Autoclave

Lab Series

- VMB series are the newest products for lab channel in 2017. There are 50 & 82 Liters. According to your requirement, STURDY provides you three different type-Economic, Standard and Advanced.
- SA-300VLA is designed for Lab and Research Centers. The most important feature is a temperature Sensor for more precise liquid temperature control. It also has piped water supply and auto water fill.
- SA-300VL is suitable for Lab and Research Centers. It is upright systems and contains enough vertical space for two baskets.

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Lab Series

Features

VMB Series

- LCD display
- Fast cooling
- Steam condenser
- Pre-reservation for auto-start
- Double interlock with pressure & temperature
- Agar/dissolution program
- Multiple language support
- Printer and data recorder(SD card)
- Automatic overflow detection for drain water bottle
- Complied with Pressure Equipment: PED 2014/68/EU
  Safety: EN/IEC 61010-1, EN/IEC 61010-2-040
  Electromagnetic compatibility (EMC): EN/IEC 61326-1
  Quality System: ISO 13485
- Chamber volume: 50L / 82L

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Features

SA-300VLA

- Digital temperature control
- Graduated sterilization timer
- Liquid temperature sensor for more precise liquid temperature control
- Auto water fill (pied-in)
- Chamber volume: 50 L

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Features

SA-300VL

- Digital temperature control
- Pressure overload protection
- Overheat protection
- Door safety mechanisms
- Pressure auto door lock
- Chamber volume: 50 L

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VMB Series External View

A SD memory card slot

B Power & Pipe heating

C Printer

D Pressure gauge

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SA-300VLA External View

A Handle

B Gauge

C Liquid temperature sensor for more precise liquid temperature control

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SA-300VL External View

A Door handle

B Adjustable for exhaust

C Pressure / temperature gauge

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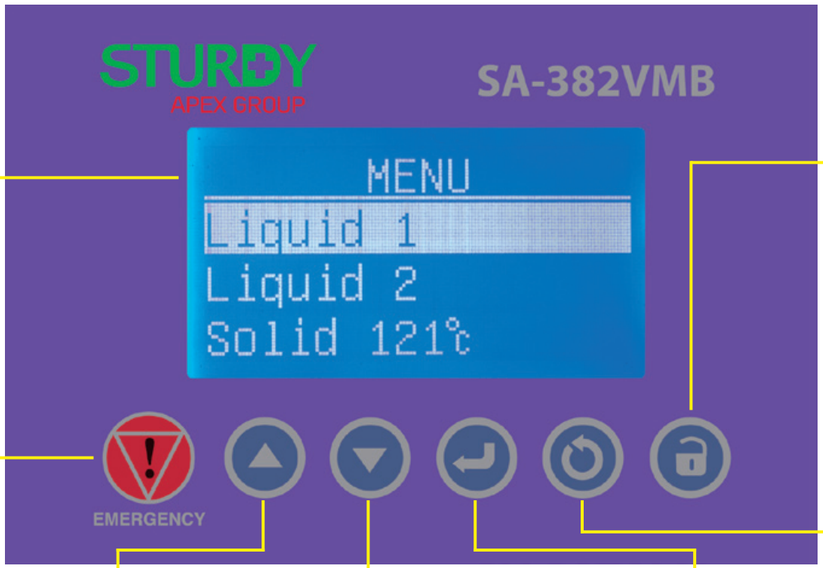
VMB Control Panel



LCD panel:
Display of machine status and for the program to process information.

"Emergency stop" button:
After pressing this button at any time, the program stops, where the inner chamber will immediately relieve pressure and air.

"Unlock" button:
Only usable when no program is executed or the program is completed. This button is not functional at other times. When the door locks up automatically, press this button and the machine unlocks automatically, which will shut off after 10 seconds.

"Cancel/ Return:" button:
Cancellation of modification and return to previous page.
When pressing the "Cancel" button during program execution, the "Confirm" icon will appear and when this is pressed, the program will continue.

"Up" button:
Used to go up in the menu and increase figures in the program.

"Down" button:
Used to go down in the menu and decrease figures in the program.

"Confirm" button:
Activation of program selected or entry for parameter modification.

