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JW Hospital Equipment

STERILIZER





CHS-ST065



CHS-ST045

**TOPSTEL**

**STEAM**

**STERILIZER**



### HEATER COMPARTMENT

With a separate heater compartment at the bottom of the chamber, the sterilizer not only has a larger capacity than other products, but also utilizes less water for sterilization. The design minimizes heating time and greatly improves drying performance.

### Air Evacuation after Water Supply

The method of vacuum drying after water is supplied to the chamber differs from existing processes in that all air in the chamber is removed completely with a vacuum pump before water is added, to assure 100% sterilization. The conventional water supply method allows a considerable volume of air on the objects of sterilization, so that a thorough and complete sterilization is not guaranteed. Certain spores in an air layer may not be completely removed. The Air Evaporation Method reduces the evaporation point of the water and forcibly releases all the air in the objects to be sterilized, guaranteeing perfect sterilization results with quick heating and steam penetration.

### Appealing Design

The product is beautifully designed for a refined appearance and harmonious integration in a hospital environment.

### Quick Water Supply

By supplying water directly into a vacuum, the filling time is sharply reduced (20 seconds at most) and the product is usable continuously at high temperatures. It supplies water faster than with conventional methods.

### Fully automated Control

The whole process of sterilization, from vacuum sterilization to vacuum drying is electronically controlled and fully automatic. Once the sterilization program is set, only press START and the complete process of Vacuum Build-up → Water Supply → Heating → Sterilization → Air Release → Vacuum Drying takes place automatically.

### RECORDER Installation

The printer records sterilization conditions (date, temperature, time and drying time, etc.) under normal operation.

### Self-diagnosis

A total of 13 error conditions are displayed under the self-diagnostic control. Your Safety is our top Priority!



OPTION : Cart

This steam sterilizer is designed for user's convenience and patient's safety preferentially.

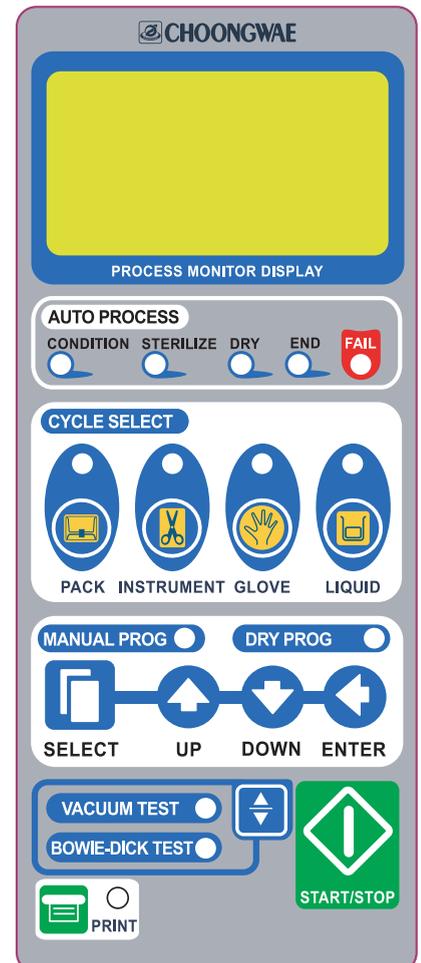
## Self-diagnosis:

A total of 13 error conditions are displayed under the self-diagnostic control.

ERROR-1	Water tank low
ERROR-2	Heater overheated (Standard throughout the process: 155°C, Dry: 190°C)
ERROR-3	Door open during operation
ERROR-4	Sterilization temperature deviations
ERROR-5	Short water supply
ERROR-6	Heating time exceeded
ERROR-7	Temperature sensor error (Disconnection /Short circuit)
ERROR-8	Heater temperature sensor error (Disconnection /Short circuit)
ERROR-9	Pressure sensor error (Disconnection /Short circuit)
ERROR-10	Vacuum release test failure
ERROR-11	Vacuum lead time excess setting
ERROR-12	Chamber overheated during water supply
ERROR-13	Chamber pressure exceeded (2.4kgf/cm <sup>2</sup> )

## LCD Display:

On the control part, both the LCD display and FND display the steps of the sterilization process. The displays are large and easily visible, even from a distance. The LCD displays sterilization temperature, pressure, lead time, drying temperature and time, heater compartment temperature, water tank level, and door open/close status, so that the user can monitor the equipment fully at any time.

