

Алматы (727)345-47-04  
Ангарск (3955)60-70-56  
Архангельск (8182)63-90-72  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Благовещенск (4162)22-76-07  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Владикавказ (8672)28-90-48  
Владимир (4922)49-43-18  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89

Россия +7(495)268-04-70

Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Казань (843)206-01-48  
Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Коломна (4966)23-41-49  
Кострома (4942)77-07-48  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Курган (3522)50-90-47  
Липецк (4742)52-20-81

Казахстан +7(727)345-47-04

Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Ноябрьск (3496)41-32-12  
Новосибирск (383)227-86-73  
Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Петрозаводск (8142)55-98-37  
Псков (8112)59-10-37  
Пермь (342)205-81-47

Беларусь +(375)257-127-884

Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саранск (8342)22-96-24  
Саратов (845)249-38-78  
Севастополь (8692)22-31-93  
Симферополь (3652)67-13-56  
Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Сургут (3462)77-98-35  
Сыктывкар (8212)25-95-17  
Тамбов (4752)50-40-97  
Тверь (4822)63-31-35

Узбекистан +998(71)205-18-59

Тольятти (8482)63-91-07  
Томск (3822)98-41-53  
Тула (4872)33-79-87  
Тюмень (3452)66-21-18  
Улан-Удэ (3012)59-97-51  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Чебоксары (8352)28-53-07  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Чита (3022)38-34-83  
Якутск (4112)23-90-97  
Ярославль (4852)69-52-93

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# Benchtop autoclaves with drying

AHS-DRY Series **CLASSIC LINE**



# Why choose RAYPA?

Expert manufacturer, original design,  
global brand



## GLOBAL REACH

With half a century of experience, we have a long list of satisfied customers around the world. Currently, we export 85% of our annual turnover and have a stable network of distributors with presence in over 100 countries.



## EFFICIENT TECHNICAL SERVICE

Our team of highly qualified technicians and engineers is expert in our products. If you experience a technical issue, it will be our priority to rectify it. When you purchase a RAYPA unit, you're guaranteed top-level support and technical assistance.



## EXPERT MANUFACTURER

After more than 45 years in the industry, RAYPA is a global leader in the manufacture of laboratory autoclaves. Each of our autoclaves is designed and manufactured entirely within our modern facility equipped with the latest technology



## FULL AND CUSTOMIZABLE RANGE

We offer an extensive portfolio of laboratory autoclaves to cover multiple applications and market segments. Discover the combination of autoclave model and accessories that best fits your needs within our 11 series and 35 available models.



## INNOVATION AND QUALITY

Our products feature advanced technology, ongoing innovation, superior construction quality, and are designed for a long service life. Our technical and engineering staff works tirelessly every day to optimize our products and exceed our customers' expectations.



## COMPREHENSIVE CONSULTANCY

Our team of specialists assesses each project and provides guidance to clients on the option that best suits their requirements. After the sale, we offer training on the use and recommended maintenance of each unit to ensure its optimal operation and extend its lifespan.

# Benchtop autoclaves with drying

The AHS-DRY Series benchtop autoclaves with front-loading access cover most laboratory sterilization needs in many industries, educational institutions and research facilities with the aim of increasing the productivity of the laboratory. A great chamber capacity, the final drying feature and the independent water tank, together with the optimization of resources such as water, power and operating time, results in a cost-efficient solution to manage laboratory workload.

## RECOMMENDED APPLICATIONS

-  Glassware
-  Plastics and metal objects
-  Laboratory waste bags
-  Liquids and culture media
-  Porous solids and wrapped objects\*

\*For this application, the sterilization time should be extended, the chamber should not be fully loaded and chemical and/or biological tests should be used to validate the correct sterilization of the load.



# AHS-DRY Series

## MAIN FEATURES

### COST-EFFECTIVE SOLUTION

AHS-DRY Series autoclaves are robust autoclaves with excellent performance for liquids and solids sterilization procedures. The vacuum drying feature by a heating jacket and vacuum pump at the end of the sterilization cycle eliminates the need of an external equipment to dry the load, significantly reducing the duration of each sterilization rotation and saving the operator time.

### MULTIPLE TYPES OF STERILIZATION CYCLES

Several options available to perform solids or liquids sterilization. Programmable final vacuum drying for the sterilization of solids, initial prevacuum for the sterilization of objects of complex geometries and programmable temperature holding at the end of the cycle for the sterilization of culture media. Optional flexible probe for liquids sterilization.

### EASY INSTALLATION AND MAINTENANCE

Every AHS-DRY Series autoclave is a plug and play equipment that does not need dedicated installation connections. They simply need a power source and can work even without a connection to the drainage. They include a manually fed independent water tank that automatically feeds the sterilization chamber. Optional upgrade to fully automatic water feed directly from water network.

