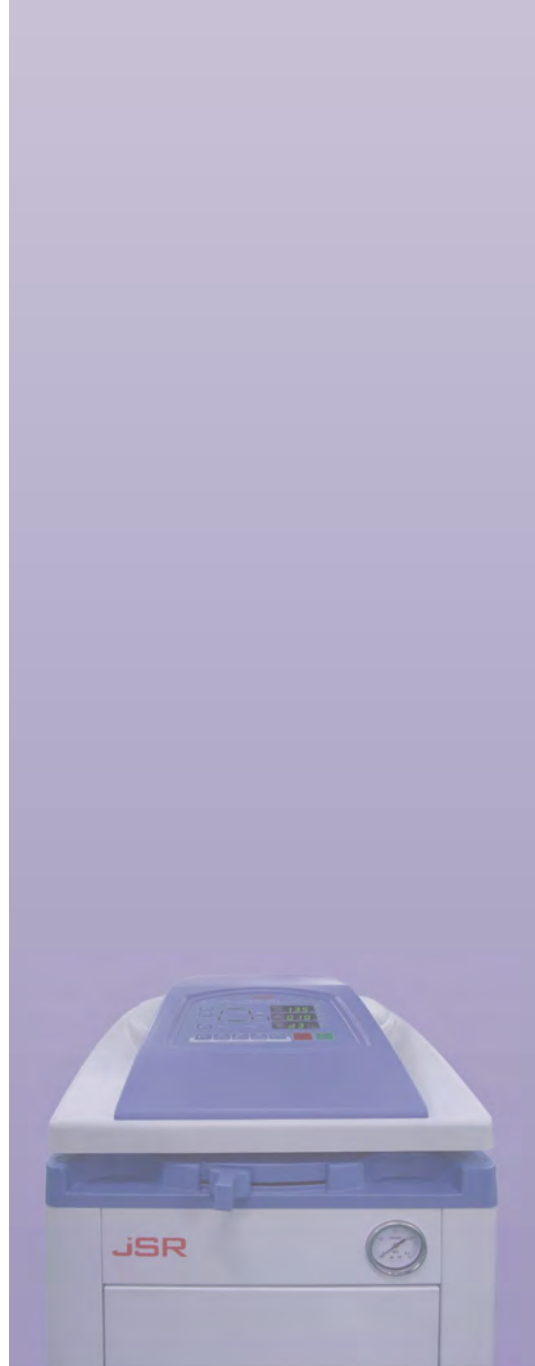


# AUTOCLAVE



**JSR**

[주] 제이에스리서치  
JS Research Inc.

# Laboratory

## STERILIZER

## SELECTION GUIDE

## Autoclave Sterilizer

### JSAT-Series Vertical Autoclave

- ▶ Max. 123 °C
- ▶ Timer On / Off
- ▶ Automatic sterilization cycle



MODEL	CAPACITY	TEMPERATURE	PRESSURE
JSAT-45	45 L	123 °C	0.12 MPa
JSAT-65	65 L		
JSAT-85	85 L		
JSAT-105	105 L		

### JSOF-S Series Dry Heat Sterilizer



- ▶ Max. 250 °C
- ▶ Constant Temperature
- ▶ Timer On / Off



MODEL	CAPACITY	TEMPERATURE	ACCURACY
JSOF-030S	33 L	amb. + 10 °C ~ 250 °C	± 0.2 °C
JSOF-050S	48 L		± 0.2 °C
JSON-030S	33 L		± 0.3 °C
JSON-050S	48 L		± 0.3 °C



### ▶ Program Control

Fully automatic autoclave cycle  
 Maximum sterilization temperature  
 and pressure up to 123 °C and 0.13 Mpa  
 Validation compliance performance  
 accuracy within  $\pm 0.5\text{ }^{\circ}\text{C}$   
 uniformity within  $\pm 2.0\text{ }^{\circ}\text{C}$

### ▶ Safety

SAFETY DOOR INTER-LOCKING SYSTEM  
 lock the door during operation which  
 integrated with temperature, pressure  
 in the chamber and in case electric cut-off

### ▶ Construction

Vertical loading chamber with light  
 weight self balanced door  
 Stainless steel 304 chamber,  
 lid and top plate

