Performance Excellence and Easy Operation

CONTROLLED BY COMPUTER

STERILIZER GXIII SERIES

UDONO STERILIZATION SYSTEM

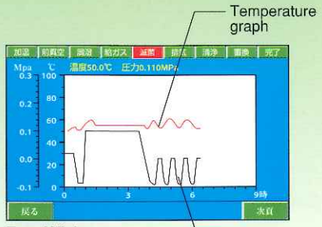
Ethylene Oxide Gas Sterilizer

udono limited

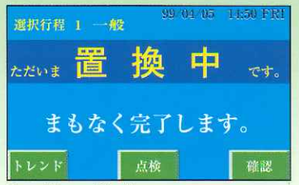
Focusing on the Fundamentals of a Sterilization System

Offering Sterilization, Purification and Safety

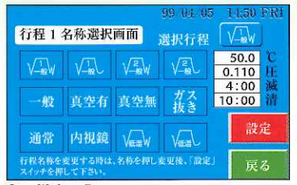
As a company specializing in the manufacture of sterilization equipment, Udono, while always breaking new ground, has continued supplying superior sterilization equipment required by the times.
Based on our abundant technological experience accumulated over many years, we have taken a fresh look at the fundamentals of ethylene oxide gas sterilization systems. Instead of giving the present system an excessive number of functions, we have focused on the basics, creating a system with superior sterilization capabilities and safety features.



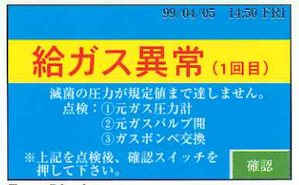
Trend Vision



Countdown Display



Sterilizing Program



Error Display

Ethylene Oxide Gas Sterilizer

XIII SERIES

Compact Design
Although the system's capacity has been enhanced, we have succeeded in keeping the size of space required for installation at a minimum. This is achieved by giving consideration to external factors such as the space required for the piping. The installed dimensions and the size of space required for servicing are also small.

The Color Liquid Crystal Display(LCD) Exemplifies its High Efficiency

The sterilizer, X-Ⅲ was developed to provide everything: enhanced state-of-the-art technology, complete and absolute sterilization, easy to use operator-friendly equipment, preventive maintenance internal systems, an internal operating system to prevent malfunctions, and its own safety mechanism. With this piece of equipment an enlarged vision has been reach and is easily visualized.

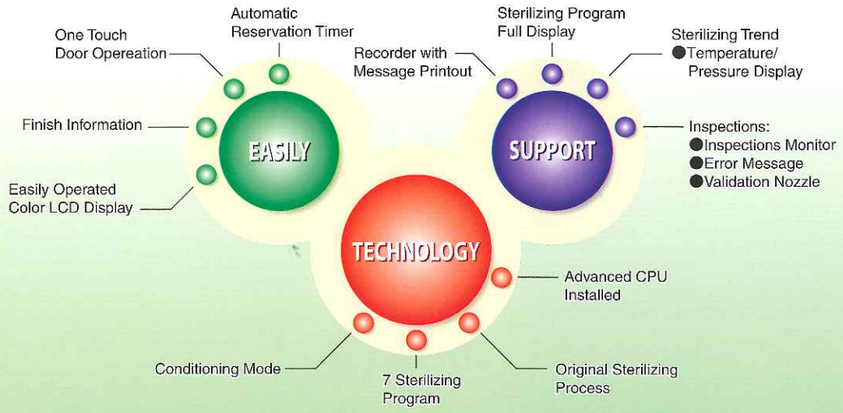
Preconditioning Mode
For ethylene oxide gas sterilization, temperature and humidity options are the most important factors. By employing the process of preconditioning, the most desired environment for sterilization is achieved, and the failure of the attainment of sterilization, because of a temperature of humidity deficiency, is thwarted. The preheat of the sterilizing object will begin. Not only the temperature but the humidity can be adjusted. Even with just a little preconditioning time, it will greatly affect the sterilization process.

The Process Trend
Since only the temperature is not dependable, the pressure trend neutralizes this problem and instills total dependability. The large color LCD, clearly allows for the visualization of both trends - pressure and temperature, which fluctuates constantly for a maximum of 18 hours.

Aeration System
The pulse-aeration will continuously exhaust the EO gas and simultaneously intake fresh air until the EO gas has dissipated. Even after the sterilization process has been completed, if the door is not opened, and extended aeration control will be activated.

