# SMS ASL laboratory steam sterilizer



## Innovation for life science

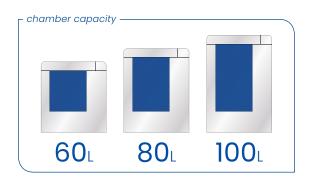
The ASL steam sterilizer family is a modern, innovative and very efficient range of sterilizers designed for laboratories and research facilities. An intuitive and easy-to-use control panel, reliability and a wide range of versions make it a popular choice.

## Safety

ASL sterilizers have been designed to ensure personnel, sterilizer and load safety. SMS delivers products that meet the highest industry safety standards and directives. This guarantees safety not only for your employees operating the autoclaves but also for your laboratory and the loads being sterilized.

# Diversity of load types

Our laboratory autoclaves, manufactured in Poland (European Union), have been designed to provide high quality, repeatable performance for a wide range of applications used in modern laboratories, which include: liquid sterilization, agar preparation, pipette and glass sterilization, biohazard and waste sterilization, instrument sterilization and more.



#### Characteristics

- cylindrical sterilization chamber and door made from stainless steel (AISI 316L)
- o side panels made from stainless steel (AISI 304L)
- unique jacket design ensuring more effective heating and cool
- built-in steam generator
- control panel with 20 sterilization programs
- V, MV and MSV versions have 2 additional test programs (vacuum test, Bowie & Dick test)
- an additional temperature sensor located inside the chamber (PT 100 sensor)
- an automatic lid locking system with a temperature safeguard
- auto-start function
- validation port
- fractionated vacuum deaeration (V, MV, MSV versions)
- steam generator automatic cleaning system
- condensate cooling system ensuring a safe discharge temperature
- optional dot-matrix printer

### **ASL** sterilizers versions

|                         | В | М | ٧ | MS | MV | MSV |
|-------------------------|---|---|---|----|----|-----|
| Fast cooling system     |   | • |   | •  | •  | •   |
| Vacuum pump             |   |   | • |    | •  | •   |
| Counter-pressure system |   |   |   | •  |    | •   |

Additionally, each version can be equipped with a 0,2  $\mu$ m HEPA exhaust filter (version+FA).

example

**ASL 80 MS+FA** – 80 liter ASL sterilizer with counter-pressure support system, fast cooling system and HEPA exhaust filter





## Choosing the right version

|  | В   | М   | V   | MV  | MS  | MSV |
|--|-----|-----|-----|-----|-----|-----|
| Laboratory instruments solids, un-packed                     | •   | •   | •   | •   | •   | •   |
| Laboratory instruments packed                                |     |     | •   | •   |     | •   |
| Porous materials<br>fabrics and textiles, animal bedding     |     |     | •   | •   |     | •   |
| Hollows<br>pipette tips                                      |     |     | •   | •   |     | •   |
| Glassware  |     |     | •   | •   |     | •   |
| <b>Liquids / growth medium</b> in open and vented containers |     | 0   |     | 0   | •   | •   |
| Liquids / growth medium<br>in sealed containers              |     |     |     |     | •   | •   |
| Waste  | •   | •   | •   | •   | •   | •   |
| Hazardous materials  | +FA | +FA | +FA | +FA | +FA | +FA |

O The use of a fast cooling system (M) may cause partial loss of the sterilized fluid.

## Rapid cooling system (M)

The rapid cooling system significantly shortens the cooling times compared to the basic version and speeds up the sterilization of liquids. In addition, this system allows for the sterilization of liquids in open containers. However, the use of an active cooling system may cause partial loss of the sterilized fluid.

# Vacuum system (**v**)

The use of a vacuum generation system enables faster and more effective venting of the sterilization chamber and safe sterilization of porous materials, hollows, as well as packed products. An additional advantage of sterilizers with the vacuum generation system is the option of drying materials, which turns on automatically after the sterilization phase.

## Counter-pressure system (s)

During the cooling phase, compressed air, decontaminated by a HEPA filter, is supplied to the sterilization chamber to prevent a sudden drop in pressure. The use of such a system reduces the loss of sterilized fluids in open and vented containers, and enables the sterilization of liquids in sealed containers (prevents their damage).

## HEPA exhaust air filter (+ FA)

In case of sterilizing contaminated materials, it is necessary to protect the laboratory environment against dangerous, not sterilized microorganisms that may escape from the chamber during the venting phase. To prevent this, the sterilizer can be equipped with a steam / exhaust air filtration system and condensate sterilization.

#### **ASL** sterilization baskets

- o KSV ⅓ı ø360 x 550 mm
- KSV ½ − Ø360 x 275 mm
- o KSV ⅓ ø360 x 200 mm
- KSV ¼ ø360 x 140 mm
- PSV ½ − ø360 x 330 mm, solid

When sterilizing liquids we suggest using the solid baskets at the bottom of the chamber.



From left to right - top row. KSV 1/1, PSV 1/2, bottom row. KSV 1/3, KSV 1/2, KSV 1/4

|                    | ASL 60       | ASL 80       | <b>ASL 100</b> |  |
|--------------------|--------------|--------------|----------------|--|
| Chamber dimensions |              |              |                |  |
| - capacity         | 60           | 80           | 100            |  |
| - height           | 460 mm       | 610 mm       | 760 mm         |  |
| - diameter         |              | 413 mm       |                |  |
| Maximal load       |              |              |                |  |
| - instruments      | <b>20</b> kg | <b>30</b> kg | <b>40</b> kg   |  |
| - textiles         | <b>10</b> kg | 17 kg        | <b>25</b> kg   |  |
| - fluids           | 15           | 21           | 30             |  |
| Overall dimensions |              |              |                |  |

797 mm

947 mm

735 mm

600 mm

1097 mm

#### electric power -

To suite different mains supplies (voltage/frequency) our sterilizers are available in two versions: 200 - 230 V, 3Ph, 50/60 Hz 380 - 400 V, 3Ph, 50/60 Hz

# Electric crane

- height

- width

- depth

To assist in loading and unloading, especially of heavy loads, the ASL can be equipped with an electric crane. An electronic remote control gives the user an easy way of controlling the crane and together with the swivel arm ensures smooth handling of all load types.

#### Standard and directives

SMS supplies solutions for infection and sterilization control that provide consistent high quality results. We understand the market's varying needs and comply with the strictest European and international standards and directives.



#### **SMS sp. z o.o.**