### ▶ Convenience Utility

Two steam collection bottles removes most  
 of steam generated during operation for  
 comfortable laboratory environment

# Laboratory STERILIZER

## AUTOCLAVE STEAM STERILIZER 123 °C Automatic



### Autoclave Steam Sterilizer




JSAT-Series Autoclave, Steam Sterilizer is for sterilization of bacteria, microorganism and virus with steamed hot air usually at 121°C, 0.12 Mpa. Sterilization for laboratory ware needs being sterilized before use such as flasks, bottles, pipets, animal cages and plastic ware, broth or agar media for bacterial culture or disposal of biohazard wastes such as syringe, cloth, gloves or petri dishes

-  Max. 121 °C 0.12 Mpa
-  Timer On / Off 
-  Safety Door Lock

*JSAT-Series Autoclave, Steam Sterilizer is an innovative replacement of conventional laboratory autoclave by providing reliable performance, up-to-dated design and safety door inter-lock system integrated with temperature and pressure for perfect user safety.*

### Specifications

<b>Temp. Range</b>	Maximum 123 °C
<b>Accuracy</b>	± 0.5 °C at 121°C
<b>Pressure</b>	Up to 0.12 Mpa
<b>Control</b>	Fully Automatic PID Control Auto START / STOP Timer
<b>Sensor</b>	Class A Pt-100 Ω Sensor
<b>Safety</b>	Over-Temperature Cut-Off Over-Pressure Cut-Off Over Current Cut-Off
<b>Material</b>	Body : Epoxy Powder Coated Steel Chamber : Stainless Steel 304
<b>Electric</b>	220 ± 10% VAC 50/60Hz 1-Phase

**Plug config.**  or  or 

### Control Accuracy

- ±0.1 °C Digital PID Controller
- Automatic START/STOP timer Max. 99min 59sec
- DUAL LED displays temperature and remaining time
- Temperature calibration and auto-tuning function
- Class A Pt-100 Ω sensor
- 정밀한 PID 컨트롤러는 온도를 ±0.1 °C 단위로 제어
- 예약 / 정지 타이머 내장 최대 99분 59초
- 온도, 잔여 시간 표시 디지털 LED 디스플레이
- 온도보정, 오토튜닝 기능 내장
- Class A Pt-100 Ω 온도센서

## Performance

- ▶ Vertical loading type chamber with 2 ea service basket
- ▶ Maximum sterilization temperature and pressure up to 123°C at 0.12 Mpa
- ▶ Automatic sterilization cycle starts just by setting sterilization temperature and time
- ▶ Stainless Steel 304 (AISI304) chamber, lid and top plate to protect from corrosion by water and steam
- ▶ Special plated heating element provides resistant to dry-burn, corrosion and guarantee long life in repeated use
- ▶ Two Stainless Steel Wire Basket included
- ▶ 기구 멸균에서 배양배지 멸균까지 다양한 멸균 용도에 적합
- ▶ 최고 멸균온도 123°C, 내압성능 0.12 MPa 멸균 조건 충족
- ▶ 온도와 멸균시간을 설정하면 자동으로 멸균 완료 후 알람
- ▶ 부식에 강한 스테인레스 스틸 히터
- ▶ 전해연마 처리된 스테인레스 스틸 와이어 멸균 바스켓 포함

## Convenience

- ▶ Vertical opening chamber lid with safety door lock for easy access to chamber and user safety
- ▶ Two steam collection bottle removes most of the steam during operation for comfortable laboratory environment
- ▶ Equipped with drain valve for cleaning or changing with fresh water
- ▶ Metallic body with durable epoxy powder coating
- ▶ High temperature and pressure resistant silicone gasket
- ▶ Built-in analog pressure gauge
- ▶ Manual pressure release valve
- ▶ Four casters for easy transport
- ▶ 수직으로 열리는 도어는 안전잠금장치가 장착되어 멸균물을 넣고 꺼내기 쉬우며 안전함
- ▶ 두개의 스팀 응축 포집병이 작동중 발생하는 스팀을 완벽히 제거하여 쾌적한 실험실 환경 유지, 드레인 밸브 장착
- ▶ 내구성이 강한 분체 도장 처리 본체
- ▶ 내부식성이 강한 Stainless Steel (SUS304) 챔버
- ▶ 밀착성과 기밀성이 뛰어난 내온 내압 고밀도 실리콘 가스켓
- ▶ 아나로그 압력계 내장
- ▶ 수동 압력 해제 밸브 장착
- ▶ 바퀴를 장착하여 이동 및 설치가 용이

