

Laboratory Steam Sterilizer



OT
40
L
90

nüve
steamArt

OT 40 L / OT 90 L Series

OT 40L/OT 90L LABORATORY STEAM STERILIZER

OT 40L/90L laboratory steam sterilizers are developed for the special sterilization applications in the laboratories of research institutes, universities and pharmaceutical, food, medical and biotechnology industries.

OT 40L/90L are especially designed for the steam sterilization of liquid and culture media and it is also convenient for the sterilization of any labware and unpacked hollow items such as metal, glass and plastics.

The time required to reach the sterilization temperature for liquids is more when it is compared to solid loads. To ensure that the set sterilization temperature is reached when the sterilization starts, OT 40L and OT 90L are equipped with a flexible temperature sensor which would be placed in a reference vessel. The sterilization starts only after the liquid temperature reaches to the set temperature.

Due to safety reasons, liquid should be cooled down at the end of the sterilization process. If there is no cooling function, the cooling time for liquids is very long because the heat can only be dispersed by convection via chamber. OT 40L/90L have a cooling function with ambient air ventilation over the chamber. By means of this air ventilated cooling system, the time required to cool down the samples under 80°C in OT 40L/90L is just one third of the time spent by the conventional system.

After steam sterilization of liquids, if the steam is discharged, liquids start to boil again since there would be no pressure but the temperature would still be high. This situation may cause the overflow of the liquids from the vessels. With the liquid sterilization programs of OT 40L/90L, the steam is not discharged at the end of the sterilization phase but it is rather condensed by means of the air ventilated cooling system to prevent a sudden drop in the chamber pressure which can cause liquids to boil again.

Discharge of the steam after the sterilization of solid materials is controlled by fractionated exhaust. The rate of steam exhaust can be programmed depending on the sensitivity of the materials. By means of the programmable exhaust rate, sudden temperature and pressure decrease is prevented and sensitive materials such as glass are protected against breakage.

OT 40L and OT 90L are equipped with an advanced microprocessor control system with 128x64 pixel LC display. Control panel is mounted on top for easy use and observation.





There are five pre-set programs which guarantee safe sterilization of the treated materials :

Liquid	121°C	15 minutes
Liquid	121°C	20 minutes
Solid	121°C	20 minutes
Solid	134°C	20 minutes
Solid	134°C	4 minutes

Besides the pre-set programs there are two free programs for liquid and solid and a special program for melting purposes which the user can program easily.

There is also a delayed start function with real time which allows the users to find their samples sterilized when they arrive to the laboratory in the morning so they do not loose time waiting for the sterilization of their samples.

OT 40L/90L include a standard RS 232 interface for direct connection to PC, printer or SD card writer. There is also a memory which can hold the last 25 cycles.

The microprocessor control system of OT 40L/90L have a comprehensive self-diagnostic system for providing information regarding possible system malfunctions. The self-diagnostic system warns the user in case of:

- Broken temperature sensors
- Over temperature
- Heater failure
- Low temperature
- Overpressure
- High preheating temperature
- Lack of water
- Exhaust tank failure

As a pressure vessel, all necessary safety measures are taken for OT 40L and 90L. The lid can not be opened when the chamber is pressurized and no program can be operated when the lid is open. The lid lock is not released until the chamber pressure reaches to the room pressure after sterilization. The lid can be opened when the liquid temperature is below 80°C after liquid sterilization and chamber temperature is below 90°C after solid sterilization. The chamber is equipped with a safety valve. If the chamber pressure exceeds the allowed limit, the safety valve discharges the steam automatically. The manometer on the control panel allows the user to follow the chamber pressure easily.

The chambers of OT 40L/90L are manufactured according to PED 97/23 EC and they have a validation port given as standard.



OT 40L 90L



TECHNICAL SPECIFICATIONS**OT 40L****OT 90L**

Chamber volume	40 liters	90 liters
Temperature range	105°C - 135°C	
No of preset programs	2 for liquids, 3 for solids	
No of free programs	1 for liquids, 1 for solids, 1 for melting	
Melting program temperature range	60°C - 100°C	
Timer for free programs	1 - 300 minutes	
Timer for melting program	1 - 60 minutes	
Chamber material	316L Stainless steel	
No. of baskets	2 pcs. (Ø295 x 242 mm)	3 pcs. (Ø360 x 242 mm)
Chamber dimensions (Diameter x Depth) mm	Ø315 x 560	Ø400 x 810
External dimensions (WxDxH) mm	595 x 540 x 1000	680 x 635 x 1060
Power consumption	2500 W	7000 W
Power supply	230 V, 50 Hz.	400 V, 50 Hz., 3 phases + N+G

Loading Capacity for OT 40L**Erlenmeyer flasks**

250 ml	500 ml	1000 ml	2000 ml	3000 ml	5000 ml
3 x 8 pcs.	2 x 4 pcs.	2 x 3 pcs.	1 pc.	1 pc.	1 pc.

Schott-Duran Bottles

250 ml	500 ml	1000 ml	2000 ml	5000 ml
3 x 12 pcs.	2 x 8 pcs.	2 x 5 pcs.	1 pc.	1 pc.

Loading Capacity for OT 90L**Erlenmeyer flasks**

250 ml	500 ml	1000 ml	2000 ml	3000 ml	5000 ml
4 x 12 pcs.	3 x 7 pcs.	3 x 4 pcs.	2 x 3 pcs.	2 x 1 pcs.	1 pc.

Schott-Duran Bottles

250 ml	500 ml	1000 ml	2000 ml	5000 ml	10000 ml
4 x 18 pcs.	3 x 11 pcs.	3 x 8 pcs.	2 x 4 pcs.	2 x 1 pc.	1 pc.

Options

Y 07 008 Thermal Printer

Y 07 004 **NüveStore™** SD Card Writer with 2 GB SD card**Accessories**

S 09 028 High basket for OT 40L (Height : 342 mm)

S 09 034 High basket for OT 90L (Height : 360 mm)

S 09 040 Low basket for OT 40L (Height : 160 mm)

S 09 041 Low basket for OT 90L (Height : 160 mm)



NÜVE SANAYİ MALZEMELERİ
İMALAT VE TİCARET A.Ş.

Esenboğa Yolu, 22 km.
Akyurt 06750 ANKARA TURKEY
Tel : (90.312) 399 28 30 (pbx)
Fax : (90.312) 399 21 97
www.nuve.com.tr
sales@nuve.com.tr

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