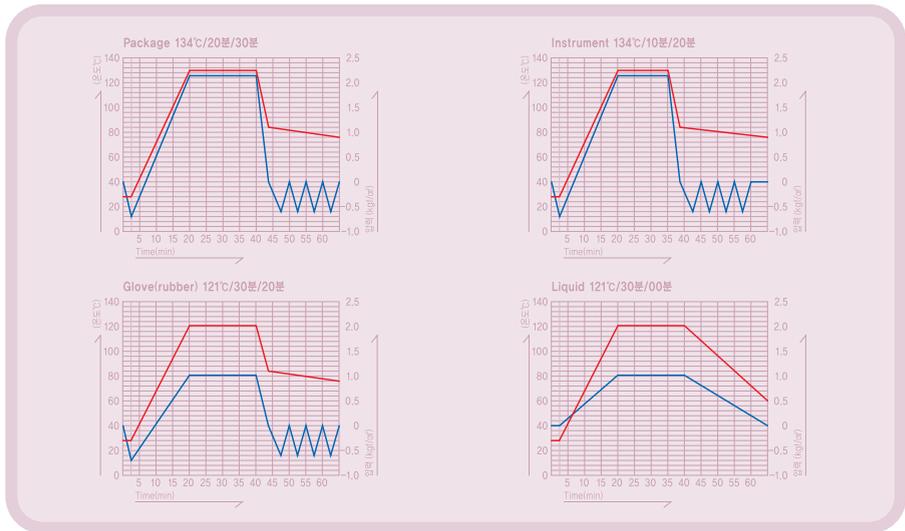


# Sterilization Programs:

The test program mode is the most convenient to use. With the Bowie-Dick test, a special program to check sterilizer performance on a regular basis, the efficiency and reliability of the equipment is maintained. The VACUUM LEAKAGE TEST shows any leaks in the sterilizer, so that the user can determine firsthand whether the product has a problem.

## Basic program

	Pack	Instrument	Glove	Liquid
Temperature	134°C	134°C	121°C	121°C
Pressure	2kgf/cm <sup>2</sup>	2kgf/cm <sup>2</sup>	1kgf/cm <sup>2</sup>	1kgf/cm <sup>2</sup>
Time	20 min	10 min	30 min	30 min
Dry Time	30 min	20 min	20 min	-

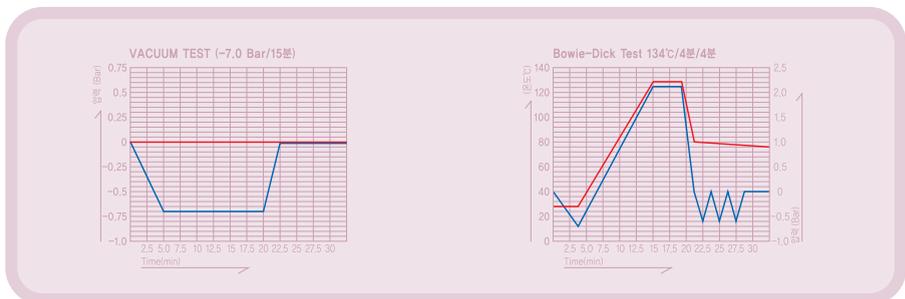


## User program

	Manual program	Dry program
Temperature	121°C~134°C	-
Pressure	1kgf/cm <sup>2</sup> ~ 2kgf/cm <sup>2</sup>	-
Time	0~60 min	-
Dry Time	0~60 min	0~60 min

## Test program

	Vacuum leakage test	Bowie-dick test
Temperature	Normal temperature	134°C
Pressure	0kgf/cm <sup>2</sup>	2kgf/cm <sup>2</sup>
Time	15 min	4 min
Dry Time	-	4 min





CHW-E055

E.O GAS

STERILIZER



CHW-E055 is a mixed gas E.O sterilizer and has a large chamber capacity of 55 liters, which is big enough to sterilize surgical instrument in all sizes and lengths. With MICRO-CONTROLLER attached to the FRONT DOOR, this compact sterilizer looks quite small from outside but it has a very practical chamber.