## Ordering Information

	JSAT-45	JSAT-65	JSAT-85	JSAT-105
Chamber Volume (Capacity)	45 L	65 L	85 L	105 L
Dimensions Inner	Φ350 x H490	Φ350 x H680	Φ450 x H535	Φ450 x H665
W x D x H mm Usable	Φ350x H410	Φ350 x H620	Φ450 x H480	Φ450 x H610
Outer	555 x 670 x 955	555 x 670 x 1105	655 x 780 x 1010	655 x 780 x 1110
Basket x 2 ea	Φ330 x H190	Φ330 x H280	Φ430 x H220	Φ430 x H270
Temperature Range	up to 123 °C			
Accuracy	± 0.5 °C			
Uniformity	± 2.0 °C			
Heater Capacity	2.0 kW	3.0 kW	4.0 kW	5.0 kW
Power Rating	9.2 Amp	13.7 Amp	18.2 Amp	22.8 Amp
Electric	220VAC 50/60Hz 1P			
Power Plug	CEE 7/7 Schuko	CEE 7/7 Schuko	30 Amp	30 Amp

## Safety

- ▶ **SAFETY DOOR LOCK**  
Door interlocking system integrated with high temperature high pressure and electric cut-off
- ▶ **TRIPLE OVER TEMP. CUT-OFF**
  - 1) Controller cut-off heater, and AUDIO VISUAL ALARM in case +2°C above set temp. or +1°C above max. temp. 123°C
  - 2) Analog System cut-off heater in case 10% above set temp.
- ▶ **DUAL OVER PRESSURE CUT-OFF**
  - 1) Controller open pressure valve and AUDIO VISUAL ALARM in case +2°C above set temp. or +1°C above max. temp. 123°C
  - 2) Mechanical over pressure valve release pressure automatically in case over maximum pressure limit
- ▶ **ANALOG PRESSURE GAUGE**  
0 ~ 0.3 Mpa pressure gage indicating actual pressure
- ▶ **MANUAL PRESSURE RELEASE VALVE**
- ▶ **Electrical Leakage Breaker** : Over current cut-off
- ▶ **안전한 도어잠금장치**  
챔버의 온도와 압력을 감지하여 자동으로 잠금장치 작동 작동 중 전원 차단 시 잠금장치 작동
- ▶ **삼중과열방지장치**
  - 1) 설정온도 +2 °C 초과 시 또는 작동 한계온도+1°C 초과 시 히터 차단 및 알람
  - 2) 콘트롤러오류로 인하여 설정온도 +10% 초과 시 히터 차단
- ▶ **이중압력안전장치**
  - 1) 설정온도 +2 °C 초과 시 또는 작동 한계온도+1°C 초과 시 밸브 개방 및 알람
  - 2) 작동 한계 압력을 초과할시 자동으로 밸브를 열어 압력해제
- ▶ **아나로그 압력계** : 챔버내부에 압력 유무를 확인
- ▶ **수동 압력해제 밸브**
- ▶ **누전차단기** : 전기 누설 시 주전원 차단

JSAT-시리즈 전제품에 대하여  
 까다로운 품질검사와  
 엄격한 적격성평가와  
 밸리데이션을 통하여  
 멸균력이 입증된 제품만을  
 생산하고 있습니다.

THINK  
INNOVATION

Safe  
Reliable  
Performance



NEW  
JSAT-SERIES

AUTOCLAVE  
STERILIZER

Innovation

**JSR**



# RELIABLE PERFORMANCE

## JSAT-Series Autoclave, Steam Sterilizer

is an innovative replacement of conventional laboratory autoclave by providing reliable performance, up-to-dated design and safety door inter-lock system integrated with temperature and pressure for perfect user safety.

