

Laboratory Autoclave

SN 200/300/500 & SQ 500

Featured by high performance and easy operation, all models are equipped with a cooling fan as standard.

- Applicable to protein reforming at the highest temperature of 135 °C.
- By simple setting and operation, the autoclave manages ordinary sterilization, sterilization of culture mediums and liquids, and melting of culture mediums.
- In addition to default sterilization programs, custom-programmed ones can be saved for repeated use.
- To minimize cooling time, a cooling fan is provided for all models as standard equipment.
- The autoclave's operation panel and display are provided on the front part of its lid for easy reading.
- With a voltage-sensing power supply mounted as standard equipment, the autoclave can be connected to any power supplies of 100-120V AC and 200-240V AC.



Instrument sterilization program

For sterilization of laboratory instruments, such as flasks, beakers, test tubes and forceps

Sterilization and keep warm program

For sterilization and keep warm of culture mediums and liquids, including reagents

Melting and keep warm program

For melting and keep warm of solidified agar culture mediums

Liquid sterilization program

For sterilization of liquids, such as purified water and dilution water

Customer-programmed program

Temperature and processing time can be preset depending user's requirements.



Model SQ500

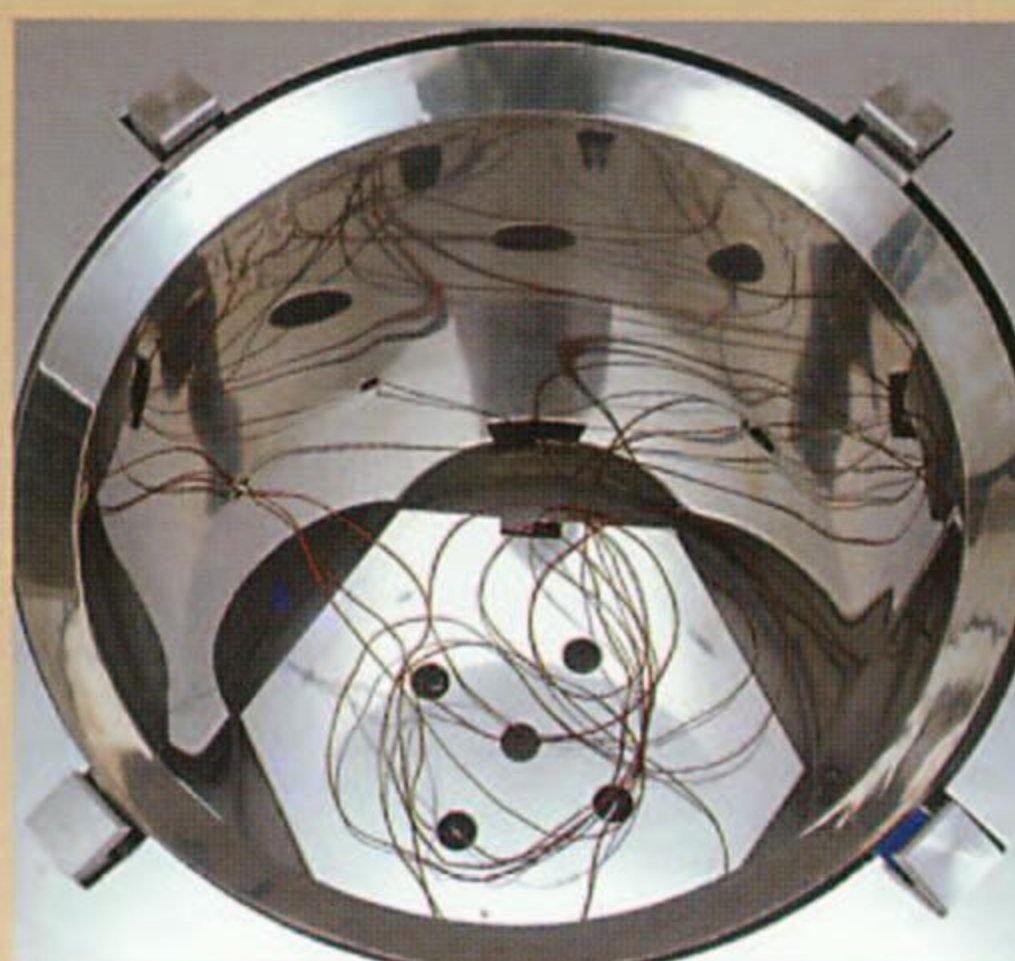
Prepared for GLP/GMP inspections



Two sensor ports are provided as standard on the chamber.