### SAFETY FIRST

AHS-DRY Series autoclaves are equipped with several features to ensure the safety of the operators. These include an overpressure safety valve, a thermally insulated door, a safety thermostat, an open door detection system, and independent pneumatic safety system that locks the main door while positive pressure exists inside the sterilization chamber.

## ADVANTAGES



Final vacuum drying feature by a heating jacket and vacuum pump to completely dry solid loads.



Sterilization chamber and door made of high quality stainless steel grade AISI-316L extremely resistant to corrosion.



Equipment built following all applicable European Union quality, regulatory and safety standards.



Heating by powerful electric elements made of Incoloy® 825 assembled inside the sterilization chamber and shielded by a protective grid.



Control by a PID microprocessor with 4 predefined and 6 editable programs, adjustable by time, temperature, drying time and type of sterilization cycle (solids or liquids, with optional agar mode and/or core probe control).



Adjustable temperature holding at the end of the sterilization cycle between 40-80°C (agar mode).



Suitable to sterilize wrapped and unwrapped loads, small porous and hollow objects and items of complex geometries with cavities\* thanks to the initial standard prevacuum phase.



Automatic water feed to the sterilization chamber from the independent water tank, with water level sensors included in both locations. Optional upgrade to fully automatic water feed directly from water network.



Programmable auto-start for up to 24 h.



Optional software for sterilization data management.



Plug and play equipment, no plumbing required.



Optional integrated or external printer.

\*For this application, the sterilization time should be extended, the chamber should not be fully loaded and chemical and/or biological tests should be used to validate the correct sterilization of the load.

## OPERATING PRINCIPLE

AHS-DRY Series autoclaves provide a solution for the multiple sterilization needs of general laboratories, including glassware, plastics, metal utensils, laboratory waste bags, wrapped and unwrapped solids, small porous and hollow objects, liquids, culture media and other laboratory items.

The load has to be placed into the vessel's trays or basket and, after manually filling the independent water tank with purified water, the equipment starts to create the initial prevacuum, automatically feeds water to the sterilization chamber, heats up and purges until the set combination of sterilization time and temperature is reached.



## OPERATION OF A STERILIZATION CYCLE FOR SOLIDS

### PREVACUUM PHASE

- In this initial step, the equipment's vacuum pump mechanically removes air from the chamber and load through a single vacuum pulse of -0,75 Bargs. This allows the steam to penetrate load objects of complex geometries that couldn't otherwise be reached with a simple displacement of the air by gravity.
- Afterwards, the independent water tank starts to supply water to the sterilization chamber and the heating jacket turns on, preheating the load.

### HEATING PHASE

- After completing the prevacuum phase and once the bottom of the sterilization chamber has been filled with water, the powerful heating elements assembled at the bottom of the sterilization chamber heat up dramatically, transferring energy to the water to produce saturated steam throughout the chamber.

### STERILIZATION PHASE

- Upon reaching the set sterilization temperature inside the chamber, the sterilization phase begins, accurately sustaining the temperature throughout the duration of this phase.

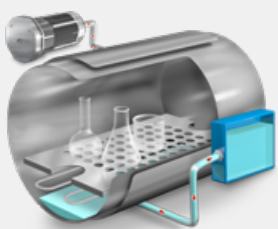
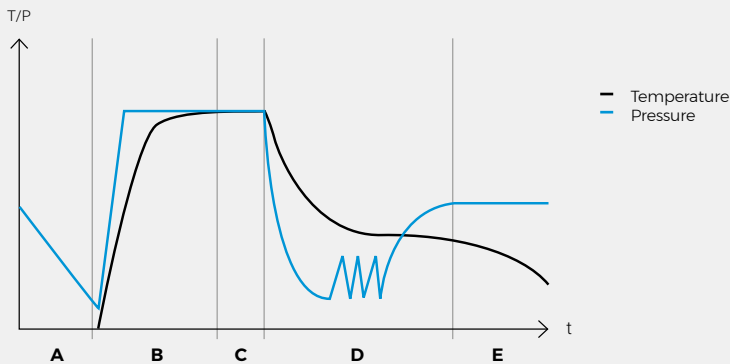
- This crucial step is controlled by a PT-100 Class A temperature probe located within the chamber. As an option for liquids sterilization processes, this phase can be regulated by a PT-100 Class A flexible temperature probe located inside a sample.

### VACUUM DRYING PHASE

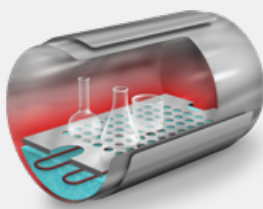
- Once the sterilization phase is finished, only for solids programs, vacuum drying starts, where multiple vacuum pulses occur while the heating jacket is turned on, completely drying the load and automatically returning the water to the independent water tank.

