	**Single Door**
Overall Size	W950 x D1,335 x H1,575 mm
Chamber	ID Ø500 x L1,000 mm, Vol: 196 ℓ, Material: STS 316L
Loading Unit	Shelves : W480 x D975 x H22 mm, 1ea : W270 x D975 x H22 mm, 1ea
Operating Temp.	121.0℃ ~ 135.0℃
Air Removal Method	Vacuum / Gravity
Air Removal Equip.	Water Ejector & Water Pump / Optional : Waterring Vacuum Pump
Controls	Microprocessor
Display	Graphic LCD (LED back-light)
Panel Printer	Direct Thermal Printing type, Printing Paper Roll: W58 x Ø40 mm, (length: 13 m)
Power Source	Built-in Steam Generator : AC 230V, 3phase 3wire, 50/60Hz, 32A or AC 380V, 3phase 4wire, 50/60Hz, 20A
	Use External Steam : AC 230V, 50/60Hz, 5A
Steam Source	Built-in Steam Generator : Heater 12 kW, Water Pump
	External Steam System : Saturated Steam of 97% Dryness, Pressure: 3.50 ~ 5.00bar Connection Pipe: Unit Side 1/2″ FPT, Facility Side 3/4″ FPT
Water Source	Soft Water less than 20℃, Pressure: 2.10 ~ 5.00bar, Connection Pipe: Unit Side 1/2″ FPT, Facility Side 3/4″ FPT
Net Weight	428 kg
Environment Conditions (IEC 61010-1)	* Altitude up to 2,000 m. * Temperature range of +5℃ to +40℃. * Maximum relative humidity of 80% for temperature up to 31℃ decreasing linearly to 50% relative humidity at 40℃. * Main supply voltage fluctuation of ±10% of nominal. * Installation Category (Overvoltage Category) II, Pollution Degree: 2.

Large Steam Sterilizer

Digital LED Display type STEAM STERILIZER

Gravity Air Removal

HS-5020G

- *Stable and Economical Gravity Air Removal type Steam Sterilizer*
- *Simple and Convenient Sterilizer Operation, Reliable Sterilization Quality*

Specifications

Model	HS-5020G
Overall Size	W760 x D1,334 x H1,695 mm
Chamber	ID Ø500 x L1,000 mm, Vol: 196 ℓ , Material: STS 316L
Loading Unit	Shelves : W480 x D975 x H22 mm, 1ea / W270 x D975 x H22 mm, 1ea
Operating Temp.	121.0℃ ~ 135.0℃
Air Removal Method	Gravity
Controls	Microprocessor
Power Source	AC 230V, 1phase, 50/60Hz, 45A AC 230V, 3phase 3wire, 50/60Hz, 25A AC 380V, 3phase 4wire, 50/60Hz, 15A
	Use External Steam : AC 230V, 50/60Hz, 5A
Steam Source	Built-in Steam Generator : Heater 9 kW
	External Steam Supply System : Saturated Steam of 97% Dryness, Pressure: 3.50 ~ 5.00bar,
Water Source	Soft Water less than 20℃, Pressure: 2.10 ~ 5.00bar, Connection Pipe: Unit Side 1/2″ FPT, Facility Side 3/4″ FPT
Drainage	Connection Pipe : Unit 3/4″ FPT, Exclusive Drainage : 2″ FPT (Metallic Pipe)
Net Weight	350 kg
Environment Conditions (IEC 61010-1)	* Altitude up to 2,000 m. * Temperature range of +5℃ to +40℃. * Maximum relative humidity of 80% for temperature up to 31℃ decreasing linearly to 50% relative humidity at 40℃. * Main supply voltage fluctuation of ±10% of nominal. * Installation Category (Overvoltage Category) II, Pollution Degree: 2.

Feature

- Since these sterilizers have their own steam generator, Steam supply is smooth, and an external steam supply device can be selected and used.
  Built-in 4 types of basic cycle programs that can sterilize liquids contained in containers, such as packaged or unpackaged medical metal instruments, synthetic resin products, rubber products, glass products, textile products, and glass so that the user can easily select the required cycle. is made available for use.