Recorders and high-performance pressure gauges are available as optional accessories.



An optional sample temperature sensor can start sterilization automatically.

With the optional mounted sample temperature sensor, you can precisely maintain a desired temperature for the samples to ensure thorough sterilization.



Front loading drain bottle

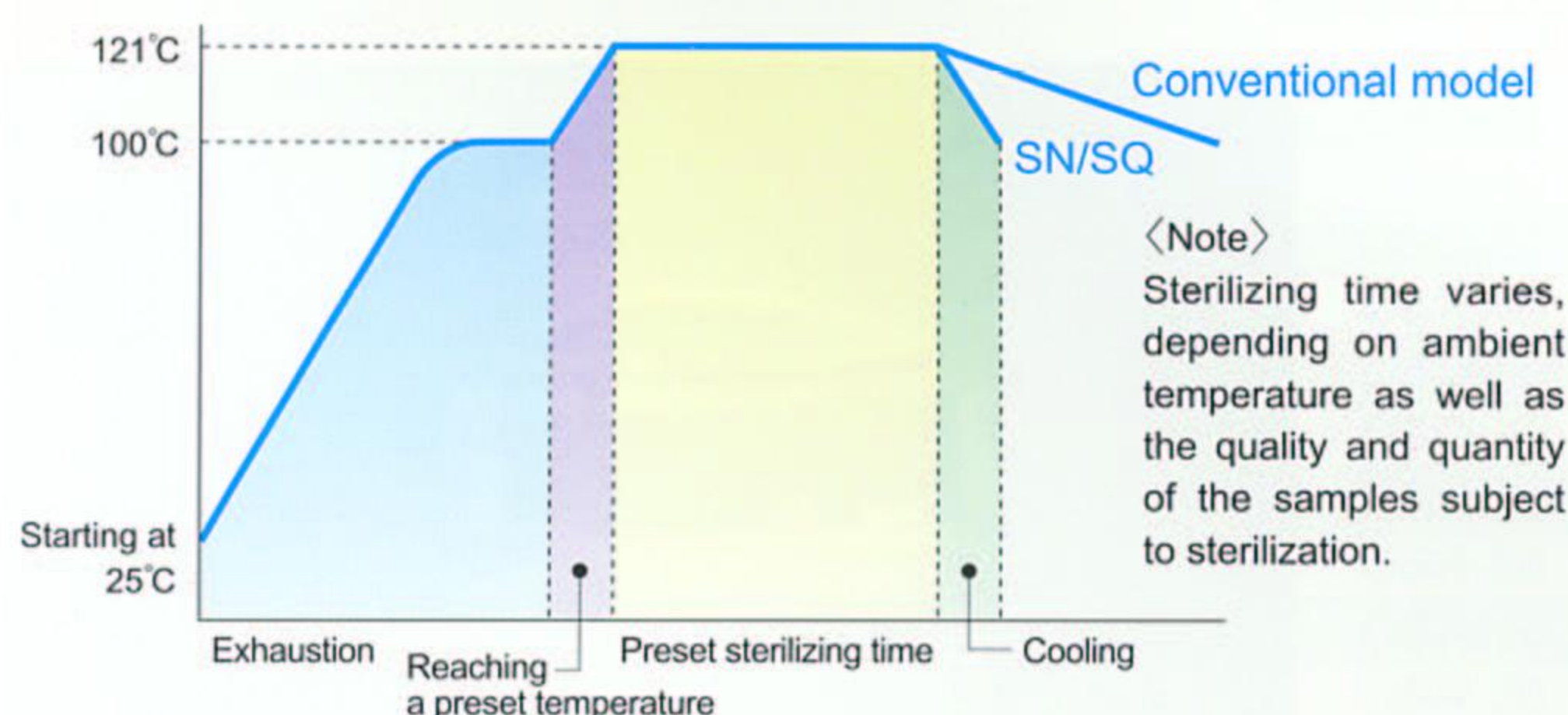
The drain bottle holder is provided behind the front panel for easy to check the drain water level.