### COOLING PHASE

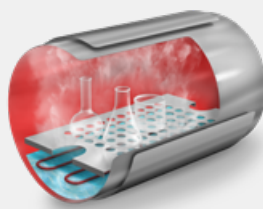
- Once the vacuum drying phase is completed, natural cooling begins and an acoustic beep will sound when a safe temperature is reached that allows the chamber to be opened.
- In liquid programs with agar mode activated, the equipment will hold the preprogrammed temperature indefinitely, selectable between 40 and 80°C.



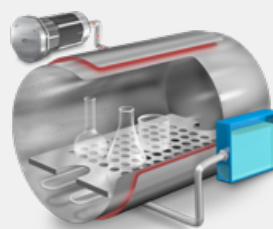
A. Prevacuum phase



B. Heating phase



C. Sterilization phase



D. Vacuum drying phase



E. Cooling phase

## PREDEFINED PROGRAMS

Program No.	Sterilization temperature °C	Sterilization time min	Drying time min	Program mode
P0	115	60	12	Solids
P1	121	30	25	Solids
P2	133	20	30	Solids
P3	121	20	-	Liquids

AHS-DRY Series autoclaves have 10 programs, from P0 to P9, and the first four are predefined and protected.

The rest of the programs, from P4 to P9, can be edited by adjusting the following parameters:

- Sterilization temperature.
- Sterilization time.
- Final drying time.
- Sterilization mode (solids or liquids).
- Sterilization with temperature holding at the end of the cycle (agar mode).
- Temperature regulation of the sterilization cycle can be done through the chamber temperature probe or through the combined use of the chamber probe and the flexible probe.

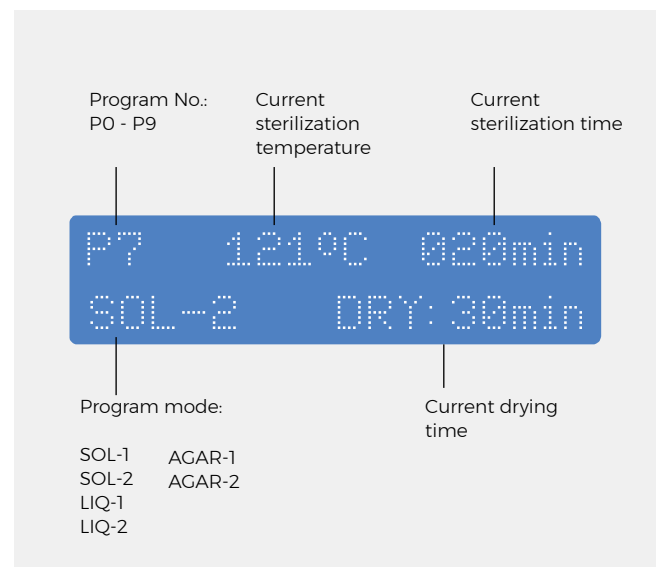
## DIGITAL MICROPROCESSOR

Digital PID microprocessor with 6 push-buttons for an easy programming and parameters selection.



## SCREEN FUNCTIONS

The alphanumeric screen, apart from showing the standard sterilization parameters, also displays the current sterilization phase and several visual alerts, including warning or error messages. The available languages include English, Spanish, French and Catalan. For other languages please contact us.



# AHS-DRY Series

## LOADING CAPACITIES



### ISO ERLENMEYER FLASKS

Autoclave model	Usable volume L	250mL (Ø85 x 143mm)			500mL (Ø105 x 183mm)			1000mL (Ø131 x 230mm)			2000mL (Ø166 x 280mm)		
		Total baskets	Units / basket	Total units	Total baskets	Units / basket	Total units	Total baskets	Units / basket	Total units	Total baskets	Units / basket	Total units
AH-21-L	21	1	8	<b>8</b>	1	4	<b>4</b>	0	0	<b>0</b>	0	0	<b>0</b>
AHS-50-DRY	50	1	14	<b>14</b>	1	8	<b>8</b>	1	5	<b>5</b>	1	2	<b>2</b>
AHS-75-DRY	75	1	26	<b>26</b>	1	15	<b>15</b>	1	8	<b>8</b>	1	3	<b>3</b>