	Max. 123 °C 0.12 Mpa
	Automatic Process
	Safety Door Lock
	Timer On / Off 



- ✓ 안전한 도어잠금장치
- ✓ 개폐가손쉬운도어
- ✓ 넓은챔버내경
- ✓ 사용이편리한낮은높이
- ✓ 적은양의 스팀배출

## Technical Specifications

TEMP. RANGE	Maximum 123 °C
ACCURACY	± 0.5 °C at 121°C
PRESSURE	up to 0.12 Mpa
CONTROL	Fully automatic cycle PID control AUTO START/STOP Timer
SENSOR	Class A Pt-100Ω Sensor
SAFETY	Over Temperature Cut-Off Over Pressure Cut-Off Over Current Cut-Off
MATERIAL	Body : Epoxy powder coated steel Chamber : Stainless Steel 304
ELECTRIC REQ. PLUG CONFIG.	220 ± 10% VAC 50/60Hz 1-Phase



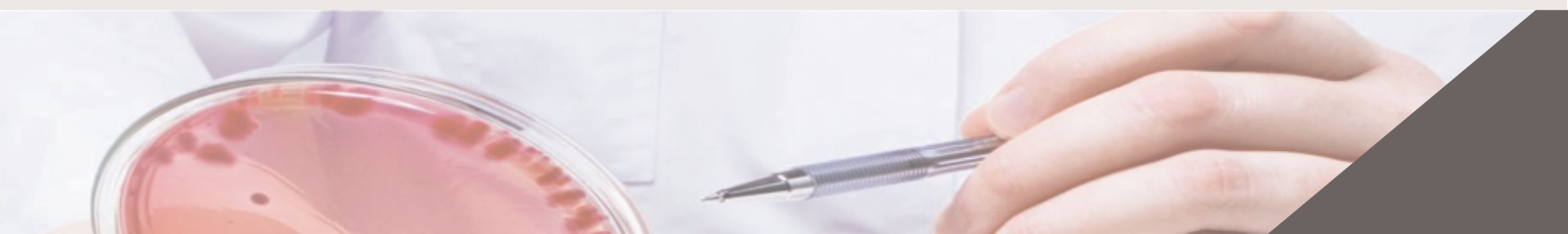
CEE 7/7 Schuko



BS 1363



30 Amp



## Features and Benefits

### Control Accuracy

- ▶  $\pm 0.1^{\circ}\text{C}$  Digital PID Controller
- ▶ Automatic START/STOP timer, Max. 99min 59sec
- ▶ DUAL LED displays temperature and remaining time
- ▶ Temperature calibration and auto-tuning function
- ▶ Class A Pt-100  $\Omega$  sensor

- ▶ 정밀한 PID 컨트롤러는 온도를  $\pm 0.1^{\circ}\text{C}$  단위로 제어
- ▶ 예약 / 정지 타이머 내장, 최대 99분 59초
- ▶ 온도, 잔여 시간 표시 디지털 LED 디스플레이
- ▶ 온도보정, 오토튜닝 기능 내장
- ▶ Class A Pt-100  $\Omega$  온도센서

### Performance

- ▶ Vertical loading type chamber with 2 ea service basket
- ▶ Maximum sterilization temperature and pressure up to  $123^{\circ}\text{C}$  at 0.12 Mpa
- ▶ Automatic sterilization cycle starts just by setting sterilization temperature and time
- ▶ Stainless Steel 304 (AISI304) chamber, lid and top plate to protect from corrosion by water and steam
- ▶ Special plated heating element provides resistant to dry-burn, corrosion and guarantee long life in repeated use
- ▶ Two Stainless Steel Wire Basket included

- ▶ 기구 멸균에서 배양배지 멸균까지 다양한 멸균 용도에 적합
- ▶ 최고 멸균온도  $123^{\circ}\text{C}$ , 내압성능 0.12 MPa 멸균 조건 충족
- ▶ 온도와 멸균시간을 설정하면 자동으로 멸균 완료 후 알람
- ▶ 부식에 강한 스테인레스 스틸 히터
- ▶ 전해연마 처리된 스테인레스 스틸 와이어 멸균 바스켓 포함

