

YORLAB[®] AUTOMATIC SLIDING DOOR H.P.H.V. RECTANGULAR HORIZONTAL STERILIZER **Model No.: YSL / YSU-608Ex.**



- A self diagnostic system provides messages and alerts that are displayed in a clear language.
- Audible alerts are sounded with the messages.
- The LCD display provides constant cycle parameter readouts and cycle progress information.
- The control system is self diagnostics and provides fault messages to the operator.
- The Control system is programmed with a total of 7 programs or more (Optional) that range in temperature from 105°C to 134°C
- Programs for (unwrapped instruments)
- Programs for wrapped instruments and packs
- Slow exhaust programs.
- Test programs Bowie & Dick and vacuum Leak Test
- If needed the number of programs can be increased to take care of user requirement.

Specifications:

- Automatic sliding door steam sterilizer
- This sterilizer is an advanced version of YSU 608 and is the ideal solution for hospitals / Pharmaceuticals / Research Institutes sterilization needs.

Engineered with people in mind :

- Features enable the convenience and durability needed to operate a sterilizer with complete peace of mind.
- The jacketed chamber is constructed of long lasting 304/316L grade stainless steel with superior corrosion resistance.
- In addition, the generator and piping are constructed of stainless steel.
- The pneumatic valves are air pressure operated, significantly reducing maintenance.
- They are safe and reliable, eliminating the requirement for high voltage.
- To save energy, the sterilizers automatically switch to a standby mode.

Control Made Simple :

- Uses an advanced microprocessor for the automated process control.
- Control panel is user-friendly consists of LCD and a functional touch pad.



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✿ YORLAB[®] AUTOMATIC SLIDING DOOR H.P.H.V. RECTANGULAR HORIZONTAL STERILIZER

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Safe Design :**Door Safety**

- The doors are designed with independent mechanical and electronic safety features that guarantee a safe working of the sterilizer.
- A safety device prevents the operator from opening the door when chamber is pressurized.
- Steam is not allowed into the chamber when the door is open.
- A cycle will not start if the door is open or not properly closed.
- The door cannot open until chamber pressure reaches room pressure.
- **Sliding Door Safety-** The sliding door will automatically stop if an obstruction is detected.
- **Double Door Safety-** interlocks prevent both doors from being opened simultaneously.

Genera/ Safety Features

- **Double Independent Monitoring :** The combined digital and mechanical monitoring provides a cross reference and guarantees accurate results.
- The operator has two independent means to monitor temperature and pressure.
- **Safety Valves :** Both the chamber and the jacket are equipped with safety valves-if the pressure exceeds the allowed limit the safety valves will discharge.
- **Built-in Steam Generator Safety :** A water level monitoring system maintains a constant water level and ensures safe operation of the heaters.
- **Emergency Shut-off :** Easily accessible emergency switches for immediate and safe shut down of the sterilizer.

1. Main Feature:	
1.1 Item	HIGH PRESSURE HIGH VACUUM STEAM STERILIZER FULLY AUTOMATIC, SLIDING DOOR SINGLE/DOUBLE
1.2 Purpose	For treatment of Sterilization of O.T. Material
1.3 Chamber Size	600 (W) x 600 (H) x 1200 (D) mm to 1200 (W) x 1500 (H) x 2400 (D) mm
1.4 Chamber Volume	460 to 4300 Ltrs.
1.5 Working Temp.	Upto 134°C
1.6 Working Pr.	1 to 2.2 k.g./cm ²
1.7 Chamber test Pr.	3.5 k.g./cm ²
1.8 Jacket test Pr.	4.8 k.g./cm ² , Channel Jacket.
1.9 Source of Energy	Electrically Operated/Direct Steam Operated
1.10 Mounting	Floor Standing Horizontal Type
2. Design	
2.1 YSU-608Ex.	Steam Sterilizer are designed to meet the norms laid down by the "ASME, BIS, IS 302, EN 205 issued and equivalent international standards for Steam Sterilization dedicated Autoclaves.
2.2 Level of Sterilization	Less than 10 ⁻⁶ , over kill approach which results in total destruction of bacillus stearothermoogukys.
2.3 Standards	Shell Fabricated & tested in accordance with IS 3829 Part I & ASME Sec VIII Division I & as per other International standards.
2.4 Certification	Quality Assurance (QA) certification which compliance with requirements of ISO 9001-2000 by BSI affiliated to Ukas & ANSI-RAB, CE Marked.

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3. Construction Features

3.1 Cross Section	Square/ Rectangular																		
3.2 Shape	Rectangular																		
3.3 Welding	Butt Fusion welded (Argon Arc)																		
3.4 Material	<table> <tr> <td>Chamber</td> <td>:</td> <td>AISI 304/316/316L</td> </tr> <tr> <td>Channel Jacket</td> <td>:</td> <td>Boiler Grader Steel/AISI 304/316/316L</td> </tr> <tr> <td>Outer Cover/ Panelling</td> <td>:</td> <td>AISI 304 /Aluminum</td> </tr> <tr> <td>Baffle</td> <td>:</td> <td>AISI 304</td> </tr> <tr> <td>Piping</td> <td>:</td> <td>AISI 304</td> </tr> <tr> <td>Door</td> <td>:</td> <td>AISI 304/316/316L</td> </tr> </table>	Chamber	:	AISI 304/316/316L	Channel Jacket	:	Boiler Grader Steel/AISI 304/316/316L	Outer Cover/ Panelling	:	AISI 304 /Aluminum	Baffle	:	AISI 304	Piping	:	AISI 304	Door	:	AISI 304/316/316L
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Door	:	AISI 304/316/316L																	