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SA-300VLA Control Panel

Main temperature control : Normal program use, the rang is 105 ~ 136°C

Liquid temperature control : Liquid program use, temperature is 121°C

Sterilization timer : The digital is count down when it power on. The maximum rang is 1 sec. To 60 minute.

Alarm lit : It is over temperature or pressure when the lamp turns on.

Add water indicator : It is add water step when the lamp turns on.

Heat indicator : It is warm up step when the lamp turns on.

Steri. Indicator : It is sterilization step when the lamp turns on.

Exhaust indicator : It is exhaust step when the lamp turns on.

Complete indicator : The cycle is finish when the lamp turns on.

Sensor selector switch : The liquid program is active when the lamp turns on.

Emergency switch : The emergency event occur when the lamp turns on. You can hear the alarm sound and exhaust the pressure and water inside of chamber.

Start switch : Press the switch for start program.

Power switch

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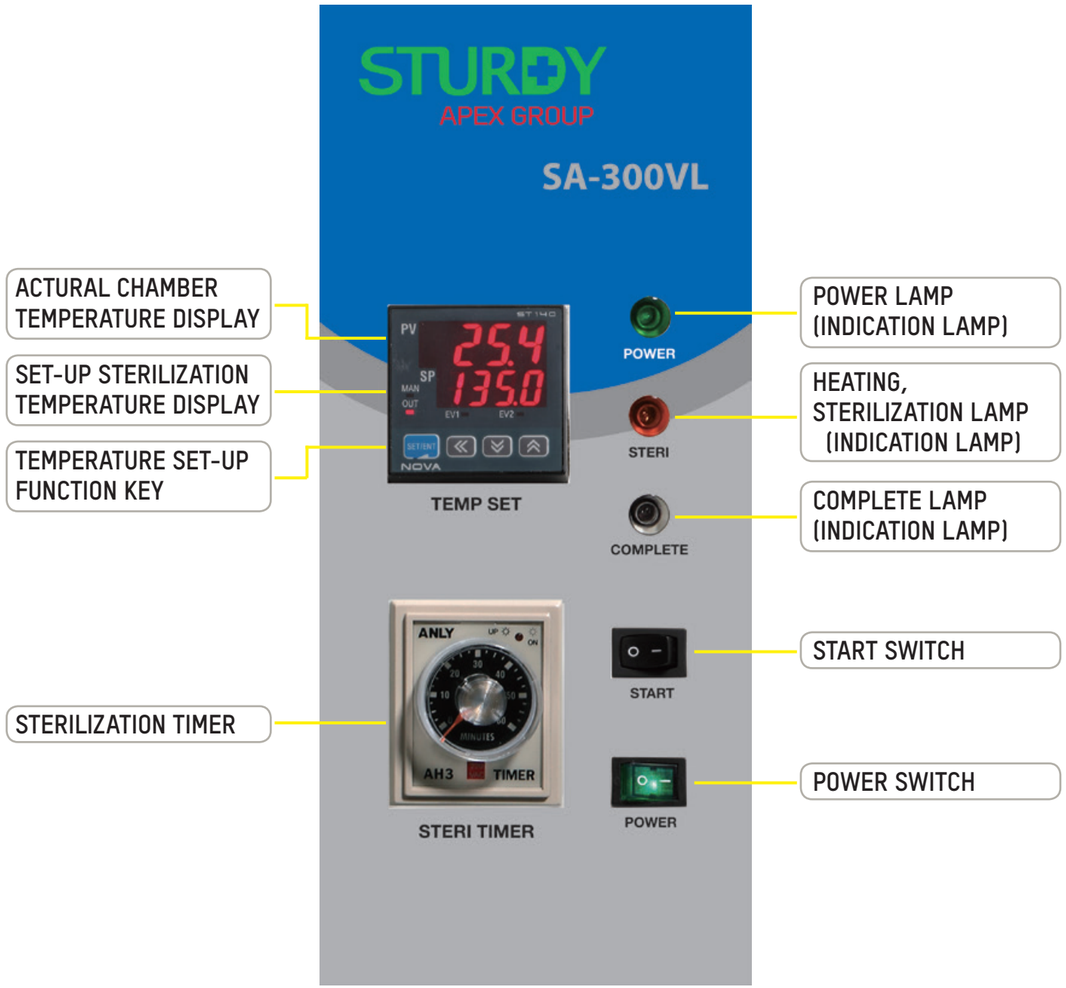
SA-300VL Control Panel