### ISO BOTTLES

Autoclave model	Usable volume L	250mL (Ø70 x 143mm)			500mL (Ø80 x 185mm)			1000mL (Ø101 x 230mm)			2000mL (Ø136 x 260mm)		
		Total baskets	Units / basket	Total units	Total baskets	Units / basket	Total units	Total baskets	Units / basket	Total units	Total baskets	Units / basket	Total units
AH-21-L	21	1	8	<b>8</b>	1	8	<b>8</b>	0	0	<b>0</b>	0	0	<b>0</b>
AHS-50-DRY	50	2	20	<b>40</b>	1	14	<b>14</b>	1	8	<b>8</b>	1	5	<b>5</b>
AHS-75-DRY	75	2	32	<b>64</b>	1	26	<b>26</b>	1	15	<b>15</b>	1	8	<b>8</b>

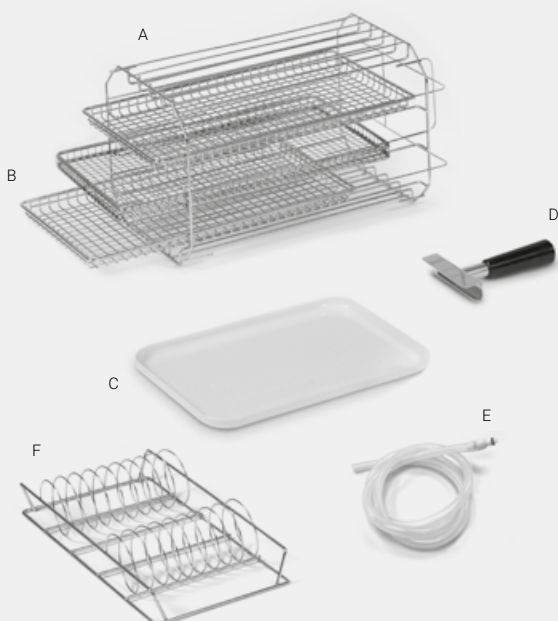
The data contained within these tables, regarding load capacities, serves as a non-binding guide to assist you in the selection of the most appropriate autoclave model.

## COMPONENTS SUPPLIED



### AH-21-L

- A. Stainless steel tray support for 4 trays\*.
  - B. 3 stainless steel wire trays.
  - C. Auxiliary plastic tray for collecting condensed water after opening the door in cycles without final drying.
  - D. Holding clamp to move the trays.
  - E. Silicone tube of 1m with quick connection to drain the independent water tank.
  - F. Stainless steel bag support.
- Stainless steel protecting grid for the heating elements.

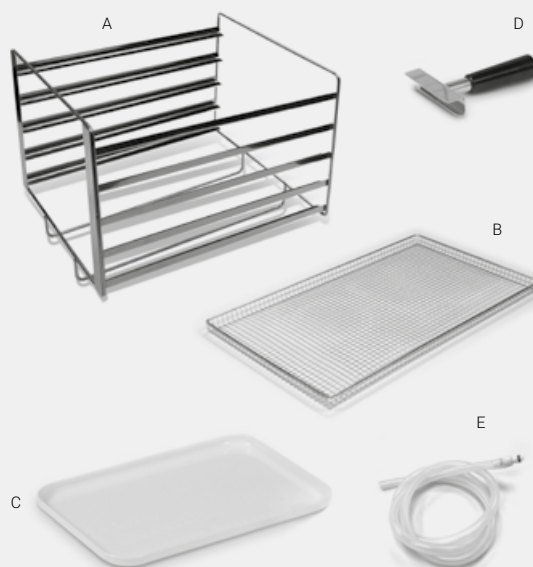


\*Special tray support compatible with up to 5 trays available under request.



### AHS-50-DRY and AHS-75-DRY

- A. Stainless steel tray support for 5 trays.
  - B. 2 stainless steel wire trays.
  - C. Auxiliary plastic tray for collecting condensed water after opening the door in cycles without final drying.
  - D. Holding clamp to move the trays.
  - E. Silicone tube of 1m with quick connection to drain the independent water tank.
- Stainless steel protecting grid for the heating elements.



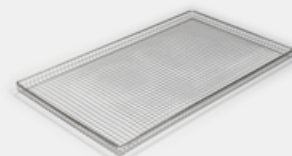


## ACCESSORIES

### STAINLESS STEEL WIRE TRAYS

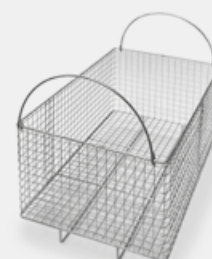
References		BAH-21	BAH-50 B	BAH-75 B
External dimensions L x D mm		190 x 350	315 x 330	315 x 530
Maximum capacity for autoclaves with the following chamber volumes	22 L	4 or 5	-	-
	55 L	-	5	-
	79 L	-	-	5

\*Special tray support compatible with up to 5 trays available under request.