Ending Information/Reservation Timer
After the sterilization begins, the computer computes the time remaining to completion of the process. This is called Finish Information. This convenient function also reports the completion of the process. If you set the Reservation Timer to begin the sterilization process for up to 100 hours later, it will do so.

The Data Printout Recorder
A printout of the dates, starting times and completion times is absolutely essential in any sterilization process. Not only is the aforementioned recorded by the X-Ⅲ but the process employed is also listed each time. If an error occurs during the printout, it also will be duly recorded.



Validation
The implements of calibration and validation of the gauges attached to the sterilizer is a very effective way of ensuring the guarantee of complete and total pathogen-free sterilization. The nozzle, which is needed to measure the support temperature distribution inside the chamber, is to become standard equipment on all future Udono's sterilizers.

Error Display
The color LCD visually annunciates an error message whenever trouble occurs. Out of consideration for safety, this simple and easy to understand message allows for the problem to be directly dealt with.

The Service Display
The schedule for the drain removal of the air compressor, the exchange of hot water, and the exchange of the gas cylinder are reported. The functions are simply done and easily understood.

Excellent Safety Features
The system is equipped with a large number of safety features including the start circuit interlock (for detecting insufficient locking of doors), faulty gas supply alarm, alarms indicating pressure drop and overpressure during sterilization, safety mechanisms for preventing the mishandling of doors during operation and for preventing the two doors from being opened simultaneously, or when there is residual pressure in the chamber. Additional safety is provided by safety circuits such as those for ensuring proper sterilization temperature and for resuming operations after a power stoppage at the point at which the process was before the stoppage.

PREPARATION (Jacket heating phase)
When power is turned on water supply starts. After the proper water level is reached the heater and the water circulation pump are activated, keeping the jacket constantly warm.

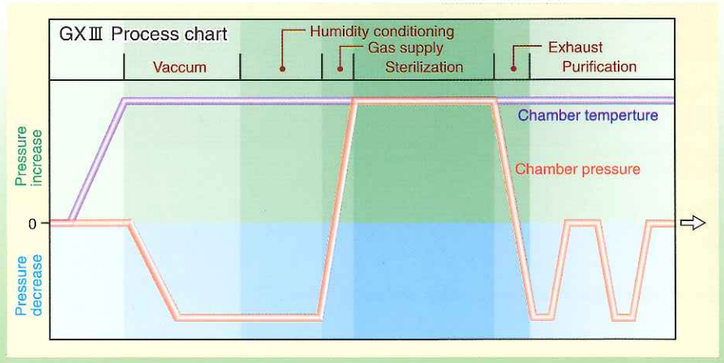
VACUUM PHASE
Using a high performance vacuum pump, vacuum is attained inside the chamber to create the proper sterilization conditions. When the desired vacuum state is reached it is maintained by the system.

HUMIDITY SUPPLY AND ADJUSTMENT
To obtain the proper level of humidity necessary for sterilization, a specified amount of fresh water is supplied. Water supply is continued for a specified amount of time to ensure sufficient distribution throughout the chamber.

GAS SUPPLY AND STERILIZATION PHASE
After a specified amount of sterilization gas is supplied under pressure, the sterilization timer is activated and the sterilization process starts and continues for the specified

PURIFICATION PHASE (Vacuum/Air supply)
The system uses the pulse aeration method. A cycle consisting of vacuum attainment → vacuum maintenance → air admission → air maintenance is repeated for a specified number of times. The process uses purified air.

PROCESS COMPLETION
When all sterilization phases are completed it is indicated by the system. The safety mechanism guarding the system even after the sterilization process has been completed is an invisible feature ensuring the greater safety of the user.



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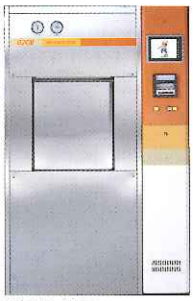
GXⅢ-R Swing Type Doors

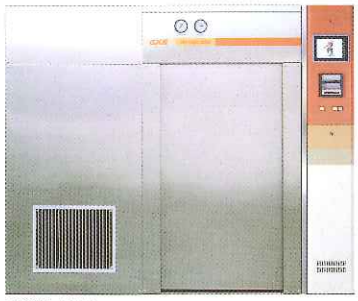

GXⅢ- R10


GXⅢ- R14

GXⅢ-U Slide Type Doors


GXⅢ- U55


GXⅢ- U67


GXⅢ- U14

STANDARD SPECIFICATIONS

Description
Ethylene Oxide Gas Sterilizer

Material:
Chamber/Door: SUS-304L
Jacket: SS-400

Performance
Sterilizing Pressure:
Maximum pressure – 0.18MPa
Sterilizing pressure – 0.12MPa
Door Gasket: Moving Gasket