Lab Series

Certifications

Sturdy is manufactured in compliance with the following directives and standards:

- 93/42/EEC
- Class IIB (European Directive for Medical Devices)
- 2014/68/EU (Pressure Equipment Directive)
- EN 285 (Large Steam Sterilizers),
- EN 13060 (Small Steam Sterilizers)
- EN 61010-1/-2-040 (Safety Requirements for Electrical Equipment for Measurement
- Control And Laboratory Use – Part 1 and Part 2)
- EN 61326-1 (Electrical Equipment for Measurement
- Control And Laboratory Use – EMC Requirements – Part 1: General Requirements)
- ISO 13485 (Quality Management/Certification)

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VMB Series Specifications

Model NO.	SA-380VMB	SA-382VMB
Overall Dimension (mm)	670WX580DX830H	670WX580DX1010H
Chamber Size (mm)	Ø380 x 481H	Ø380 X756H
Chamber Capacity (Liter)	50	82
Drain Water Bottle Capacity (Liter)	N/A	6

Note: We provide the following three types of specification with a flexible range of features.

Type	Economic	Standard	Advanced
Sterilization Temp.		105˚C-135˚C	
Sterilization Time		1-419 min	
Dissolution Temp.		60˚C-100˚C	
Dissolution Time		1-179 min	
Warm Temp. Range		40˚C-60˚C	
Warm Time		99 hr	
Fast cooling		4 Fan motor	
Floating Sensor		PT-100	
Vacuum Pump	N/A	N/A	S
Automatic Adding Water	N/A	S	S
Printer	N/A	S	S
SD CARD	N/A	S	S
Program	Solid 121˚C / 135˚C		
	• Liquid X 2 • Agar • Dissolution (Melting) • Customization X 2 • Dry (Option)		
Safety device	• Overpressure protection • Overheat protection • Auto door lock • Leakage circuit breaker		

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VMB Series Specifications

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Loading capacity of VMB

Item	Volume	Total Q'ty (Pcs X Layers)	
		SA-380VMB	SA-382VMB
Erlenmeyer flasks	250 ml	12 X 2	12 X 4
	500 ml	8 X 1	8 X 3
	1000 ml	5 X 1	5 X 2
	2000 ml	2 X 1	2 X 2
	5000 ml	1 X 1	1 X 1
Schott-Duran media bottles	250 ml	19 X 2	19 X 4
	500 ml	12 X 1	12 X 3
	1000 ml	8 X 1	8 X 2
	2000 ml	4 X 1	4 X 2
	5000 ml	1 X 1	1 X 1

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SA-300VL/VLA Specifications

SPEC/Model NO.	SA-300VL	SA-300VLA
Chamber Capacity (L)	50	
Chamber Size Diam x Depth (mm)	300 x 710	
Overall Dimensions W x H x D (mm	600 x 1090 x 450	600 x 980 x 450
Voltage (V)	230	
Current(A) / Power(W)	10A / 2300W	
Heater (W)	2300	
Dry Heater (W)	N/A	
Net Weight (Kg)	72	77
Water Fill*	Manual	Piped
Type	Vertical	
Water Tank Capacity (cc)	N/A	
Water Consumption per cycle (cc)	900-1020	
Temperature Options (˚C)	105-136	
Prion	N/A	
Bowie Dick Test	N/A	
Pump Test	N/A	
Sterilization Timer	0-60 min.	
Dry Timer	N/A	

SPEC/Model NO.	SA-300VL	SA-300VLA
Redry	N/A	
Data Recorder	N/A	
Liquid	S	
Liquid Temp. Control & Sensor	N/A	S
Temperature Indicator	LED	
Pressure Indicator	Gauge	
Progress Indicator (bar or lights)	S	
Power Indicator	S	
Pressure Auto Lock	S	
Door Closed Indicator	N/A	
Low Water Indicator	N/A	
Reset	N/A	
Program Selector	N/A	
Error Indicator	N/A	
Pre-Vacuum	N/A	
Post Dry Vacuum	N/A	

* "Manual" - Must add water manually for each session. "Piped" - Uses local water plumbing with auto-fill.

Note: "S" - Standard configuration. "O" - Optional configuration.