

AHS-B SERIES - INSTALLATION GUIDE

Information to consider before installing your RAYPA autoclave.

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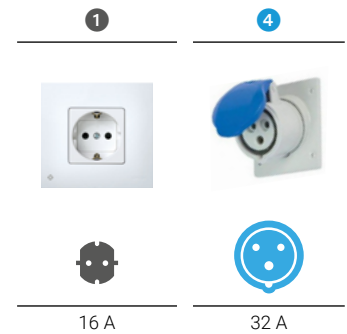
FRONT-LOADING BENCHTOP AUTOCLAVES WITH PREVACUUMS AND DRYING AHS-B SERIES

AH-21-B MODEL

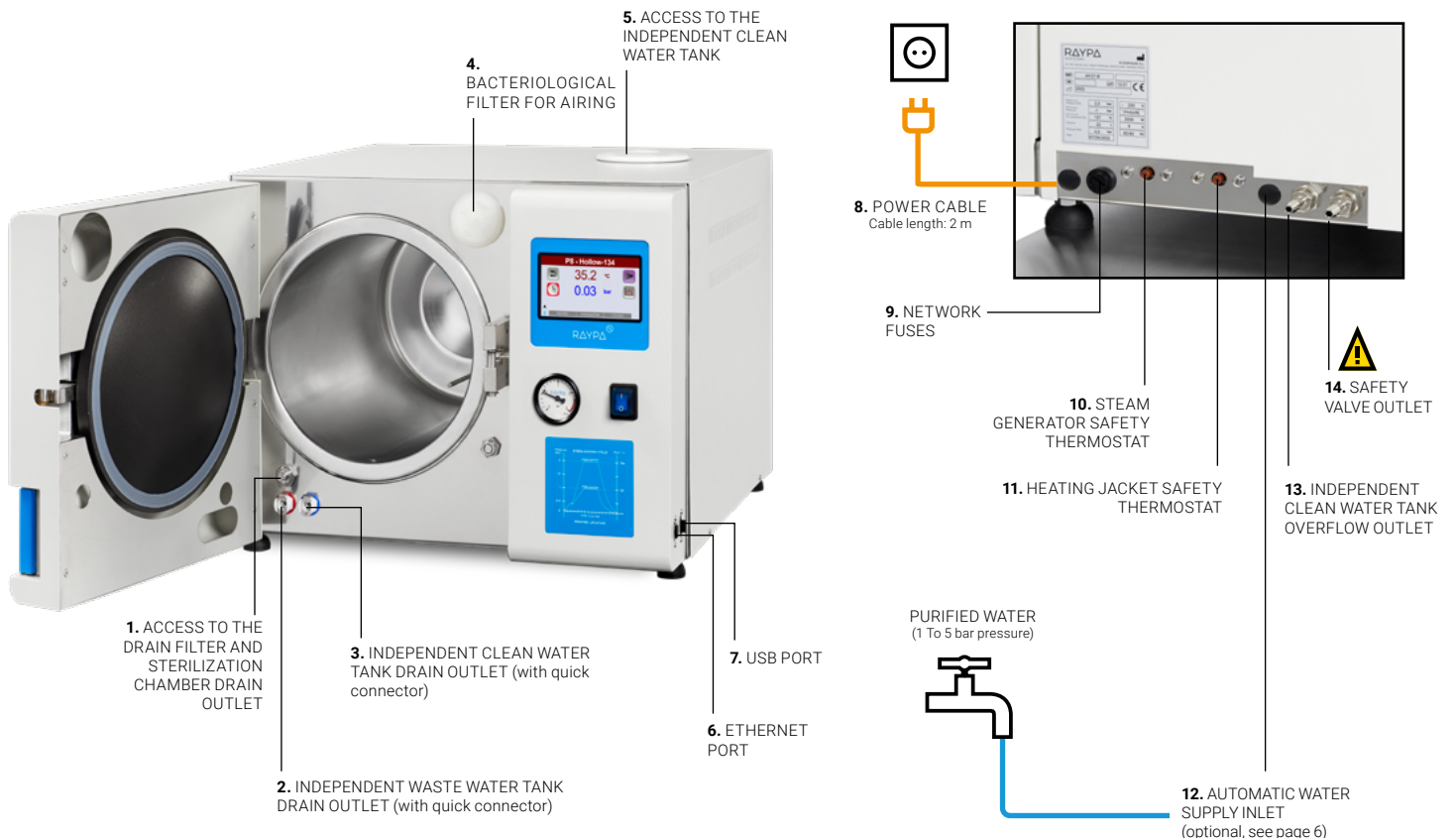
ELECTRICAL CONNECTION

The following table shows the plug configuration according to IEC and SCHUKO international standards. For customers who require other plugs and other electrical configurations, please contact our technical team.

MODEL	FREQUENCY	POWER	AMPERES / PHASE	VOLTAGE	CONNECTION
AH-21-B	50/60 Hz	2000 W	9 A	230 (1P+N+PE) V	16 A ①
AH-21-B-115V	50/60 Hz	2000 W	17 A	120 (1P+N+PE) V	32 A ④



CONNECTIONS GRAPH



AH-21-B MODEL

COMPONENTS INCLUDED

In addition to the accessories chosen at the time of purchase of the autoclave (software kit, basket, etc.), the following components are always included:



1 stainless steel frame of 200 x 400 x 200 mm, with capacity for 5 trays. It includes 3 stainless steel wire trays of 190 x 350 mm.



1 stainless steel tray support of 400 x 180 x 80 mm, with a capacity for 20 bags. The size of this accessory can be customized according to client needs. For more information, please contact us.



1 auxiliary plastic tray of 200 x 280 mm, for collecting condensed water after opening the door in cycles without final drying.



1 metal clamp for moving trays.