★1. #1 Vertical Sliding Door
#2 Horizontal Sliding Door
#3 Swing Door
★2. Number loadable for 27 cm round type cast
★3. S = Shelves
MT = Loading Trolley
SF = Semi-floor Loading Cart
F = Floor Loading Cart

System specifications / Type	Chamber dimensions W × H × D(mm)	Capacity (ℓ)	Door type ★1	Cast ★2	Loading System ★3	System outer dimensions W	H	D
GXⅢ-U556-S	500 × 500 × 600	150	Slide#1	4	S/MT	1,150	1,800	1,100
559-S	500 × 500 × 900	230		6		1,150		1,400
677-S	670 × 670 × 700	310		8		1,220		1,200
6710-S	670 × 670 ×1000	440		12		1,220		1,500
6713-S	670 × 670 ×1300	580		16		1,220		1,800
1410-S	670 ×1400 ×1000	940	Slide#2	24	SF/F	2,200		1,500
1412-S	670 ×1400 ×1200	1,120		32		2,200		1,700
559-D	500 × 500 × 900	230	Slide#1	6	S/MT	1,150		1,210
6710-D	670 × 670 ×1000	440		12		1,220		1,310
6713-D	670 × 670 ×1300	580		16		1,220		1,610
1410-D	670 ×1400 ×1000	940	Slide#2	24	SF/F	2,200		1,450
1412-D	670 ×1400 ×1200	1,120		32		2,200		1,650
GXⅢ-R107-S	670 ×1000 × 700	470	Swing#3	12	S/MT	1,370		1,100
1010-S	670 ×1000 ×1000	670		18		1,370		1,400
1013-S	670 ×1000 ×1300	870		24		1,370		1,700
1410-S	670 ×1400 ×1000	940		24	SF/F	1,450		1,500
1412-S	670 ×1400 ×1200	1,120		32		1,450		1,700
1010-D	670 ×1000 ×1000	670		18	S/MT	1,370		1,260
1013-D	670 ×1000 ×1300	870		24		1,370		1,560
1410-D	670 ×1400 ×1000	940		24	SF/F	1,450		1,290
1412-D	670 ×1400 ×1200	1,120		32		1,450		1,490

INSTALLATION REQUIREMENTS

The following are required for installation.

★4. Steam : Stop with a valve
Pressure supply 0.3~0.65MPa
★5. Water : Stop with a valve
Pressure supply 0.1~0.25MPa
★6. Drain : Stop with a plug
Lay-out pipe independently
★7. Gas Exhaust (opt.) : Stop with a plug
★8. Air Compressor : Stop with a valve
Pressure Supply
0.65 ~ 0.75MPa
★9. Gas : Stop with high pressure valve
Capable of pressure more than 7.0MPa
★10. Power Source : AC200V 3φ (50/60Hz) (AC adjustable)
Air compressor : AC200V 3φ (50/60Hz) 5A

Installation requirements / Type	Steam ★4 kg/hr	Steam ★4 Caliber	Water supply ★5 ℓ/min	Water supply ★5 Caliber	Drain ★6 Caliber	Gas Exhaust ★7 Caliber	Air pressure ★8 Caliber	Gas ★9 Caliber	Power supply ★10 Ampare
GXⅢ-U556-S	5	20A	8	20A	40A	25A	15A	8mm	15A
559-S									
677-S	10								20A
6710-S									
6713-S	15								
1410-S	25		10		50A				30A
1412-S									
559-D	5		8		40A				20A
6710-D	10								
6713-D	15								
1410-D	25		10		50A				30A
1412-D									
GXⅢ-R107-S	15	20A	8	20A	40A	25A	15A	8mm	25A
1010-S									
1013-S	20								
1410-S	25		10		50A				30A
1412-S									
1010-D	15		8		40A				25A
1013-D	20								
1410-D	25		10		50A				30A
1412-D									

S : Single door D : Double door

- Use an exclusive pipe for venting out water, exhaust, and drain. Temperature may be higher than 100℃.
- Install drain pipes, steam exhaust pipes and safety valve exhaust pipes as required.
- For floor loading sterilizer, space is required below surface for installation (floor level −150 mm).

Subject to modification without notice to improve quality and performance.