



**ZEALWAY (Xiamen) Instrument INC.**



GR SERIES AUTOCLAVE  
GI SERIES AUTOCLAVE  
S SERIES ULTRASONIC CLEANER

[www.zealway.com.cn](http://www.zealway.com.cn)

Thousands of laboratory instruments are produced everyday in the world,  
A tiny part of them need to satisfy more stringent requirements:  
more safer, more easier, more intelligent and more tasteful...  
The more requirements are demanded, the greater missions are given.  
ZEALWAY is destined to be the representative of higher-end products.



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# Company profile<<

ZEALWAY (Xiamen) Instrument INC. is a sole proprietorship of the US-based ZEALWAY Instrument INC. and specializes in the production of laboratory instruments, such as autoclave and ultrasonic cleaner, etc. We have imported a full-set production and testing equipments and relied on the advanced technologies and management experiences of America with an aim to guarantee globally conforming quality standards. As excellent performances and elegant, fashionable profiles, our products enjoy the high reputation among the clients both from at home and abroad.

Currently, we have acquired a national license for medical instrument production and a national product registration certificate. All our products with pressure vessel certificate. Meanwhile, we have passed CE test, ISO9001, and ISO13485 certification by DNV.

# GR SERIES AUTOCLAVE >>



## To meet the requirements of a future lab

GR series intelligent autoclaves - a once-off selection that exempts the worries of continual upgrading

### Heavy-gauge sterilization chamber

The heavy-gauge sterilization chamber in a diameter of 40cm offers a massive space to satisfy various sterilization requirements.

### Microcomputer control system

The latest "Inspiration" fast-speed microcomputer intelligent control system is highly robust to not only realize the total-process controls of sterilization, but also enable convenient maintenance, inquiry, calibration, recording and upward scalability in the future. It allows three tiers of administrations, i.e. user, user administrator and engineer, to guarantee satisfactory use and management of the autoclave.

## Waste sterilization mode

Dedicated waste sterilization procedures are established for effective sterilization of lab wastes.

## Drying

Thoroughly drying according to CE standards

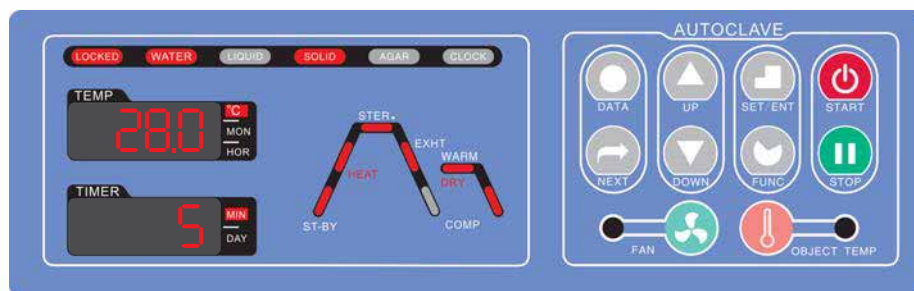
## Cooling lock OPEN temperature

Each procedure can set different cooling lock OPEN temperatures according to the thermal inertia of the sterilization object so as to prevent the user from opening the cover and hence getting burnt when the sterilization object (particularly liquid object) is still in an unsafe state.

## Sterilizing temperature

105 to 138°C

## Simple and easily understandable and operable control panel



The control panel is installed on the top cover for the convenience of operation and observation. A four-digit temperature display that conforms to the latest national and industrial standards is provided. The status flow chart clearly displays the autoclave's working conditions, including the present sterilization mode, present working state, completed sterilization steps and impending sterilization steps. Press "DATA" key at any time to check the specific parameters of the present procedure.

## Preset Procedures

Six sterilization procedures and warming procedures are preset for the sterilizing, warming and drying of solids and liquids, the melting and warming of agars.



## Safety

Mechanical interlocking: the unique "eight-column evenly distributed" interlocking device is safer and more reliable than common interlocking devices. The electric double inner locks enable the control system to monitor the temperature and pressure in the sterilization chamber on a real-time basis and disable opening of the sterilization chamber cover until the safe temperature and pressure are reached, hence guaranteeing the personal safety of the operator.