**Mixing Gas** • EO(20%) + CO2(80%)/STANDARD • EO(12%) + CFC(88%)

DOOR INTERLOCK SAFETY SYSTEM is a mechanical safety device, which does not allow the door to be open when the chamber is pressurized. This device is used in order to protect users from possible risk.

The air introduced into the chamber during the cleaning process comes through the air filter (BACTERIA & AIR FILTER) that has the capacity of filtering out 99.97% of the particles in the size of 0.3 um and it can protect the sterilized material from being contaminated. The microprocessor indicates the time to change air filters on the monitor.

The gas supply system inside the chamber supplies gas vaporized from liquefied gas. CHW-E055 adopted a pulse vaporizing system that completely vaporizes the liquefied gas so that no residual gas reactants remains in the chamber.

In this product, the AIR REMOVAL SYSTEM uses a Teflon sealed piston vacuum pump with strong power and excellent endurance.

The number of times when EO gas was used is all stored in a memory chip and is displayed on the MONITOR when the power is turned on. The device is programmed in such a way that allows a user to check and confirm the time to change the EO gas, before activating the sterilizer.

A program for the cleaning only process is included in the system that enables the user to set the time and temperature to run the cleaning process any time when necessary.

The MICROPROCESSOR does automatic control of the whole sterilization process and the SELF-TEST program displays, on the LCD MONITOR, errors and unstable status of the system while sterilization is under way.



This E.O gas sterilizer is designed for user's convenience and patient's safety preferentially.



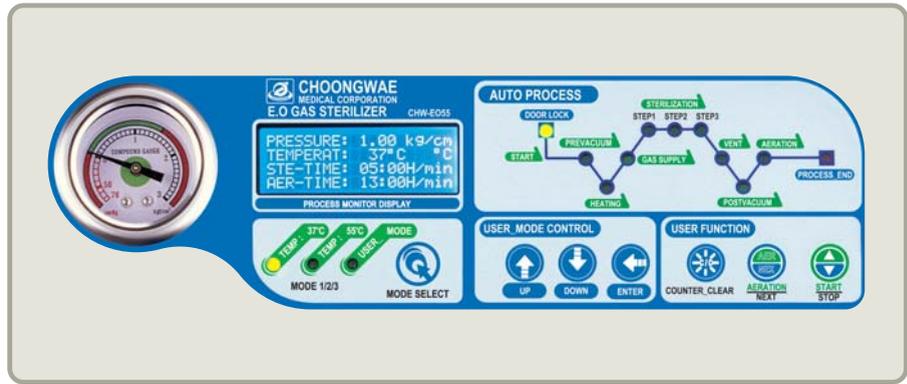
OPTION : Cart

## Self-diagnosis:

The MICROPROCESSOR does automatic control of the whole sterilization process and the SELF-TEST program displays, on the LCD MONITOR, errors and unstable status of the system while sterilization is under way.

ERROR-1	Door is not properly sealed
ERROR-2	Delayed chamber vacuum time
ERROR-3	Delayed gas supply to the sterilization chamber
ERROR-4	Chamber pressure lower than set
ERROR-5	Chamber pressure higher than set
ERROR-6	Carburetor temperature lower than set
ERROR-7	Carburetor temperature higher than set
ERROR-8	Chamber temperature lower than set
ERROR-9	Chamber temperature higher than set
ERROR-10	Chamber sensor in trouble
ERROR-11	Carburetor sensor in trouble
ERROR-12	Pressure sensor in trouble
ERROR-13	Vacuum failed
ERROR-14	Bacteria filters need to be changed





## Control & Monitor Display:

### PROCESS MONITOR DISPLAY

LCD MONITOR displays the pressure, temperature and time of sterilization, and the cleaning time on a real time basis.

### MODE SELECT

Press the MODE SELECT button to make consecutive selection out of three programs.