- All processes of preparation, adjustment, sterilization, exhaust and completion are automatically performed by a control device employing a microprocessor.
  On the front of the sterilizer, it is equipped with a display device to identify the set values such as pressure, temperature, and time of the cycle, and the progress process such as door lock, preparation, adjustment, sterilization, exhaust and completion.
  The self-diagnosis function detects errors during operation of the sterilizer, issues an alarm with sound and display devices, and automatically takes safety measures such as cycle stop and exhaust.

Chamber

The cylindrical chamber with jacket is the most sound structurally and the door is sealed firmly by a locking system with the steel levers of radial type. The durability and corrosion resistance of these components are very excellent because they are made of the high class stainless steel.

Door

The cycle is not started unless the door is locked. In case there exists vapor pressure in the chamber, turn the hand wheel counter clockwise for open the door, then the radial type levers are released and a gap is made between the chamber and door, so it is safe because the vapor is leaked out from the chamber. The door plate cover blocks high temperature heat for protecting operator from burns during operating the sterilizer.

Display

The LED panel placed in the upper right side of sterilizer displays the set values of the selected cycle such as temperature, pressure, time and the operator can monitor the actual progress of cycle by the indicators on it.

Steam Generator

The saturated steam as sterilant can be supplied smoothly from the built-in steam generator and moreover the external steam supply source can be applied to the sterilizer.

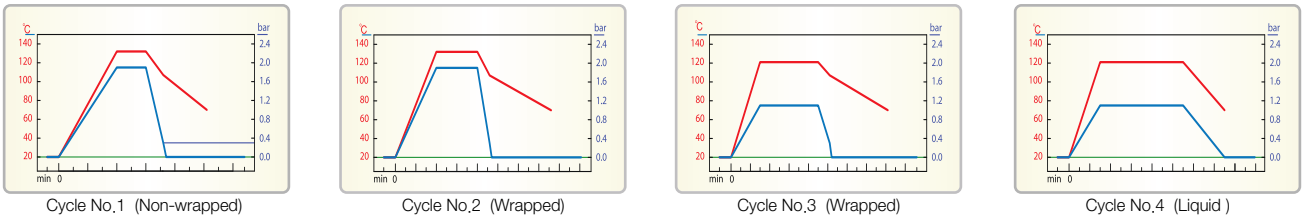
Cycle Program

Cycle No.	1	2	3	4
Air Removal	Gravity			
Load Type	Non-wrapped	Wrapped		Liquid
Exposure Temp.	134℃	134℃	121℃	121℃
Exposure Time	10 min	20 min	30 min	40 min
Dry Time	15 min	30 min	30 min	-

Self-Diagnosis Program

If a trouble has occurred during operating, the error code is displayed on the LED panel accompanying an audible alarm and the cycle in progress is aborted automatically by the embedded self-diagnosis program for safety.

Cycle Graph



Cycle No.1 (Non-wrapped) Cycle No.2 (Wrapped) Cycle No.3 (Wrapped) Cycle No.4 (Liquid)

Large Steam Sterilizer

Graphic LCD type STEAM STERILIZER

First Vacuum Air Removal & Post-vacuum Drying

HS-85SL/60SL

Automatic Door & Vertical Chamber type

HS-60SL

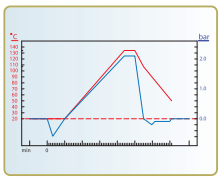
Cycle Program

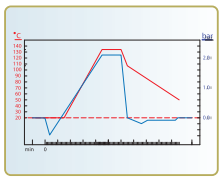
Item	Basic Cycle Program(Standaed and Optional type)					Exclusive Cycle(Optional type)
Cycle No.	P1	P2	P3	P4	P5	P6
Load Type	Non-wrapped	Wrapped	Non-wrapped	Wrapped	Liquid	Liquid & Retort
Exposure Temp.	134℃	134℃	121℃	121℃	121℃	121℃
Exposure Time	5 min	15 min	20 min	30 min	30 min	30 min
Dry Time	15 min	30 min	30 min	30 min	-	-
Exposure Pressure	-	-	-	-	-	2.00 bar