### STAINLESS STEEL WIRE HORIZONTAL BASKET

References		RB-AH-21	RB-AHS-50	RB-AHS-75
Dimensions	Exterior L x D x H mm	170 x 340 x 180	324 x 360 x 235	324 x 560 x 235
	Interior L x D x H mm	160 x 330 x 170	314 x 350 x 225	314 x 550 x 225
Maximum capacity for autoclaves with the following chamber volumes	22 L	1	-	-
	55 L	-	1	-
	79 L	-	-	1



### STAINLESS STEEL BAG HOLDER SUPPORT\*

References		BAP-21	BAP-75
External dimensions L x D x H mm		400 x 180 x 80	300 x 180 x 95
Positions / support		20	20
Maximum capacity for autoclaves with the following chamber volumes	22 L	1	-
	55 L	-	4
	79 L	-	6

\*Possibility of adapting the size of this accessory according to the needs of each customer. For more information, please contact us.



### STAINLESS STEEL CONTAINERS WITH FILTER ON THE LID

References		FC-215	FC-331	FC-338
Dimensions	Exterior L x D x H mm	285 x 185 x 65	300 x 300 x 110	300 x 300 x 85
	Interior L x D x H mm	275 x 175 x 55	290 x 290 x 100	290 x 290 x 75
Maximum capacity for autoclaves with the following chamber volumes	22 L	2	-	-
	55 L	6	2	2
	79 L	9	2	2



## ACCESSORIES



### FLEXIBLE TEMPERATURE PROBE PT-100 CLASS A

After installing this accessory, the temperature regulation of the sterilization cycle can be controlled by the main chamber temperature probe or both the main chamber temperature probe and the flexible temperature probe.

The temperature control by the flexible temperature probe is especially advantageous for processes involving the sterilization of large volumes of liquids, where the sterilization process is regulated by both the temperature achieved in the center of the liquid sample as well as the temperature achieved in the sterilization chamber. Furthermore, should the autoclave be opened at chamber temperatures higher than 80°C there is a risk of liquids boiling over which can be avoided if the temperature of the sample is controlled throughout the sterilization procedure.

Must be installed at our factory.

**Ref. PT-2-AH**



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### EXTERNAL MATRIX PRINTER

Prints program number, cycle number, temperature, time, date and hour and error messages.

Selectable print frequency between 10 and 240 seconds.

Connection: RS-232.

Requires factory adaptation.

**Ref. ITS**

**Consumables: PAPER-ITS for paper and 70945 for ink ribbon**



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### EMBEDDED THERMAL PRINTER

Prints program number, cycle number, temperature, time, date and hour and error messages.

Selectable print frequency between 10 and 240 seconds.

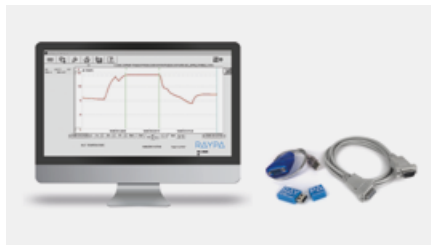
Must be installed at our factory.

**Ref. IT**

**Consumable: PAPER-IT for paper**



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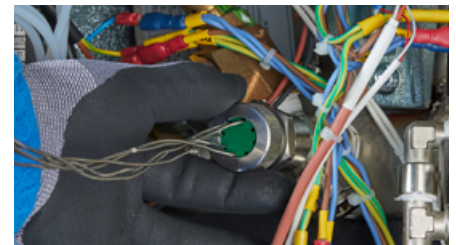
### SW7000 SOFTWARE

Communication software between the equipment and the PC that allows the visualization and recording in real time or after each cycle. Cycles can also be exported to Excel or printed.

Connection to PC via RS-232.

It is supplied with a RS-232 cable, a USB stick that includes the software and installation drivers, and a RS-232 to USB adapter.

**Ref. SW7000**



### CABLE GLAND

Installation of a Ø2mm or Ø4mm cable gland to provide access to as many as eight external temperature probes for calibration and validation procedures.

**Ref. CG2MM and CG4MM**



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## ACCESSORIES



### BENCHTOP AUTOCLAVE TABLE

Stainless steel table with casters (with brakes on two of them).

Designed to accommodate any model of benchtop autoclave, including larger models.

Dimensions (LxDxH): 800x900x800mm.

**Ref. TABLE-AHS**



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### TRANSPORT TROLLEY

Auxiliary trolley to aid in the loading and unloading of the autoclave.

Made of chrome iron and plastic.

The surface of each shelf is textured to prevent the load from moving.

Rubber-coated casters to reduce noise and prevent floor wear.