Cooling fan as standard equipment

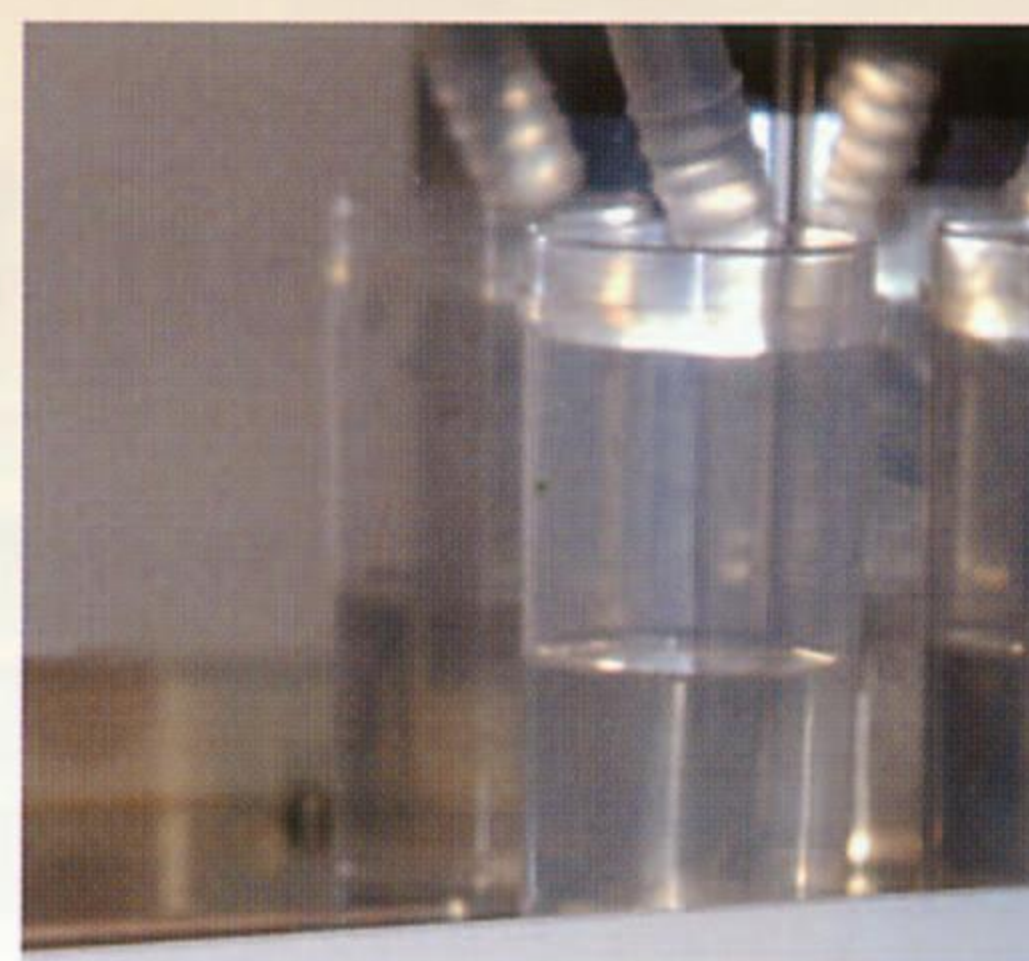
- The cooling fan starts when sterilization finishes.
- It quickly cools down the autoclave's internal temperature to a safe level.
- It shortens waiting time before the removal of sterilized samples.
- If you prefer natural cooling, preset the cooling fan to OFF.