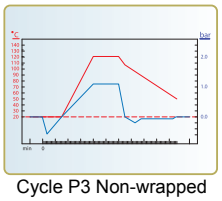
- *Vertical Type, Steam Sterilizer*
- *Automatic Driving Door*

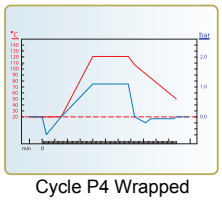
Cycle Graph

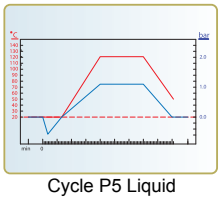
: PRESSURE
: TEMPERATURE

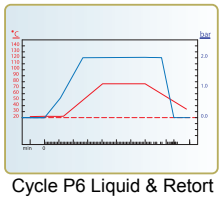

Cycle P1 Non-wrapped


Cycle P2 Wrapped


Cycle P3 Non-wrapped


Cycle P4 Wrapped


Cycle P5 Liquid


Cycle P6 Liquid & Retort


HS-60SL


HS-85SL

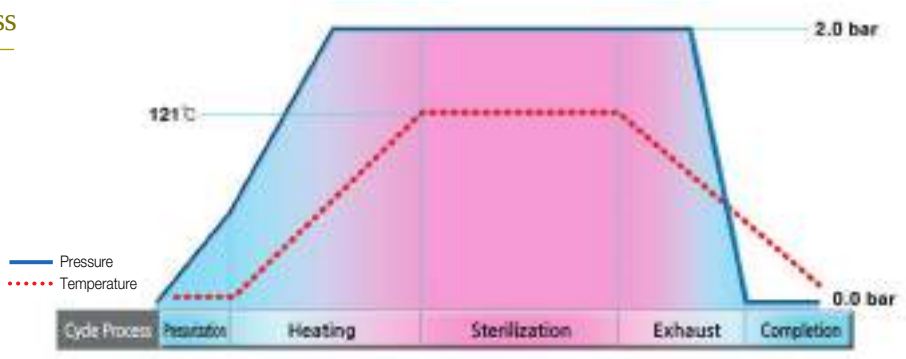
Specifications

Model	HS-60SL	HS-85SL
Overall Size	W540 x D645 x H970 mm	W600 x D705 x H992mm
Chamber	Vertical, ID Ø340 x L719 mm, Vol: 60ℓ , Material: STS 316L	Vertical, ID Ø400 x L741 mm, Vol: 85ℓ, Material: STS 316L
	Max. Working Pressure: 2.40bar, Min. Working Pressur: -1.00bar, Max. Working Temperature: 138.0℃, Test Pressure: 5.13bar	
Loading Device	Cylindrical Stainless Steel Basket ID Ø308 x L213 mm, 3ea	Cylindrical Stainless Steel Basket ID Ø355 x L215 mm, 3ea
Reservoir	W190 x D130 x H256 mm, Vol: 5.5ℓ (full water level)	W258 x D130 x H256 mm, Vol: 7.5ℓ (full water level)
Collection Container	Vol: 2.3ℓ (full water level)	Vol: 5.0ℓ (full water level)
Operating Temperature	121.0℃ ~ 135.0℃	
Sterilant	Saturated Steam	
Air Removal Method	Vacuum	
Air Removal Equipment	Vacuum Pump (Diaphragm type)	
Air Filter	Filtration Efficiency: 99.999% for 0.3㎛ Particles	
Door Operation	Automatic Driving by Motor	
Controls	Microprocessor	
Display	Graphic LCD (LED back-lighting)	
Panel Printer (option)	Direct Thermal Printing, Printing Paper Roll: W58 x Ø40 mm, L=13 m	
Power Source	AC 230V, 50/60Hz	
Power Consumption	3,300 W	
Weight	130 kg	140 kg
Environment Conditions (IEC 61010-1)	* Altitudes up to 2,000 meters * Temperature range of +5℃ to +40℃ * Maximum relative humidity of 80% for temperatures up to 31℃ decreasing linearly to 50% at 40℃ * Main supply vlotage fluctuation of ±10% of nominal * Installation Category (Overvoltage Category) II, Pollution Degree 2	

Operation Overview of HS-60SL / 85SL

Remarkably shortened the sterilization time by the jacket water cooling exhaust process !