### USER\_MODE CONTROL

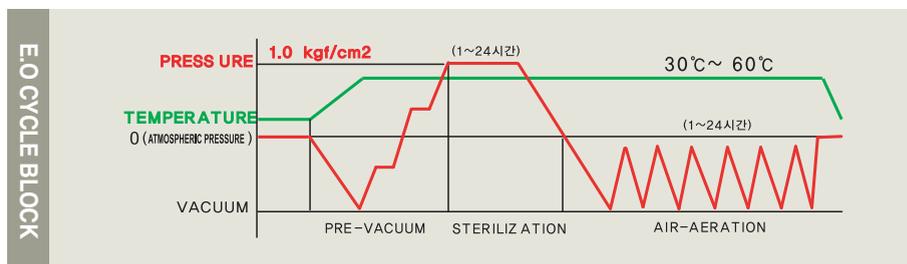
Press the UP/DOWN/ENTER buttons to make selection out of the program time in the MODE 3 (USER\_MODE).

MODE 1•2•3	Sterilization Pressure	Sterilization Temp.	Sterilization Time	Cleaning Time
MODE 1	1.0 kgf/cm <sup>2</sup>	37°C	5 Hour	13 Hour
MODE 2	1.0 kgf/cm <sup>2</sup>	55°C	3 Hour	9 Hour
MODE 3	0.5 ~ 1.0 kgf/cm <sup>2</sup>	30°C ~ 60°C	1 ~ 24 Hour	1 ~ 24 Hour

### AUTO PROCESS

Auto Process displays all the state of sterilization under way.

START → PRE-VACUUM → HEATING → GAS SUPPLY → STERILIZATION(STEP1•2•3)  
 → GAS EVACUATION → POST-VACUUM → AIR-AERATION → FINISH



### USER FUNCTION

This ONE-TOUCH function allows a user to start or stop the sterilization, clear the number of gas use counter, and run the exclusive cleaning procedure.

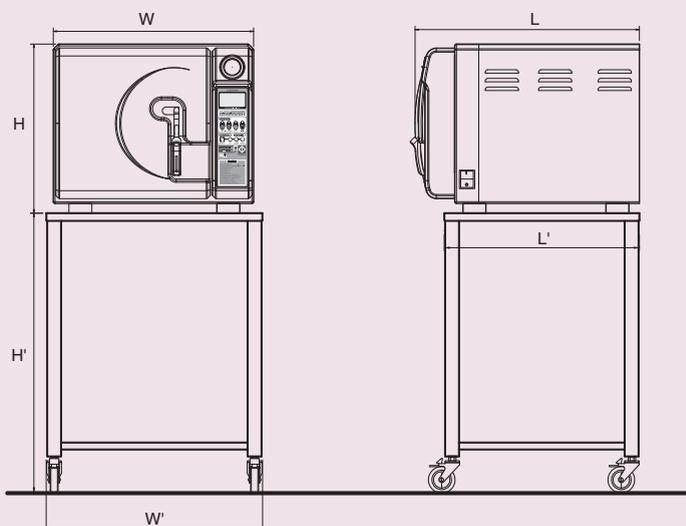


# STEAM

# STERILIZER



## ■ DIMENSION



## ■ SPECIFICATIONS

MODEL		CHS-ST045	CHS-ST065
<b>Overall Size</b>		580(W)×510(H)×650(L)mm	580(W)×510(H)×820(L)mm
<b>Chamber</b>	<b>Size</b>	310(W)×340(H)×430(L)mm	310(W)×340(H)×620(L)mm
	<b>Type</b>	Square	
	<b>Material</b>	KS D 3577-85 (STS316)	
	<b>Capacity</b>	45 Liter	65 Liter
<b>Sterilizer Temperature, Pressure</b>		121°C(1kgf / cm <sup>2</sup> ) ~ 134°C(1kgf / cm <sup>2</sup> )	
<b>Reservoir Capacity</b>		6.0 Liter	8.0 Liter
<b>Heater</b>		2.3 kW	2.9 kW
<b>Power Source</b>		AC220V 50/60Hz 2.3 kW	AC220V 50/60Hz 2.9 kW
<b>Air Removal</b>		Oil-less vacuum pump(40 RNS)	Oil-less vacuum pump(50 RNS)
<b>Display</b>		Graphic LCD	
<b>Control Mode</b>		Micro processor	
<b>Recorder</b>		Dot Printer	
<b>Dry System</b>		Vacuum dry system	
<b>Weight</b>		93kg	110kg