Dimensions (LxDxH): 730x490x700mm

**Ref. TR-TR**



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### AUTOMATIC WATER FILLING KIT

Water pump to automate the supply of the tank with purified water. Compatible with installations that have a purified water network, a purified water tank or installations with a non-purified water network; in the latter case a water purifier (ECOPUR-500) and a purified water tank (TANK-KLL) will be required.

Must be installed at our factory.

**Ref. KLL-21 and KLL-AHS**



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### ECO-EFFICIENT WATER PURIFIER

Direct flow eco-efficient water purifier without water accumulation capable of filtering 1,3L/min with LED display.

The installation of this accessory requires the joint installation of the external tank (TANK-KLL) and the automatic water filling system (KLL-AHS or KLL-21).

**Ref. ECOPUR-500**



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### PURIFIED WATER TANK

Alternative solution for the storage of up to 25L of purified water in the absence of a water network.

**Ref. TANK-KLL**



[Download technical data sheet](#)

# AHS-DRY Series

## ACCESSORIES



### Temperature data logger

Temperature recorder in AISI-316L stainless steel disk format with connection base and software.

Recommended for autoclave validation and for monitoring the internal temperature of vessels.

Available in various sizes.

**Ref. BDL-DISK3618\_CL**



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### PACK OF STERILIZATION TAPE

Class 1 indicator for steam sterilization.

The color change indicates that the materials have been processed, but this is not a guarantee of a correct sterilization. Additional methods such as biological indicators are required (EN ISO 11138).

Pack of 5 rolls of 50m x 19mm tape.

**Ref. TEST-CT**



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## SPECIFIC SERVICES



### **IQ-OQ DOCUMENTATION**

Delivery of documentation and protocols for autoclave qualification through a third party.

**Ref. IQ-OQ DOC**



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### **IQ-OQ-PQ QUALIFICATION**

Autoclave qualification service performed by RAYPA technicians or authorized entities. It covers the startup of the equipment and the comprehensive qualification of its performance.

**Ref. IQ-OQ-PQ**



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### **CALIBRATION CERTIFICATE FOLLOWING ENAC TRACEABILITY STANDARDS**

Unitary certification of proper equipment calibration and performance in compliance with international standards.

**Ref. MAPEO-ENAC**



### **MAPPING OF STABILITY AND HOMOGENEITY**

Generation of documentary evidence certifying that the temperature and pressure distribution within the autoclave is uniform and stable, in accordance with the manufacturer's design specifications.

**Ref. MAP-3, MAP-7 and MAP-9**



### **ON-SITE COMMISSIONING & TRAINING**

On-site commissioning, which includes verification of the correct operation and installation of the equipment and a training session for users on the use and maintenance of the equipment.

**Ref. INSAE**



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### **REMOTE COMMISSIONING & TRAINING**

Guided remote startup including a training session for users on the operation and maintenance of the equipment.

**Ref. INSAE-REM**



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### **MAINTENANCE CONTRACT**

Regular inspection plan that includes technical inspection, probe calibration and compliance with the preventive maintenance plan, in addition to tariff discounts.

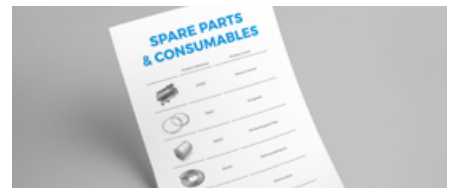
**Ref. MANT-1.4 and MANT-1.5**



### **EXTENDED WARRANTY**

Extended warranty up to a total of 3 years.