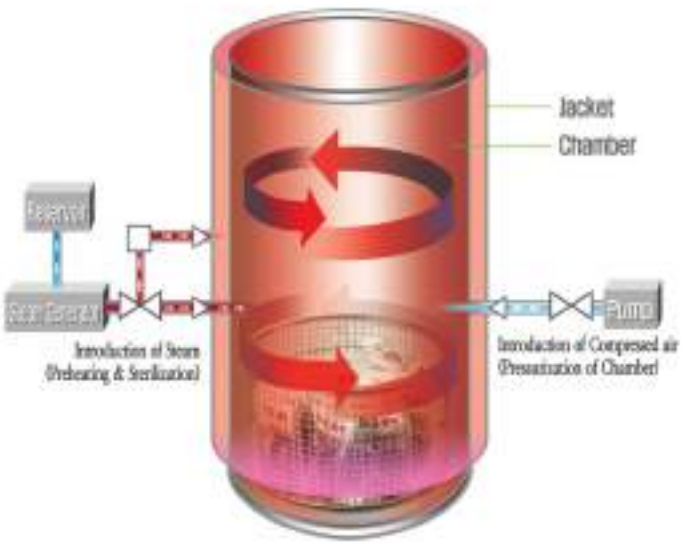
1. Cycle Process



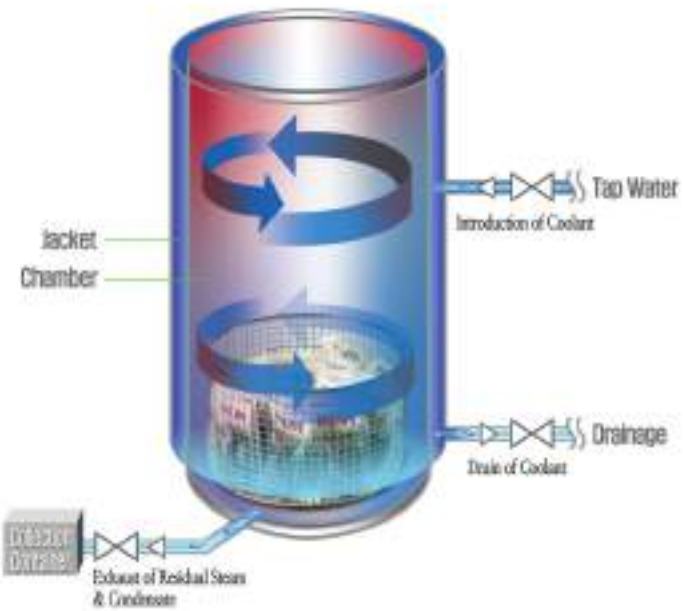
Cycle Process	Descriptions
Pressurization	The compressed air supplied from the outside is introduced into the chamber until the set pressure is reached through the air filter. This process prevents the flexible packaging from breaking and deforming due to thermal shock at the start of the cycle.
Heating	Saturated steam is introduced into the jacket to preheat the chamber, and saturated steam is continuously injected into the chamber until the set sterilization temperature is reached.
Sterilization	The items to be sterilized are exposed to saturated steam for a set time while maintaining the sterilization temperature.
Exhaust	The pressure in the chamber is maintained while the exhaust valve is closed, and the temperature is gradually lowered while condensing the steam in the chamber by injecting coolant into the jacket. When the temperature of the sterilized product is below 80℃, the exhaust valve opens and the residual steam and condensate are discharged until the chamber is at atmospheric pressure. ※ The jacket water cooling method has an effect of shortening the cooling time up to 80℃ by about 90% than the existing natural cooling method.
Completion	When the chamber is at atmospheric pressure, a completion signal sounds and the cycle ends.