1 silicone tube with quick connection, $\varnothing 5 \times \varnothing 8$ mm and 1 m long, for draining the independent clean and waste water tanks.

For:

- 2. INDEPENDENT CLEAN WATER TANK DRAIN OUTLET**
- 3. INDEPENDENT WASTE WATER TANK DRAIN OUTLET**

FRONT-LOADING BENCHTOP AUTOCLAVES WITH PREVACUUMS AND DRYING AHS-B SERIES

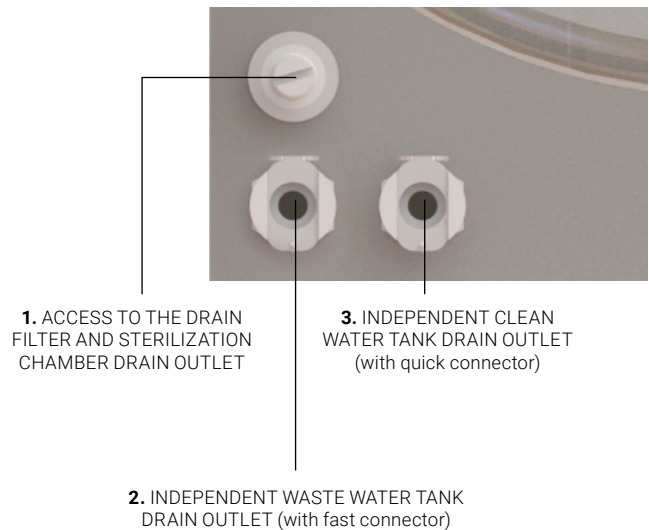
AH-21-B MODEL

DRAINAGE CONNECTIONS

To drain the independent water tanks, connect the included hose to the INDEPENDENT WASTE WATER TANK DRAIN OUTLET **(2)** and the INDEPENDENT CLEAN WATER TANK DRAIN OUTLET **(3)**.

See “DRAINAGE HEIGHT, independent waste and clean water tanks” on page 8.

To clean the drain filter or drain the sterilization chamber, unscrew the screw on the ACCESS TO THE DRAIN FILTER AND STERILIZATION CHAMBER DRAIN OUTLET **(1)**, while placing the supplied plastic tray underneath.



FRONT-LOADING BENCHTOP AUTOCLAVES WITH PREVACUUMS AND DRYING AHS-B SERIES

AH-21-B MODEL

SEMI-AUTOMATIC WATER SUPPLY

STANDARD

Purified water is necessary for the operation of the autoclave and is added manually into the independent water tank until the alarm (a "beep") is heard and the on-screen lack of water message disappears. Water distribution from the independent clean water tank into the sterilization chamber is automatic.

See "FREE HEIGHT for independent clean water tank filling" on page 8.

The independent water tank has a volume of 6L and is equipped with minimum and maximum water volume sensors.



If the separate water tank is not filled sufficiently, an error message will appear on the screen and operation of the autoclave will be blocked. If overfilled, after hearing the alarm (a "beep"), the excess water will come out through the INDEPENDENT WATER TANK OVERFLOW OUTLET (13).

IMPORTANT NOTE:

PURIFIED WATER

The water used to feed the autoclave must be free of contaminants and meet the following hardness and conductivity requirements:

- Hardness: ≤ 0.02 mmol/l
- Conductivity: between $5 \mu\text{S/cm}$ and $15 \mu\text{S/cm}$

Multiple systems can be used to obtain water with these requirements: osmotized, demineralized, decalcified, distilled water, etc*.

*Note: Take into account that distilled water that is too pure (conductivity less than $5 \mu\text{S/cm}$) is not recommended as it may cause long term corrosion on stainless steel and water level detection problems in some models.

FRONT-LOADING BENCHTOP AUTOCLAVES WITH PREVACUUMS AND DRYING AHS-B SERIES

AH-21-B MODEL

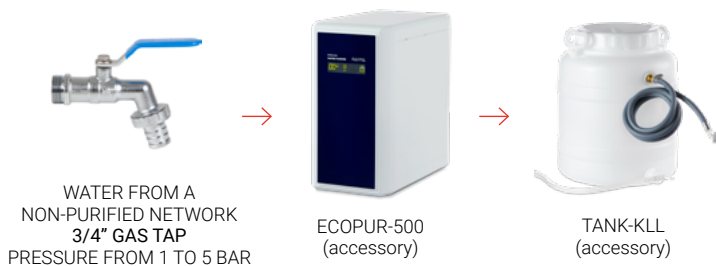
AUTOMATIC WATER SUPPLY

OPTIONAL

If you have chosen the **KLL-21** automatic water filling accessory (optional, but factory installed) there are the following water feed options **A**, **B**, and **C** using the AUTOMATIC WATER SUPPLY INLET connection **(12)**.

Autoclaves equipped with the KLL-21 accessory will have both the filling of the independent water tank and the distribution of water into the sterilization chamber fully automated during normal operation of the autoclave.

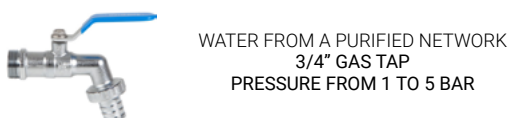
A. Use tap water (pressure from 1 to 5 bar) that goes through our ECOPUR-500 WATER PURIFIER. Resulting water from the purifier will accumulate in a tank connected to the automatic water supply inlet of the autoclave.



B. Use customer's purified water tank that will connect directly to the automatic water supply inlet of the autoclave.



C. Use water from a previously purified network (pressure from 1 to 5 bar) which will connect to the automatic water supply inlet of the autoclave.