## ■ OPTION ACCESSORY

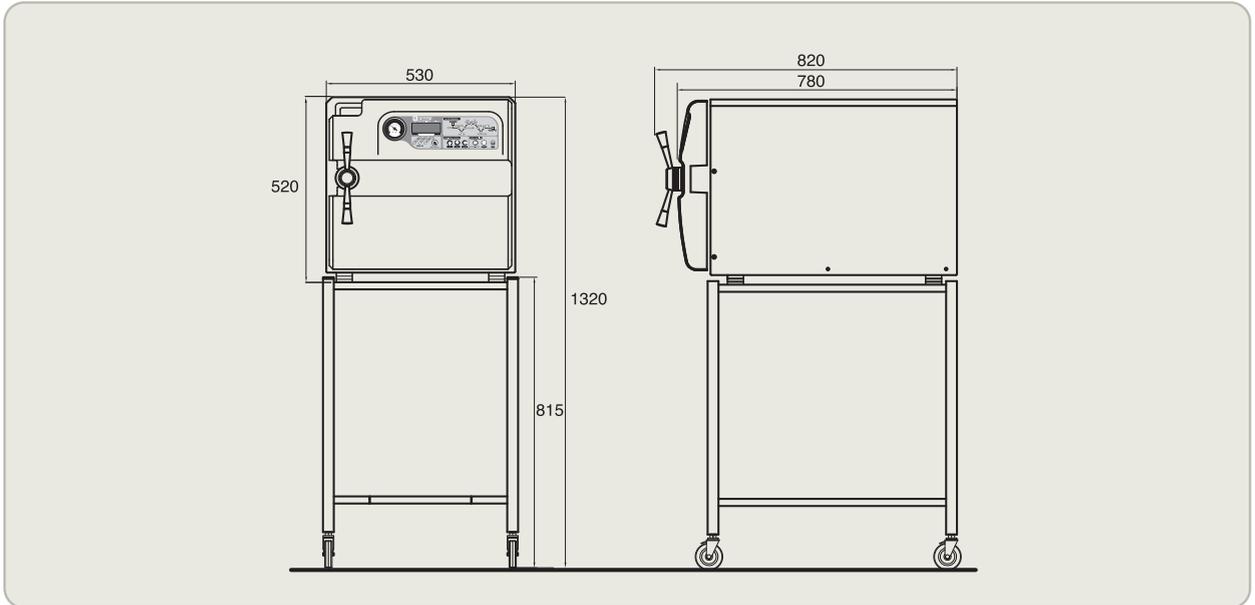
<b>Cart</b>	CHS-ST045	620(W')×820(H')×560(L')mm
	CHS-ST065	620(W')×820(H')×750(L')mm
<b>Printer</b>	Dot Printer	

# E.O GAS

# STERILIZER



## ■ DIMENSION



## ■ SPECIFICATIONS

MODEL		CHW-EO55	
Overall Size		530(W) × 520(H) × 820(L)mm	
Chamber	Size	Ø340 × 620(L)mm	
	Type	Circular	
	Material	Stainless Steel	
	Capacity	55 Liter	
Power Source		AC 220V, 60Hz	
Power Consumption	Silicon heater	390W	880W
	Cartridge heater	400W	
	Vacuum pump	130W	
	Controller	40W	
Control Mode	Mode 1	37°C	
	Mode 2	55°C	
	Mode 3	30°C~60°C	
Control System		Micro Processor	
Using Gas		E.O Gas(20%) + CO2(80%) or E.O Gas(12%) + CFC(88%)	
Air Removal		Oil-less Vacuum Pump	
Weight		72kg	

## ■ STANDARD ACCESSORY

Cart	540(W) × 815(H) × 690(L)mm
Gas Cylinder	E.O Gas(20%) + CO2(80%) / 10kg
Sealing Machine	AC220V/60Hz, 300mm
Ventilation Hose	Ø12 × 2.0M
Roll Bag	150mm/1roll