4. Door

4.1 Type	Sliding Single or Double Door
4.2 Sealing	Silicon Tubular Gasket (durable enough to with stand inside temperature & pressure as well as hydraulic test pressure)

5. Steam Generator

5.1 Source of Energy	Electrically Operated
5.2 Capacity	Adequate/Sufficient for complete sterilization cycles
5.3 Fittings	<ul style="list-style-type: none"> a) Water Level Indicator/ Sight Glass b) Water inlet & outlet valve
5.4 Safety	<ul style="list-style-type: none"> a) Pressure Regulating Electric Device b) Spring loaded safety valve c) Low water protection for heaters to cut of the supply if water level falls below the minimum level. d) Self locking gauge glass valve to protect electric circuit and human against thermal injuries in case of breakage.

6. Piping & Fittings

6.1 SS Piping	Made of stainless steel and bronze, duly argon arc welded.
6.2 Dial Thermometer	Fitted in the chamber drain line 6/10 cm diameter with $\pm 1.5^\circ$ accuracy.
6.3 Pressure Gauge	6.5 / 7.5 cm diameter industrial type pressure gauge mounted on the jacket.
6.4 Compound Gauge	6.5 / 7.5 cm diameter industrial type Compound gauge mounted on the Chamber.
6.5 Manual Operational Valve	Single Port operational valve in case of manual operation (optional).
6.6 Safety	<ul style="list-style-type: none"> a) Relief valve for jacket b) Vacuum breaker in the jacket to prevent vacuumization of jacket c) Bacteria retentive filter to avoid contamination of load fitted in the drying system

7. Vacuum Pump for Pre Post Vacuum Pulse

7.1 Type	Water-ring motorised vacuum pump, suitable for three phase electric supply. 380/50 Hz.
7.2 Purpose	Pre evacuation of chamber before sterilization as per norms and for drying sterilized load.

8. Accessories

8.1 Air Compressor (Optional)	Provided of suitable capacity for all pneumatic operations.
8.2 Secondary Sterilization Device	Provided with the autoclave

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9. Controls

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|-----|-----------------------|--|
| 9.1 | Panel | Steel/Stainless Steel cubical modular type panel incorporating various pressure gauges to indicate actual pressure in chamber jacket and on gasket. |
| 9.2 | Control Accessories | Circuit breaker, Overload relay, Transmitter, Switches, Indicator, Push Buttons & Connectors mounted inside the control panel |
| 9.3 | Process control | PLC with four line LCD or more with numeric and command key to feed alphanumeric data. |
| 9.4 | Man Machine Interface | Userfriendly Alpha-numerical / Graphical / Digital type display |
| 9.5 | Display | Cycle status Fault/Error Indication with visual alarms |
| 9.6 | Program | The following programs are loaded in the PLC with one pre vacuum pulse to purge the autoclave of all air under strict Sterilization Control cycle software program.
a) Temperature of not less than 121°C and a pressure of 15 psi for an autoclave residence time of not less than 20 minutes for each cycle
b) Temperature of not less than 135°C and a pressure of 31 psi for an autoclave residence time of not less than 7 minutes for each cycle.
c) Validation test program for periodic validation. |



10. Recording of Operational Parameters (Optional)

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| 10.1 | Computer Recording
Microprocessor controlled | Recording of process value through a dot matrix printer on a roller paper as per real time printing device to record events during continuation of cycle. The event recording include exact hour, minute and seconds of following parameters
a) Chamber Temperature b) Chamber Pressure
c) Selected Program d) Cycle Status or Cycle Events
e) Date, Day, Year, Time f) Batch Identification facility
g) Fault & emergency message with code |
|------|---|--|

11. Test

- 11.1 Each equipment is tested for following tests before dispatch and certified
- Chemical test - A chemical indicator sterilization test as per biomedical rule-98.
 - Biological test - Bacillus stearothermophilus spore strips, with at least 1 x10⁶ spores/m
 - Validation test - Periodic validation for recording the efficiency of the autoclave

12. Utilities & Environment Requirement

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|------------------------|--|--------------------|
| 12.1 Supply Voltage | : 415 ± 5% Volt 3 Phase | Inner Sizes |
| 12.2 Frequency | : 50 Hz. | 450 x 450 x 900mm |
| 12.3 Power Consumption | : 36 KW to 72 KW | 600 x 600 x 1200mm |
| 12.4 Water Supply | : Approx 150 Itrs to 300 Ltrs./cycle | 600 x 900 x 1500mm |
| 12.5 Environment | : 5 to 50°C | 900 x 900 x 1500mm |
| 12.6 R.H. | : 90% at 30°C or any size as per customer requirement. | |

13. Carriage & Trolley (Optional) : Loading Equipment Our loading equipment assists for the loading and unloading process. It is made of high quality, durable stainless steel. We offer two options. Pull Out Trays : Stainless Steel trays equipped with rails for easy loading and unloading. The rails are designed to prevent the trays from rolling over.

Loading Carts and Transfer Carriages : The adjustable loading cart rolls from the transfer carriage onto the interior chamber tracks for easy handling of heavy loads. The trolley is equipped with revolving wheels, maximizing mobility in limited space. The wheel breaks prevent the trolleys from rolling and the carriage is equipped with a lock that prevents it from sliding.