KLL-21 ACCESSORY

(installed inside the
AH-21-B autoclave)

AH-21-B MODEL

USE OF ECOPUR-500 IN COMBINATION WITH AH-21-B MODEL

OPTIONAL

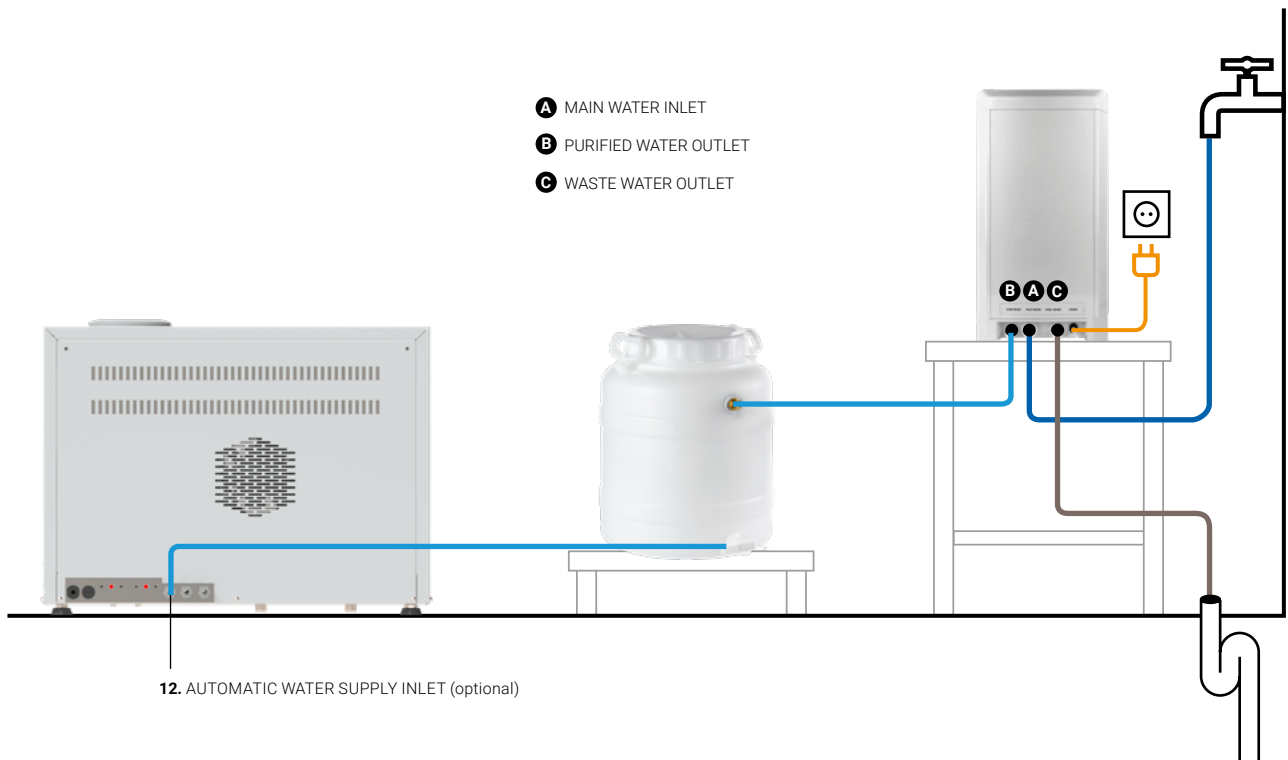
If you have chosen the **KLL-21** automatic water filling accessory (optional, but factory-installed), and you do not have a purified water supply at the location where you intend to install the autoclave, we recommend using our ECOPUR-500* water purifier.

The MAIN WATER INLET (**A**) must be connected from the purifier to a non-purified water main with the 1,2m hose (water temperature from the main must not exceed 38°C or be less than 5°C).

Water must be driven from the PURIFIED WATER OUTLET (**B**) to the TANK-KLL accessory inlet and, from there, to the AUTOMATIC WATER SUPPLY INLET (**12**) of the autoclave using the provided 1,2m hose.

Waste water must be driven from the WASTE WATER OUTLET (**C**) to a drain with the 1,2m provided hose.

Bear in mind that the inlet and drain hoses in the purifier must always be visible and in perfect working condition.



Read the specific manual before installing this accessory.

*It is recommended to use a single purifier for each autoclave. In case you would like to use the same purifier for more than one autoclave contact our technical support.

FRONT-LOADING BENCHTOP AUTOCLAVES WITH PREVACUUMS AND DRYING AHS-B SERIES

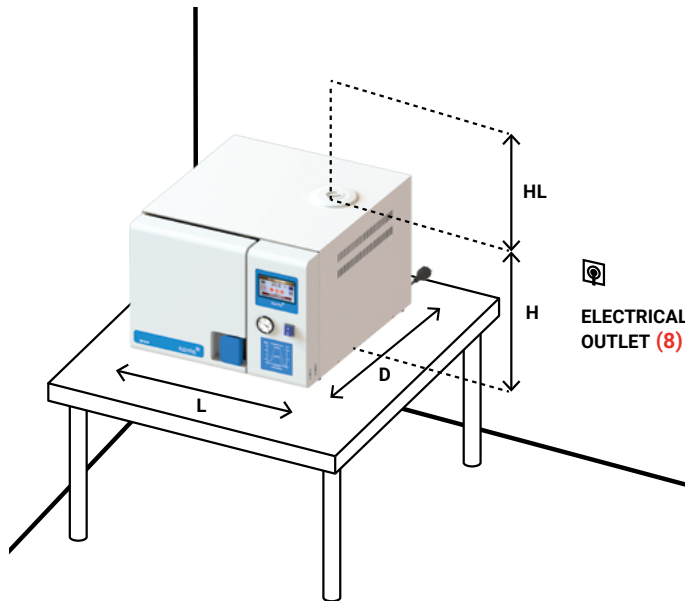
AH-21-B MODEL



DIMENSIONS TO CONSIDER FOR THE INSTALLATION OF YOUR AUTOCLAVE

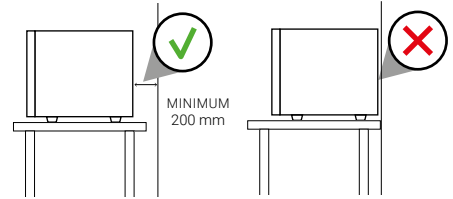
For safety reasons, the distance between both sides of the autoclave and the wall or any other object must be 100 mm, and between the autoclave and the rear wall must be at least 200 mm.