Comparison of the cooling time of Model SN/SQ with conventional autoclaves

(Initial water temperature: 25°C, Sterilizing temperature: 121°C, Ambient temperature: 23°C)



•The cooling time from 121°C to 100°C was approximately 21 minutes for conventional autoclaves. It is shortened to approximately 3 minutes for model SN/SQ, which is equipped with a cooling fan as standard.



The photo shows Steam cup

Basic safety measures

- Steam cup
- Lid's interlock mechanism
- Self-diagnosis
- Alarm against the absence of a drain bottle
- Leakage breaker
- During any malfunction, the autoclave will automatically shutdown with the alarm buzzer sounding and an error message being displayed.
- Up to 20 errors can be saved to memory.



Easy to discharge sterilizing water

A large-diameter drainpipe is provided for easier maintenance.

Upwards opening lid for space savings

In comparison with conventional autoclaves, the new autoclaves require less space for installation.

Efficient use of time

The autoclaves are equipped with timer-start and preheating features as standard for efficient use of time.

The highest preset temperature is 135°C

At the highest preset temperature of 135°C, the autoclaves can manage protein-reforming process.

Voltage-sensing power unit

With a voltage-sensing power unit mounted as standard equipment, the autoclave can be chosen from any power supplies of 100-120V AC or 200-240V AC (single phase). You no longer have to worry about overseas voltage settings.

SN 200/300/500

Cooling fan as standard equipment

Upwards opening lid

Effective capacity : 20ℓ, 32ℓ, 47ℓ

Voltage-sensing power supply

Lid's interlock mechanism

Automatic saving of error history

Maximum temperature of 135°C



SQ 500 (low height type)