Agar processing	Timed startup	Saturated steam monitoring
It can heat and melt down and preserve the heat of agars or preheat the sterilization chamber.	It is possible to preset a time program so that the autoclave can be automatically started for sterilization according to the preset schedule.	The system can automatically monitor the discharge conditions of cold air so as to guarantee a sterilizing environment of pure steams and optimal sterilization effects.
Automatic water feeding	Steam discharge control	Ergonomic design
Exempt the convenience of frequent water feeding; water level sensors are installed to automatically stop the autoclave and give out alarms when water is running out.	Upon completion of sterilization procedure, the vent valve can automatically open to discharge steams at the preset temperature.	The chamber cover and bench are covered with a resin coating for heat insulation and to avoid hand burns. The chamber door that flips open upwards saves greater space compared with the horizontally-sliding door. The round-corner design is expected to avoid collisions and personal injuries. The cover open/close device is installed at the front part of the top for convenient operations.
Memory system	Calibration interface	
The operator can set the sterilization parameters and create as many as 60 procedures that can be readily used.	Temperature and pressure calibration interfaces are available for calibration purpose.	

## GR Series Configuration

Features		Model	GR60DR GR85DR GR110DR	GR60DF GR85DF GR110DF	GR60DA GR85DA GR110DA
Sterilization mode	Solid mode: Heating→Sterilizing→Exhausting and air cooling		Yes	Yes	Yes
	Solid with drying mode: Heating→Sterilizing→Exhausting and air cooling →Water drainage→Drying		Yes	No	No
	Liquid with warming mode: Heating→Sterilizing→Precooling→Exhausting→Warming		Yes	Yes	Yes
	Liquid mode: Heating→Sterilizing→Precooling→Steam exhausting		Yes	Yes	Yes
	Waste mode: Heating→Sterilizing→Steam exhausting and air cooling		Yes	Yes	Yes
	Agar mode: Heating→Melting→Warming		Yes	Yes	Yes
Automatic water feeding			Standard	Standard	No
Water level sensor			Standard	Standard	No
Cooling fan			Standard	Standard	Optional
Load thermometer			Optional	Optional	Optional
Printer			Optional	Optional	Optional
Memory system			Create 60 procedures	Create 60 procedures	Create 20 procedures

## Technical Data

Model	GR60DR GR60DF GR60DA	GR85DR GR85DF GR85DA	GR110DR GR110DF GR110DA
Capacity	60L	85L	110L
Dimension (L x W x H)	660mmx644mmx980mm	660mmx644mmx980mm	660mmx644mmx1180mm
Sterilization chamber Dimension (Dia. x H)	Φ 400mm x 505mm	Φ 400mm x 700mm	Φ 400mm x 895mm
Rated power supply	220V 50Hz/60Hz		
Rated power	2900W	4600W	4600W
Working environment	5-40℃, relative humidity 10% to 85%		
Sterilization chamber material	SUS304		
Sterilization temperature	105 to 138℃		
Preset range of sterilization time	1 to 300 minutes		
Preset range of melting temperature	60 to 100℃		
Preset range of melting time	1 to 300 minutes		
Preset range of warming temperature	45 to 60℃		
Preset range of warming time	1 to 9999 minutes		
Preset range of drying time	1 to 300 minutes (only for GR60DR/GR85DR/GR110DR)		
Preset range of cooling lock OPEN temperature	40 to 99℃ for solid and agar modes and 40 to 80℃ for liquid and waste modes		
Preset range of steam exhausting temperature	73 to 104℃		
Exhausting mode	Fully automatic internal discharging embedded with a steam trapping bottle		
Preset range of Timer	0 minute - 6 days delayed		
Range of pressure gauge	0 to 0.6Mpa		
Rated working pressure	0.27Mpa		
Controller	"Inspiration" fast-speed microcomputer intelligent control system		
Safety device	"eight-column evenly distributed" interlocking device, electric double inner locks, dry scorch protection, overpressure protection, safety valve, over temperature protection, over current and short circuit protection, leakage protection, cooling lock, anti-scald chamber cover and bench, automatic troubleshooting		
Accessories	stainless steel basket		

## Optional Parts

- 1.Printer:** it can record the sterilization parameters and print one set of data per minute.
- 2.Cooling fan:** upon completion of the sterilization procedure, it can compulsorily lower the temperature in the sterilization chamber and hence shorten the operating time and improve work efficiency.
- 3.Load thermometer:** it is particularly applicable for substances with a high thermal inertia, e.g. resin, liquids, etc. After installation of the load thermometer, the thermostatic system can be switched between this sensor and the main instrument sensor.