MODEL	L LENGTH with closed door	L1 LENGTH with maximum door opening	D DEPTH	D1 DEPTH with maximum door opening	H HEIGHT	LA x DA SUPPORT AREA	HL FREE HEIGHT for filling the independent water tank	HD DRAINAGE HEIGHT independent water tank overflow outlet
AH-21-B	560 mm	740 mm	660 mm	970 mm	425 mm	537 x 527 mm	400 mm	50 mm

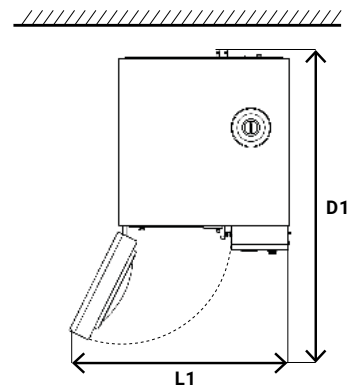


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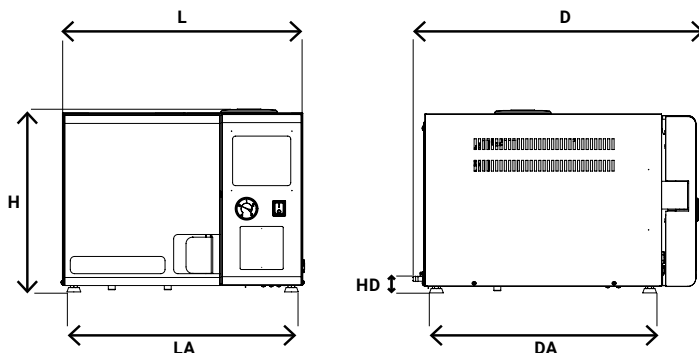
Respect the recommended distances.



PLAN VIEW



FRONTAL AND LATERAL VIEWS



ENVIRONMENTAL CONDITIONS

This autoclave can operate under the following maximum conditions:

- Ambient temperature: 30 °C
- Humidity: 75%
- Altitude: 3,000 meters above sea level. In case of higher altitudes, consult with our technical team.

FRONT-LOADING BENCHTOP AUTOCLAVES WITH PREVACUUMS AND DRYING AHS-B SERIES

AH-21-B MODEL

RECOMMENDED MAINTENANCE

Autoclaves are like cars: they need regular maintenance for them to work properly, to ensure good condition, prevent deterioration of its components, and maximize their useful life. Frequent cleaning and regular maintenance are essential, as autoclaves work at high pressures and temperatures and are therefore subject to a high level of stress.

For clients that perform multiple cycles each day, we recommend carrying out maintenance and cleaning tasks more frequently.

DAILY MAINTENANCE

Clean the gasket using a clean cotton cloth with a mild vinegar solution (or a comparable product) to reduce the formation of lime deposits.

Wipe the external surfaces with a clean cotton cloth moistened with water and a neutral detergent. Ensure all surfaces are thoroughly dried afterwards.

WEEKLY MAINTENANCE

Clean the sterilization chamber and all the components with a clean cotton cloth dampened with water and neutral detergent. Dry them after.

Empty the integrated water tank completely, removing all its contents, and then refill it exclusively with purified water.

MONTHLY MAINTENANCE

Carefully clean the discharge filter under running water, following the detailed instructions in the user and maintenance manual. If it is clogged with agar, hot water will be needed. If the filter cannot be restored, replace it with a new one.

ANNUAL MAINTENANCE

Autoclaves from the AHS-B Series are equipped with a bacteriological filter, which should be replaced either upon reaching the recommended interval or when a filter blockage is detected.

Conducting a technical inspection is essential to ensure consistent process safety over time. It is necessary to periodically verify the thermodynamic process parameters (pressure and temperature), ensuring they remain within the accepted limits.