Cooling fan as standard equipment

Upwards opening lid

Effective capacity : 50ℓ

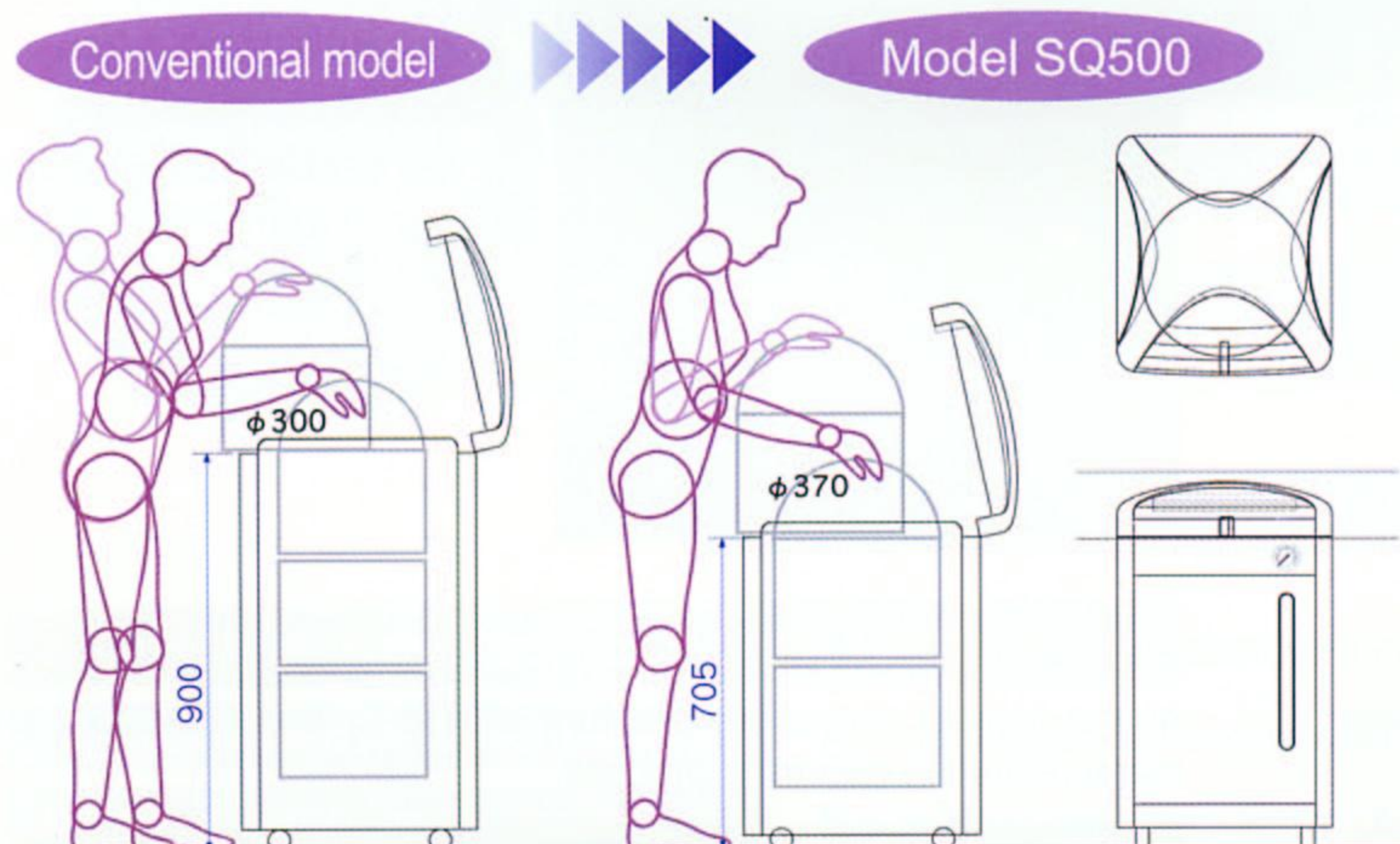
Voltage-sensing power supply

Lid's interlock mechanism

Low height type

Automatic saving of error history

Maximum temperature of 135°C



•With this low height, you can easily manage the samples for sterilization.



Specifications

Product code	241005 241054	299334 299335	241006 241055	299336 299337	241007 241056	299338 299339	241008 241057	299340 299341
Model #1	SN200(J) SN210(J)	SN200(E) SN210(E)	SN300(J) SN310(J)	SN300(E) SN310(E)	SN500(J) SN510(J)	SN500(E) SN510(E)	SQ500(J) SQ510(J)	SQ500(E) SQ510(E)
System	Automatic high-pressure steam sterilization system for laboratory use #2							
Performance	Range of working temperatures	45-135°C:45-60°C for preheating, 40-60°C for keep warm, 65-100°C for melting, 105-135°C for sterilization						
	Max. working pressure	0.255MPa						
	Ambient temperature	5-35°C						
Lid	Manual upward opening with an interlock for safety							
Main unit	Heater	100V, 1.2 kW (600W 2 units)	100V, 1.6 kW (800W 2 units)	100V, 1.9 kW (950W 2 units)	100V, 2 kW (1000W 2 units)			
	Exhaust valve	An exhaust valve and a slow release valve						
	Connection ports for optional accessories	1/4" female thread for, sample temp. sensor, chamber temp. sensor, and pressure sensor (branching from the solenoid valve tubing) Total :3 ports						
	Cooling fan	Axial fan motor						
Controller	Temperature setting, control and display	PID control by microprocessor, digital setting (by UP/DOWN keys) and display						
	Timer and its resolution	0 or 1 minute to 99 hours 59 minutes in increments/decrements of 1 minute						
	Operation mode	Instrument sterilization course, liquid sterilization course, sterilization and keep/warm course, melting and keep/warm course, customer-programmed course						
	Other features	Key locking, presetting, saving, preheating, forced cooling, sample temperature sensor (option), memory locking, saving the history of up to 20 errors, indication of accumulated working hours, indication of present time, on-off beeping setting						
Safety measures	Sensor malfunctioning, SSR short-circuit, broken heater wire, prevention of idle heating (liquid expansion type), alarm against the absence of a drain bottle, failure in locking the cover, memory malfunctioning, pressure relief valve (0.255 MPa)							
Classification of pressure vessel	Small pressure vessel (installation report to authorities is not required)							
Specifications	External dimensions(mm)#3	400(W)×530(D)×848(H)	460(W)×590(D)×848(H)	460(W)×590(D)×1,058(H)	520(W)×660(D)×876(H)			
	Effective internal dimensions(mm)	240(inner diameter)×445(depth)	300(inner diameter)×445(depth)	300(inner diameter)×665(depth)	370(inner diameter)×410(depth)			
	Effective Capacity	20ℓ	32ℓ	47ℓ	50ℓ			
	Weight	Approx. 65 kg	Approx. 75 kg	Approx. 85 kg	Approx. 95 kg			
	Power supply	SN200 100-120V AC(12.5A-15A)	SN300 100-120V AC(16.5A-20A)○	SN500 100-120V AC(19.5A-23.5A)○	SN500 100-120V AC(20.5A-24.5A)○			
Accessories	Stainless Basket (mesh type)							
	OSM-60(205mm diameter × 204mm deep) × 2 for SN200/210 OSM-70(262mm diameter × 204mm deep) × 2 for SN300/310 OSM-70(262mm diameter × 204mm deep) × 3 for SN500/510 OSQ-90(332mm diameter × 195.5mm deep) × 2 for SQ500/510							
Steam cup × 1, drain bottle × 1, Drain board × 1, Chemical indicator × 1 set (30 pieces)								