Application Scope	▶ Various blister package products including disposable contact lenses and medicines ▶ Oriental herb medicine pouch, food retort pouch ▶ Glass bottles, molding containers, cans etc.

2. Illustrate the heating and sterilization process



3. Illustrate the cooling and exhaust process



Cutting & Sealing Machine

HCS-400

Cutting & Sealing Machine for Sterilizing Bag

Cut and Seal the Roll Pouch (Paper & Tyvek®) for Sterilizing with One Machine Safely and Economically !

Using an exclusive machine for cutting and sealing the pouch roll is strongly recommended because the contents may be damaged or contaminated if the pouches have damaged due to wrong packaging during sterilizing or conserving.
This specially designed machine can cut and seal the roll pouch with one unit, therefore the user is able to do all the work for packaging the medical instruments and devices to be sterilized conveniently and economically in a small space.

Cutting Mode

Sealing Mode

Roll Stand

Appliance Table

Specifications

Model		HCS-400
Applied Roll Pouch		Width of Roll: 50 ~ 400 mm, Diameter of Roll: max. Ø250 mm, Diameter of Paper Tube: Ø50 ~ 75 mm
Productivity		About 7 pcs/min (Width of Roll: standard 150 mm)
Cutting Length		20 cm (12 ~ 999 cm)
Cutting Quantity		1 pc (1 pc ~ 999 pcs)
Sealing Temperature Range		110℃ ~ 230℃
Sealing Time		2 sec. (1~3 sec.)
Controls		Microprocessor
Power Source		AC 230V, 50/60 Hz
Heater Capacity		500 W
Dimension		Unit : W670 x D325 x H230 mm, Overall : W682 x D625 x H325 mm
Weight		26 kg
Optional Item	Roll Stand	Model : RS-3, Overall Dimension: W530 x D300 x H670 mm
	Appliance Table	Model : AT-650S, Overall Dimension: W690 x D760 x H821 mm

Feature

1. The entire process is controlled automatically and displayed digitally on the LED display by a microprocessor.
2. If the cutting length and quantity are already set in the machine, the roll pouch is attracted to the pouch inlet automatically and the set quantities of pouch that are sealed bottom side are produced after cutting in the set length.
3. The pouch contained the item to be sterilized is sealed automatically if the upper side of pouch is inserted in the sealing inlet.
4. The set sealing temperature is maintained constantly by precise control.
5. The appliance table and the roll stand are provided as an optional items. (optional)

Self-Contained BI Incubator

HI-5615

Self-Contained Biological Indicator Incubator

Convenient and Effective Incubation of Self-Contained Biological Indicator

Specifications

Model	HI-5615
Overall Size	W180 x D125 x H86 mm
Operating Temperature	37℃ / 56℃
Incubation Cavity	Number: 1~15, Diameter: 15mm, Depth: 35mm (SCBI Adapter: ID Ø9.5 x L35 mm)
Power Adapter	Input : AC 100V ~ 240V, 50/60Hz, 2.0A Output : DC 24V, 5.0A
Power Input	DC 24V, 2.5A (50 W)
Weight	2.1kg
Environment Conditions	* Altitudes up to 2,000 m. * Temperature range of +5℃ to +35℃. * Maximum relative humidity of 80% * Main supply vlotage fluctuation of ±10% of nominal. * Installation Category (Overvoltage Category) II, Pollution Degree 2.

Feature

1. Built-in thermometer for reading the incubation temperature.
2. Temperature selection switch for simple operation.
3. 15 incubation cavities and adapters for incubating the SCBIs.
4. An integrated activation (crushing) cavity to simplify activation.
5. Neat and transparent plastic top cover for preserving a stable and safe incubation environment.

NOTE

Large Steam Sterilizers

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