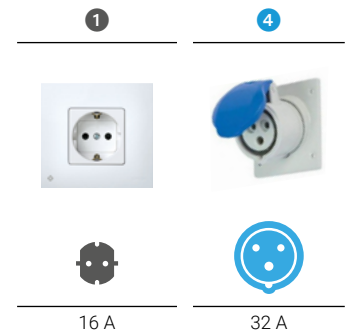
FRONT-LOADING BENCHTOP AUTOCLAVES WITH PREVACUUMS AND DRYING AHS-B SERIES

AHS-50-B AND AHS-75-B MODELS

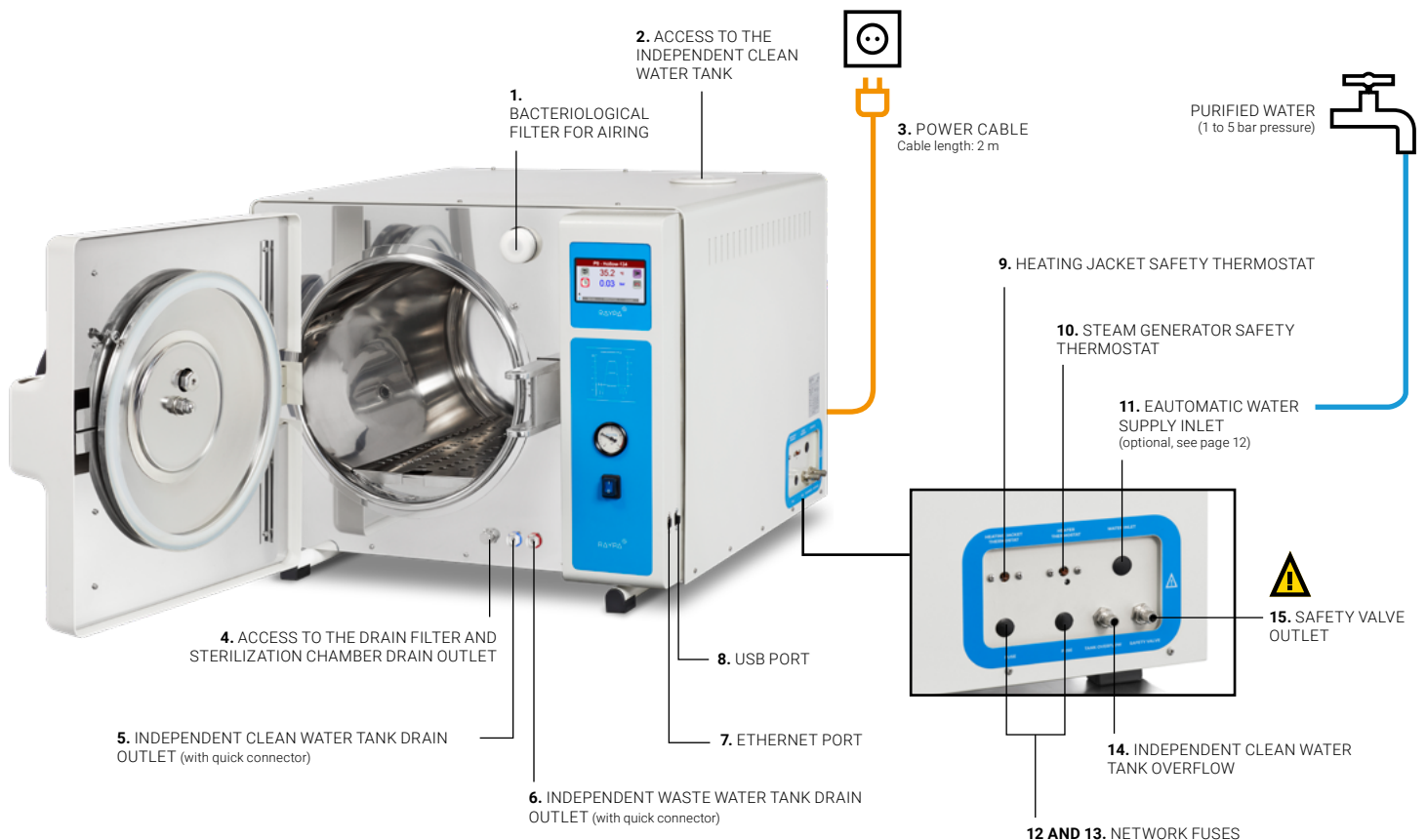
ELECTRICAL CONNECTION

The following table shows the plug configuration according to IEC and SCHUKO international standards. For customers who require other plugs and other electrical configurations, please contact our technical team.

MODEL	FREQUENCY	POWER	AMPERES / PHASE	VOLTAGE	CONNECTION
AHS-50-B	50/60 Hz	3600 W	15 A	230 (1P+N+PE) V	16 A ①
AHS-50-B-115V	50/60 Hz	3600 W	30 A	120 (1P+N+PE) V	32 A ④
AHS-75-B	50/60 Hz	3600 W	15 A	230 (1P+N+PE) V	16 A ①
AHS-75-B-115V	50/60 Hz	3600 W	30 A	120 (1P+N+PE) V	32 A ④



CONNECTIONS GRAPH



**FRONT-LOADING
BENCHTOP AUTOCLAVES
WITH PREVACUUMS AND
DRYING**
AHS-B SERIES

AHS-50-B AND AHS-75-B MODELS

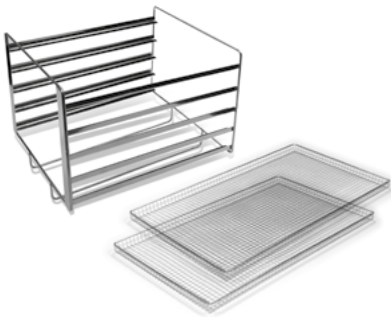
COMPONENTS INCLUDED

In addition to the accessories chosen at the time of purchase of the autoclave (tray support, software kit, basket, etc.), the following components are always included:



1 stainless steel protective cover for the sterilization chamber to place it on the inner base of the sterilization chamber.

MODELS	DIMENSIONS L X D
AHS-50-B	235 x 370 mm
AHS-75-B	235 x 570 mm



1 stainless steel frame with capacity for 5 trays. Includes 2 stainless steel wire trays.

MODELS	FRAME DIMENSIONS L X D X H	TRAY DIMENSIONS L X D
AHS-50-B	320 x 360 x 270 mm	315 x 330 mm
AHS-75-B	320 x 565 x 270 mm	315 x 530 mm



1 auxiliary plastic tray of 250 x 350 mm, for collecting condensed water after opening the door in cycles without final drying.



1 metal clamp for moving trays.



1 silicone tube with fast connection of $\varnothing 5 \times \varnothing 8$ mm and 1 m long, for draining the independent clean and waste water tanks.

For:

- 5. INDEPENDENT CLEAN WATER TANK DRAIN OUTLET**
- 6. INDEPENDENT WASTE WATER TANK DRAIN OUTLET**

FRONT-LOADING BENCHTOP AUTOCLAVES WITH PREVACUUMS AND DRYING AHS-B SERIES

AHS-50-B AND AHS-75-B MODELS



2 stainless steel threaded pins which must be installed at the lateral connections.