○ Power plug is not provided. #1 Abbreviation (J) is Operation panel board in Japanese and (E) is in English. #2 The autoclaves are not for medical use.

#3 External dimensions exclude protrusions.

Optional accessories



• In addition to absorbent gauzes, laboratory garments and culturing instruments, a wide selection of basket and containers for laboratory waste are available.



• Stainless bucket

Product code	Description	Model	Corresponding models
241087	Basket (mesh type)	OSM-60	For SM/SN/SP200
241088		OSM-70	For SM/SN300/500/SP300 ※
241089		OSM-80	For SM/SN/SP500 ※
241099		OSQ-90	For SQ500
241093	Basket (mesh type) with stacking fitting	OSQ-30	For SM/SN/SP200, with two fittings/set ※
241092		OSQ-40	For SM/SN/SP300, with two fittings/set ※
241091		OSQ-50	For SM/SN/SP500, with three fittings/set ※
241090	Basket (mesh type) with a mesh shelf	OSR-40	For SQ500, with two fittings/set
241096		OSQ-60	For SM/SN/SP200, with 1 mesh shelf ※
241095		OSQ-70	For SM/SN/SP300, with 1 mesh shelf ※
241094		OSQ-80	For SM/SN/SP500, with 2 mesh shelves ※
241097	Stainless solid basket	OSR-50	For SQ500, with 1 mesh shelf
241083		OSR-10	For SM/SN/SP200 ※
241084		OSR-20	For SM/SN/SP300/500 ※
241098	Stainless bucket	OSR-60	For SQ500
241150		OSN10	For SM/SN/SP200
241151		OSN12	For SM/SN/SP300/500
241152	Chamber temperature sensor	OSN14	For SQ500
241153		OSR-70	For SN/SQ, Type T thermocouple, 3 pieces/set
241154		OSN16	For SN/SQ, Type T thermocouple, 1 piece
241155		OSN18	For SN/SQ, external installation
241156		RM10C	6-point type, temp. and pressure recording external installation
241157		OSN20	For SN/SQ
241158		OSN22	For SN/SQ, 4 - 20 mA
241159	OSN24	For SN/SQ, relay, contact output	

※ Can be also used with conventional models SM200/300/500/510 and SP200/300/500/510.