# GI T SERIES AUTOCLAVE >>



## T Series:

New-generation Fully-automatic Autoclave

### Microcomputer control system

“ SMART III” microcomputer control system is adopted to realize not only the intelligent controls of the sterilization process but also the classified management of instruments (user, administrator and engineer three levels included ). As a result, we can guarantee satisfactory use and management of autoclaves.

### Multilayered pressure protection system

Our patented pressure interlocking device can automatically sense the pressure in the sterilization chamber and tightly locked, which effectively prevent personal injuries caused by spraying steams arising from misoperation. The system can monitor the pressure changes in the sterilization chamber on a real-time basis. Upon detection of any pressure anomaly, the dual overpressure protection system consisting of a safety valve and a pressure protective device will be actuated immediately to relieve pressures or disconnect power supplies.

### Unique anti-scald design

The cover and bench of the sterilization chamber are made of special plastics to give a nice look and avoid causing corrosions and scald. The unique steam discharge and collection system can help to prevent scald.

### Multiple sterilization modes

Five sterilization modes are preset for sterilization, drying and Warming of solid and liquid substances and for melting and Warming of agar separately.

## Temperature and pressure

Sterilizing temperature: 105 to 135°C Design pressure: 0.3MPa

## Simple and easily understandable control panel

A four-digit temperature display that conforms to the latest national and industrial standards is provided. The status flow chart clearly displays the autoclave's present sterilization mode, working conditions, completed sterilization steps and impending sterilization steps. Press "DATA" key at any time to check the specific parameters of the present procedure.



## Over Temperature Protection System

The system can monitor the temperature changes in the sterilization chamber on a real-time basis and disconnect power supplies immediately upon detection of over temperature or temperature variation anomaly.

## Automatic Troubleshooting System

Troubleshooting is conducted automatically upon startup. Acoustic alarms will be given and trouble code displayed if any trouble occurs during equipment operation.

## Safety and Function

<b>Dry scorch protection system</b> The system can monitor the water level in the sterilization chamber on a real-time basis and disconnect the power supply for protection immediately upon detection of overflow water level.	<b>Cover checking system</b> The system can automatically check the locking conditions of the cover. If the cover is not tightly locked, the autoclave can't be started.
<b>Leakage protection device</b> Upon detection of any electric leakage, the system will disconnect the power supply for protection of the operator immediately.	<b>Over current and short circuit protection</b> The system will disconnect the power supply for protection immediately upon detection of any over current or short circuit.
<b>Overpressure test procedure</b> It is used to check if the overpressure protection system has actuated safety valve or disconnected power supplies upon detection of any pressure anomaly.	
<b>Memory system</b> The operator can set the sterilization parameters and create new procedures that can be readily used.	<b>Timed startup</b> It is possible to preset a time program so that the autoclave can be automatically started for sterilization according to the preset schedule.
<b>Agar processing</b> It can heat and melt down and preserve the heat of agars or preheat the sterilization chamber.	<b>Steam discharge control</b> Upon completion of sterilization procedure, the vent valve can automatically open to discharge steams at the preset temperature.
<b>Taste</b> It is a perfect combination of ergonomics and structural aesthetics with a fashionable, neat and elegant profile design to satisfy your demands for quality and tasteful products.	

## Configuration

Features		Model	GI36TR/GI54TR GI80TR/GI100TR	GI36TW/GI54TW GI80TW/GI100TW	GI36T/GI54T GI80T/GI100T
Sterilization mode	Solid mode: Heating→Sterilizing→Exhausting		Yes	Yes	Exhausting controlled by a knob
	Solid with drying mode: Heating→Sterilizing→Exhausting→ Water drainage→Drying		Yes	No	No
	Liquid mode: Heating→Sterilizing→Precooling→ Exhausting		Yes	Yes	Exhausting controlled by a knob
	Liquid with warming mode: Heating→Sterilizing→Precooling→ Exhausting→warming		Yes	Yes	No
	Agar mode: Heating→Melting→Warming		Yes	Yes	Yes
Preset range of exhausting temperature			73 to 104℃	73 to 104℃	Exhausting controlled by a knob
Preset range of drying time			1 to 300 minutes	No	No
Status flow chart that displays work processes			Yes	Yes	Status indicator
Timed startup			0 minute - 6 days delayed	0 minute - 6 days delayed	No
Procedures created			60	60	20