For:

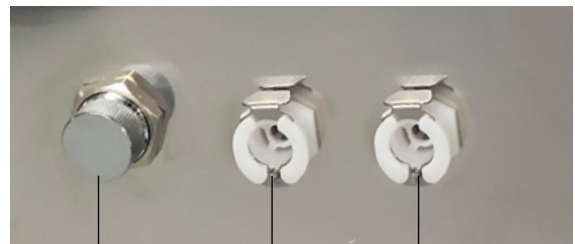
- 14. INDEPENDENT CLEAN WATER TANK OVERFLOW OUTLET**
- 15. SAFETY VALVE OUTLET**

DRAINAGE CONNECTIONS

To drain the independent water tanks, connect the hose to the INDEPENDENT CLEAN WATER TANK DRAIN OUTLET **(5)** and the INDEPENDENT WASTE WATER TANK DRAIN OUTLET **(6)**.

See "DRAINAGE HEIGHT, independent waste and clean water tanks" on page 16.

To clean the drain filter or drain the sterilization chamber, unscrew the screw on the ACCESS TO THE DRAIN FILTER AND STERILIZATION CHAMBER DRAIN OUTLET **(4)**, while placing the supplied plastic tray underneath.



4. ACCESS TO THE DRAIN FILTER AND STERILIZATION CHAMBER DRAIN OUTLET

6. INDEPENDENT WASTE WATER TANK DRAIN OUTLET (with quick connector)

5. INDEPENDENT CLEAN WATER TANK DRAIN OUTLET (with quick connector)

FRONT-LOADING BENCHTOP AUTOCLAVES WITH PREVACUUMS AND DRYING AHS-B SERIES

AHS-50-B AND AHS-75-B MODELS

SEMI-AUTOMATIC WATER SUPPLY

STANDARD

Purified water is necessary for operation of the autoclave and is added manually into the independent water tank until the alarm (a "beep") is heard and the on-screen lack of water message disappears. Water distribution from the independent clean water tank into the sterilization chamber is automatic.

See "FREE HEIGHT for independent clean water tank filling" on page 16.

The independent water tank has a volume of 10L and has minimum and maximum volume sensors.



If the separate water tank is not filled sufficiently, an error message will appear on the screen and operation of the autoclave will be blocked. If overfilled, after hearing the alarm (a "beep"), the excess water will come out through the INDEPENDENT WATER TANK OVERFLOW OUTLET **(14)**.

IMPORTANT NOTE:

PURIFIED WATER

The water used to feed the autoclave must be free of contaminants and meet the following hardness and conductivity requirements:

- Hardness: ≤ 0.02 mmol/l
- Conductivity: between $5 \mu\text{S/cm}$ and $15 \mu\text{S/cm}$

Multiple systems can be used to obtain water with these requirements: osmotized, demineralized, decalcified, distilled water, etc*.

*Note: Take into account that distilled water that is too pure (conductivity less than $5 \mu\text{S/cm}$) is not recommended as it may cause long term corrosion on stainless steel and water level detection problems in some models.

FRONT-LOADING BENCHTOP AUTOCLAVES WITH PREVACUUMS AND DRYING AHS-B SERIES

AHS-50-B AND AHS-75-B MODELS

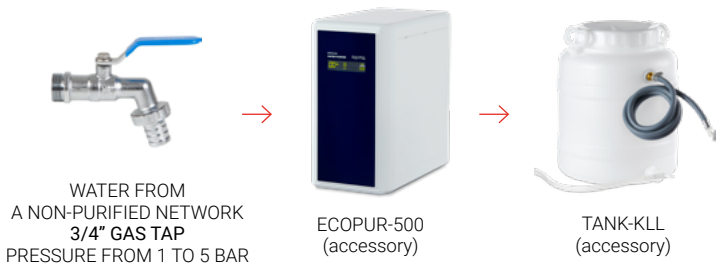
AUTOMATIC WATER SUPPLY

OPTIONAL

If you have chosen the **KLL-AHS** automatic water filling accessory (optional, but installed in the factory), there are the following water feed options **A**, **B**, and **C** using the AUTOMATIC WATER SUPPLY INLET connection **(11)**.

Autoclaves equipped with the KLL-AHS accessory will have both the filling of the independent water tank and the distribution of water into the sterilization chamber fully automated during normal operation of the autoclave.

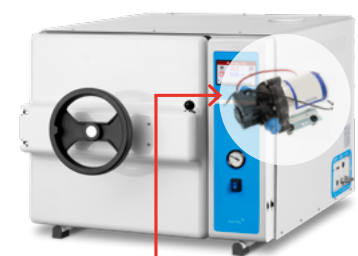
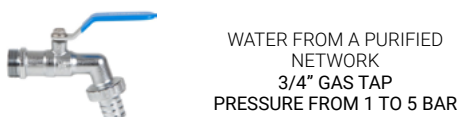
A. Use tap water (pressure from 1 to 5 bar) that goes through our ECOPUR-500 WATER PURIFIER. Resulting water from the purifier will accumulate in a tank connected to the automatic water supply inlet of the autoclave.



B. Use a customer's purified water tank that will connect directly to the automatic water supply inlet of the autoclave.



C. Use water from a previously purified network (pressure from 1 to 5 bar) which will connect to the automatic water supply inlet of the autoclave.