**Ref. WE-CL**

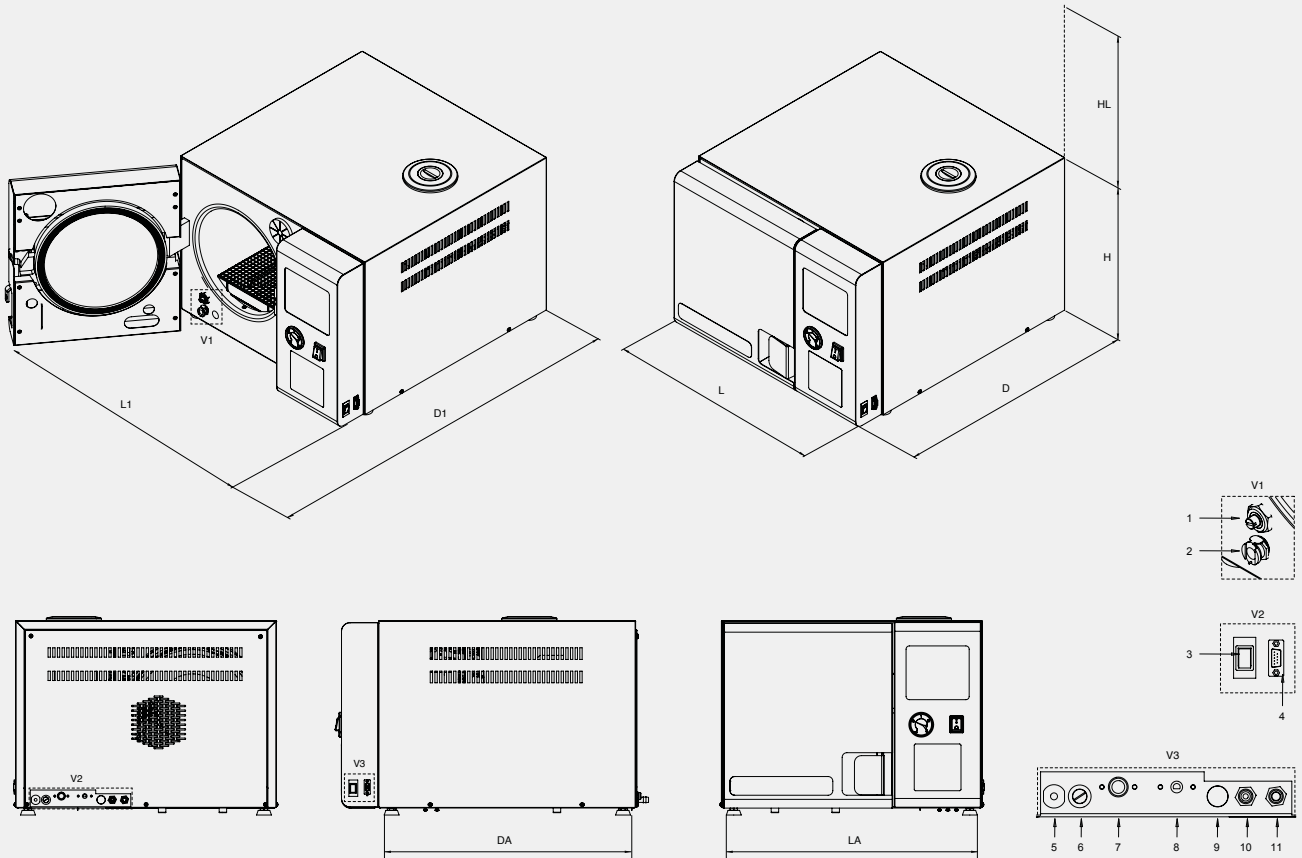


### **SET OF CONSUMABLES, SPARE PARTS AND ESSENTIAL COMPONENTS**

Set of spare parts, consumables and original components selected to meet the maintenance plan of each model with the aim of maximizing the lifespan of the equipment and minimizing downtime in the event of a breakdown.