## Technical Data

Model	GI36T/GI36TW GI36TR	GI54T/GI54TW GI54TR	GI80T/GI80TW GI80TR	GI100T/GI100TW GI100TR
Capacity	36	54	80	100
Outer dimension (WxDxH) (mm)	460 x 542 x 1070	460 x 542 x 1070	620 x 680 x 1040	620 x 680 x 1140
Sterilization chamber size (mm)	Φ 320 x 530	Φ 320 x 730	Φ 400 x 700	Φ 400 x 800
Rated power supply	220V 50Hz/60Hz			
Rated power (W)	2300	2900	4600	4600
working environment	5-40℃, relative humidity 10% to 85%			
Sterilization chamber material	SUS304 stainless steel			
Sterilization temperature	105 to 135℃			
Sterilization time	1 to 300 minutes			
Melting temperature	60 to 100℃			
Melting time	1 to 300 minutes			
Warming temperature	45 to 60℃			
Warming time	1 to 9999 minutes			
Exhausting mode	Fully automatic internal discharging, embedded with a steam trapping bottle			
Range of pressure gauge	0 to 0.6Mpa			
Controller	"SMART III" microcomputer control system			
Memory system	Memorable, no disappear even power off			
Safety device	Self-induction pressure interlocking device, over temperature protection system, dry scorch protection system, overpressure protection, safety valve, over current and short circuit protection, cover inspection system, leakage protection device, anti-scald safety protection and automatic troubleshooting system			
Accessories	Stainless steel baskets			
Optional parts	Printer and printing set			

# S SERIES >> ULTRASONIC CLEANER



- Unique outer edge design. The outer edge of the cleaning tank has one coating of special plastics that enhances the profile and works to anti-corrosion and anti-scalding.
- The cleaning tank is made of thickened special stainless steels to guarantee durability.
- High-performance transducers of an international brand are adopted to improve the cleaning effects.
- Highly robust intelligent microcomputer controls
- Embedded frequency scanning can effectively clean the dead corners and guarantee optimal cleaning effects.
- High ultrasonic powers but low noises



## Features

**Degasification:** it can rapidly remove the gases in solutions and evenly mix up the ultrasonic cleaning liquid, Preset range of degasification time: 1 to 99 minutes.

**Heating:** heating can be conducted independently or together with ultrasonic and degasification, Preset range of heating temperature: 0 to 80°C

**Adjustable power:** it is possible to readily and conveniently adjust the powers, range of power adjustment: 30% to 100%

**Water level control system:** the liquid level in the cleaning tank is monitored on a real-time basis, Power supply is disconnected and alarms given if the water level is too low.

**Over temperature protection system:** real-time measurement of solution temperature, If the temperature exceeds 75°C, an over temperature alarm will be given. If the temperature exceeds 80°C, operation will be stopped.

**Memory:** revised parameters can be saved and won't disappear even upon power failure.

**Automatic shutdown:** Preset range of cleaning time: 1 to 720 minutes. Considering the safety, the system will shut down automatically after 12 hours of continuous operations.

**Level line:** the cleaning tank is marked with a level line on the surface so that it is clearly visible if the cleaning liquids are sufficient inside.

**Water discharge:** water can be discharged by rotating the drainage valve on one side.

**Working frequency:** 40KHz  $\pm$  2K

## Technical Data

Parameter model	Capacity (L)	Size of wash tank (LxWxD) mm	Dimension (LxWxH)mm	Max input power(W)	Max output power (W)	Heating power (W)	Adjustable power(%)	Water drainage	Water level control system	Net weight (kg)
S04B	4	300x150x100	420x230x270	220	180	-	-	-	-	7.4
S04P				220	180	-	30-100	-	-	
S04H				450	180	250	30-100	-	-	
S06B	6	300x150x150	420x230x320	220	180	-	-	-	-	8
S06P				220	180	-	30-100	-	-	
S06H				450	180	250	30-100	-	-	
S10B	10	300x240x150	420x310x370	400	360	-	-	Y	Y	12.4
S10P				400	360	-	30-100	Y	Y	
S20H				900	360	500	30-100	Y	Y	
S22B	22.5	500x300x150	640x340x370	750	720	-	-	Y	Y	19.7
S22P				750	720	-	30-100	Y	Y	
S22H				1500	720	1000	30-100	Y	Y	



## **ZEALWAY (Xiamen) Instrument INC.**

Add: No. 136 Jiutianhu West 2nd Road, Xinglin Industrial  
Zone, Jimei District, Xiamen, Fujian, China.

Post Code: 361022

Tel: 0086-592-2615088

Fax: 0086-592-2615099

E-mail: [oversea@zealway.com.cn](mailto:oversea@zealway.com.cn)