KLL-AHS ACCESSORY

(installed inside AHS-50-B /
AHS-75-B autoclaves)

FRONT-LOADING BENCHTOP AUTOCLAVES WITH PREVACUUMS AND DRYING AHS-B SERIES

AHS-50-B AND AHS-75-B MODELS

USE OF ECOPUR-500 IN COMBINATION WITH AHS-50-B AND AHS-75-B MODELS

OPTIONAL

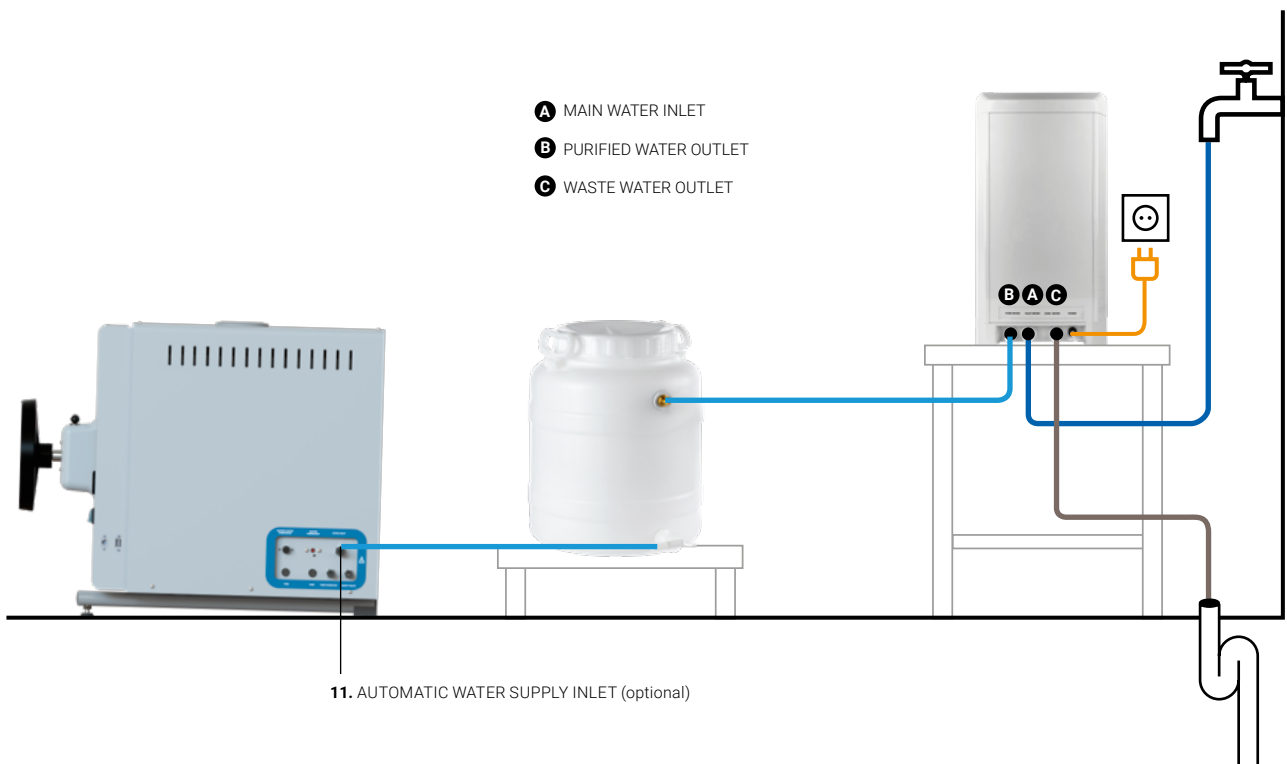
If you have chosen the **KLL-AHS** automatic water filling accessory (optional, but factory-installed), and you do not have a purified water supply at the location where you intend to install the autoclave, we recommend using our ECOPUR-500* water purifier.

The MAIN WATER INLET (**A**) must be connected from the purifier to a non-purified water main with the 1,2m hose (water temperature from the main must not exceed 38°C or be less than 5°C).

Water must be driven from the PURIFIED WATER OUTLET (**B**) to the TANK-KLL accessory inlet and, from there, to the AUTOMATIC WATER SUPPLY INLET (**11**) of the autoclave using the provided 1,2m hose.

Waste water must be driven from the WASTE WATER OUTLET (**C**) to a drain with the 1,2m provided hose.

Bear in mind that the inlet and drain hoses in the purifier must always be visible and in perfect working condition.



Read the specific manual before installing this accessory.

*It is recommended to use a single purifier for each autoclave. In case you would like to use the same purifier for more than one autoclave contact our technical support.

FRONT-LOADING BENCHTOP AUTOCLAVES WITH PREVACUUMS AND DRYING AHS-B SERIES

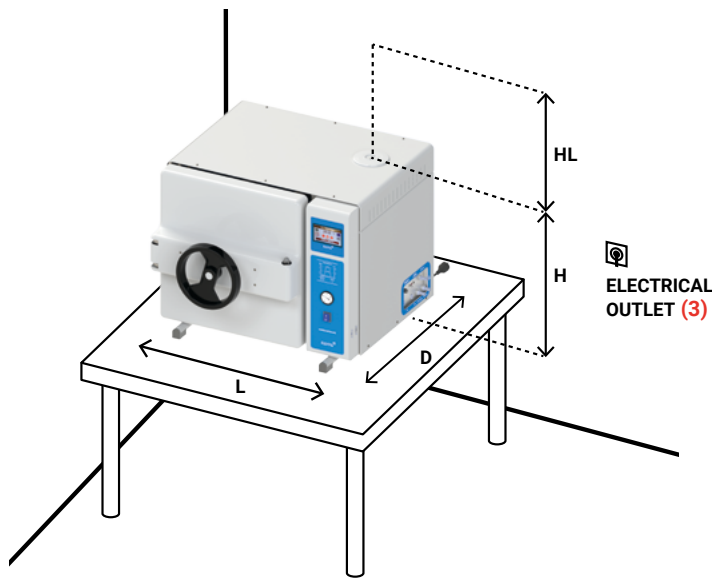
AHS-50-B AND AHS-75-B MODELS



DIMENSIONS TO CONSIDER FOR THE INSTALLATION OF YOUR AUTOCLAVE

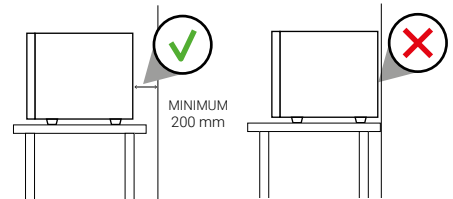
For safety reasons, the distance between both sides of the autoclave and the wall or any other object must be 100 mm, and between the autoclave and the rear wall must be at least 200 mm.