### Convenience

- ▶ Steam collection bottle removes most of the steam during operation for comfortable laboratory environment
- ▶ Equipped with drain valve for cleaning or changing with fresh water
- ▶ Metallic body with durable epoxy powder coating
- ▶ High temperature and pressure resistant silicone gasket
- ▶ Built-in analog pressure gauge
- ▶ Manual pressure release valve
- ▶ Four casters for easy transport

- ▶ 스팀 응축 포집병이 작동중 발생하는 스팀을 제거하여 쾌적한 실험실 환경 유지, 드레인 밸브 장착
- ▶ 내구성이 강한 분체 도장 처리 본체
- ▶ 내부식성이 강한 Stainless Steel (SUS304) 챔버
- ▶ 밀착성과 기밀성이 뛰어난 내온 내압 고무도 실리콘 가스켓
- ▶ 아나로그 압력계 내장
- ▶ 수동 압력 해제 밸브 장착
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JSAT-시리즈 전제품에 대하여  
까다로운 품질검사와  
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밸리데이션을 통하여  
멸균력이 입증된 제품만을  
생산하고 있습니다.

VALIDATION  
COMPLIANCE

**STERILITY  
ASSURED**



# DOOR INTERLOCK SAFETY SYSTEM

## Safety

### ▶ SAFETY DOOR LOCK

Door interlocking system integrated with high temperature high pressure and electric cut-off

### ▶ TRIPLE OVER TEMP. CUT-OFF

- 1) Controller cut-off heater, and AUDIO VISUAL ALARM in case +2°C above set temp. or +1°C above max. temp. 123°C
- 2) Analog System cut-off heater in case 10% above set temp.

### ▶ DUAL OVER PRESSURE CUT-OFF

- 1) Controller open pressure valve and AUDIO VISUAL ALARM in case +2°C above set temp. or +1°C above max. temp. 123°C
- 2) Mechanical over pressure valve release pressure automatically in case over maximum pressure limit

### ▶ ANALOG PRESSURE GAUGE

0 - 0.3 Mpa pressure gage indicating actual pressure

### ▶ MANUAL PRESSURE RELEASE VALVE

### ▶ Electrical Leakage Breaker : Over current cut-off

### ▶ 안전한 도어잠금장치

챔버의 온도와 압력을 감지하여 자동으로 잠금장치 작동 작동 중 전원 차단 시 잠금장치 작동

### ▶ 삼중과열방지장치

- 1) 설정온도 +2 °C 초과 시 또는 작동 한계온도 +1°C 초과 시 히터 차단 및 알람
- 2) 콘트롤러오류로 인하여 설정온도 +10% 초과 시 히터 차단

### ▶ 이중압력안전장치

- 1) 설정온도 +2 °C 초과 시 또는 작동 한계온도 +1°C 초과 시 밸브 개방 및 알람
- 2) 작동 한계 압력을 초과할시 자동으로 밸브를 열어 압력해제

### ▶ 아나로그 압력계 : 챔버내부에 압력 유무를 확인

### ▶ 수동 압력해제 밸브

### ▶ 누전차단기 : 전기 누설 시 주전원 차단

## Ordering Information

	JSAT-45	JSAT-65	JSAT-85	JSAT-105
Chamber Volume (Capacity)	45 L	65 L	85 L	105 L
Dimensions Inner	Φ350 x H490	Φ350 x H680	Φ450 x H535	Φ450 x H665
W x D x H mm Usable	Φ350 x H410	Φ350 x H620	Φ450 x H480	Φ450 x H610
	555 x 670 x 955	555 x 670 x 1105	655 x 780 x 1010	655 x 780 x 1110
	Basket x 2 ea	Φ330 x H195	Φ330 x H280	Φ430 x H220
Temperature Range	up to 123 °C			
	Accuracy ± 0.5 °C			
	Uniformity ± 2.0 °C			
Heater Capacity	2.0 kW	3.0 kW	4.0 kW	5.0 kW
Power Rating	9.2 Amp	13.7 Amp	18.2 Amp	22.8 Amp
Electric	220VAC 50/60Hz 1P			
Power Plug	CEE 7/7 Schuko	CEE 7/7 Schuko	30 Amp	30 Amp

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