MODEL	L LENGTH with closed door	L1 LENGTH with maximum door opening	D DEPTH	D1 DEPTH with maximum door opening	H HEIGHT	LA x DA SUPPORT AREA	HL FREE HEIGHT for filling the independent water tank	HD DRAINAGE HEIGHT independent water tank overflow outlet
AHS-50-B	805 mm	1240 mm	805 mm	1230 mm	650 mm	622 x 670 mm	400 mm	95 mm
AHS-75-B	805 mm	1240 mm	1005 mm	1430 mm	650 mm	622 x 830 mm	400 mm	95 mm

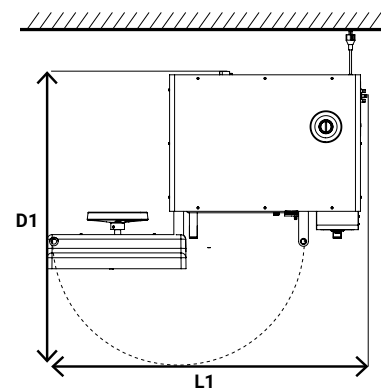


WARNING:

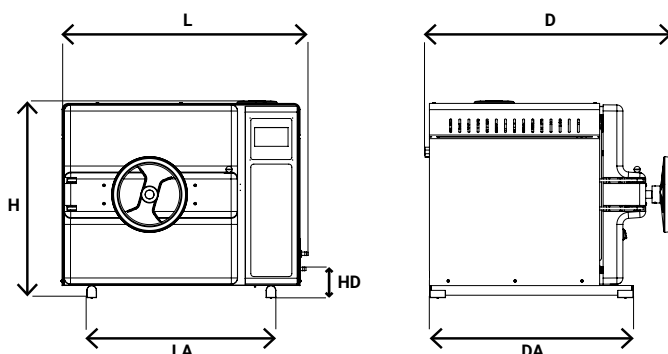
Respect the recommended distances.



PLAN VIEW



FRONTAL AND LATERAL VIEWS



ENVIRONMENTAL CONDITIONS

This autoclave can operate under the following maximum conditions:

- Ambient temperature: 30 °C
- Humidity: 75%
- Altitude: 3,000 meters above sea level. In case of higher altitudes, consult with our technical team.

FRONT-LOADING BENCHTOP AUTOCLAVES WITH PREVACUUMS AND DRYING AHS-B SERIES

AHS-50-B AND AHS-75-B MODELS

RECOMMENDED MAINTENANCE

Autoclaves are like cars: they need regular maintenance for them to work properly, to ensure good condition, prevent deterioration of its components, and maximize their useful life. Frequent cleaning and regular maintenance are essential, as autoclaves work at high pressures and temperatures and are therefore subject to a high level of stress.

For clients that perform multiple cycles each day, we recommend carrying out maintenance and cleaning tasks more frequently.

DAILY MAINTENANCE

Clean the gasket using a clean cotton cloth with a mild vinegar solution (or a comparable product) to reduce the formation of lime deposits.

Wipe the external surfaces with a clean cotton cloth moistened with water and a neutral detergent. Ensure all surfaces are thoroughly dried afterwards.

WEEKLY MAINTENANCE

Clean the sterilization chamber and all the components with a clean cotton cloth dampened with water and neutral detergent. Dry them after.

Empty the integrated water tank completely, removing all its contents, and then refill it exclusively with purified water.

MONTHLY MAINTENANCE

Carefully clean the discharge filter under running water, following the detailed instructions in the user and maintenance manual. If it is clogged with agar, hot water will be needed. If the filter cannot be restored, replace it with a new one.

ANNUAL MAINTENANCE

Autoclaves from the AHS-B Series are equipped with a bacteriological filter, which should be replaced either upon reaching the recommended interval or when a filter blockage is detected.

Conducting a technical inspection is essential to ensure consistent process safety over time. It is necessary to periodically verify the thermodynamic process parameters (pressure and temperature), ensuring they remain within the accepted limits.



**FRONT-LOADING
BENCHTOP AUTOCLAVES
WITH PREVACUUMS AND
DRYING
AHS-B SERIES**

TECHNICAL SUPPORT, ORIGINAL SPARE PARTS AND EXPERIENCED CONSULTING SERVICES

For an optimal operation of the autoclave, always use original spare parts and schedule periodically, with a specialized technician, the relevant maintenance tasks, such as calibration of the temperature and pressure sensors or replacement of the sterilization chamber door gasket.

Additionally, we provide a comprehensive range of services to ensure a satisfactory user experience throughout the entire lifespan of our products. These services include support and training programs, guided start-up and qualification services, preventive and corrective maintenance, periodic calibration, technical support and repairs, as well as consulting on special applications.

Should you encounter any issues, have questions, or require further information regarding maintenance of the AHS-B Series autoclave, please don't hesitate to reach out to our technical support service using the following contact details.



Technical support

<https://www.raypa.com/en/contact/>
+34 937 830 720 (Ext. 2109)

+ info

 YouTube



CLICK!
ACCESS THE
AHS-B SERIES
VIDEO

Find out more about our AHS-B Series on our **Youtube** Channel.