## TECHNICAL DRAWINGS

### AH-21-L



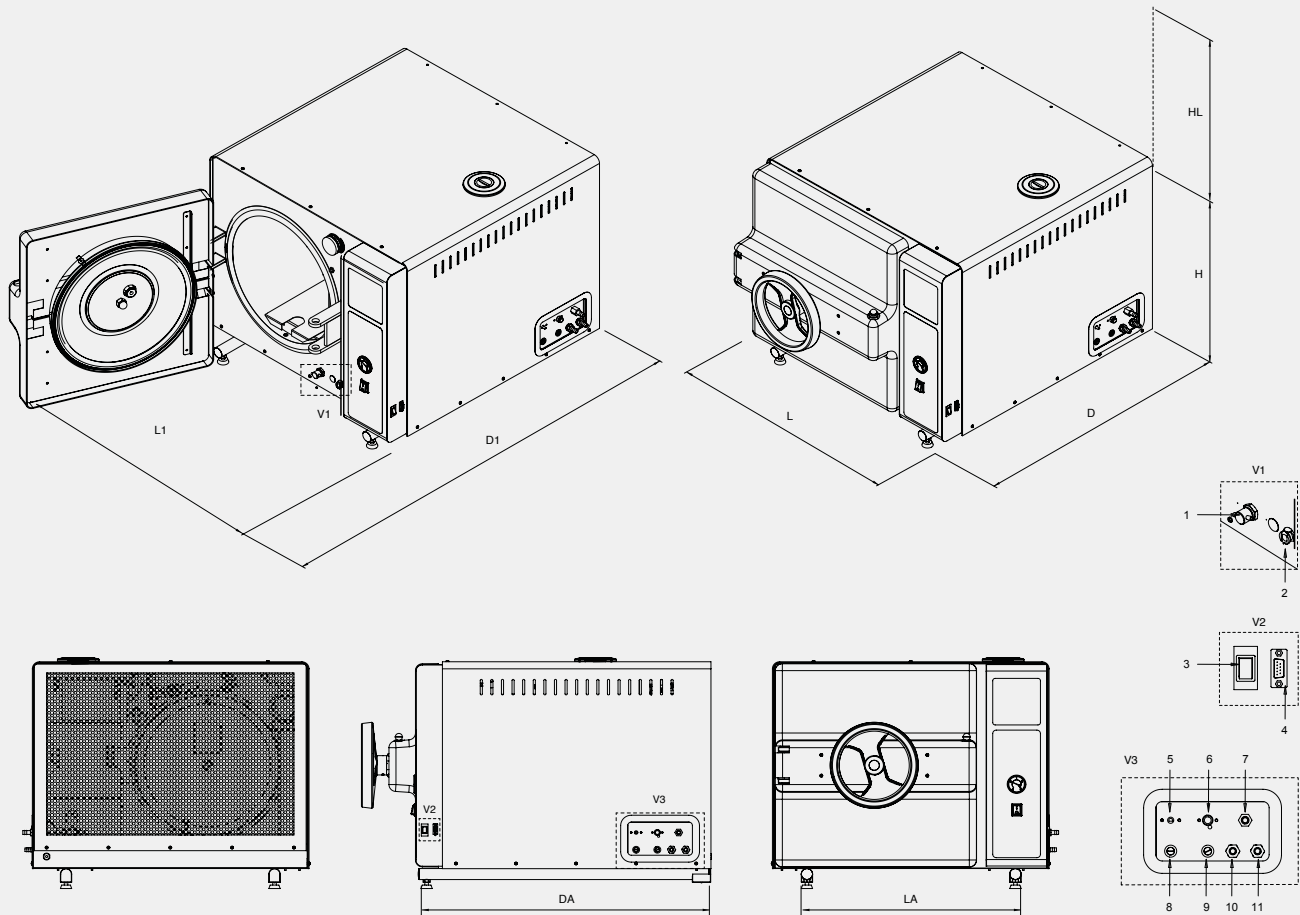
MODEL	L LENGTH with closed door	L1 LENGTH with maximum door opening	D DEPTH	D1 DEPTH with maximum door opening	H HEIGHT	LA x DA SUPPORT AREA	HL FREE HEIGHT for filling the independent water tank
AH-21-L	560 mm	740 mm	660 mm	970 mm	425 mm	537 x 527 mm	400 mm

### CONNECTIONS

1	Access to the drain filter and sterilization chamber drain outlet	7	Safety thermostat for the heating elements of the sterilization chamber
2	Independent water tank drain outlet	8	Heating jacket safety thermostat
3	PC/Printer selector	9	Automatic water feed inlet (optional)
4	RS-232 Port	10	Independent water tank overflow outlet
5	Power cable	11	Safety valve outlet
6	Mains fuse		

## TECHNICAL DRAWINGS

### AHS-50-DRY and AHS-75-DRY













#### MODELS

	<b>L</b> LENGTH with closed door	<b>L1</b> LENGTH with maximum door opening	<b>D</b> DEPTH	<b>D1</b> DEPTH with maximum door opening	<b>H</b> HEIGHT	<b>LA x DA</b> SUPPORT AREA	<b>HL</b> FREE HEIGHT for filling the independent water tank
AHS-50-DRY	805 mm	1240 mm	805 mm	1230 mm	650 mm	622 x 670 mm	400 mm
AHS-75-DRY	805 mm	1240 mm	1005 mm	1430 mm	650 mm	622 x 830 mm	400 mm

#### CONNECTIONS

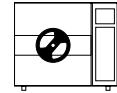
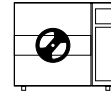
1	Access to the drain filter and sterilization chamber drain outlet	8	Mains fuse
2	Independent water tank drain outlet	9	Mains fuse
3	PC/Printer selector	10	Independent water tank overflow outlet
4	RS-232 Port	11	Safety valve outlet
5	Heating jacket safety thermostat		
6	Safety thermostat for the heating elements of the sterilization chamber		
7	Automatic water feed inlet (optional)		

## TECHNICAL BRIEF

Available models		AH-21-L	AHS-50-DRY and AHS-75-DRY	
	General classification	Recommended setting	General laboratory	
		Equipment placement	Benchtop	
		Load direction	Frontal	
		Chamber profile	Round	
	Recommended type of load	Glassware	++	
		Plastics and metal objects	++	
		Laboratory waste bags	++	
		Liquids and culture media	++	
		Porous solids and wrapped loads	+	
	Sterilization technology features	Steam generation method	Heating elements	
		Type of purge	Vacuum	
		Vacuum drying by heating jacket and vacuum pump	✓	
	Transfer of data	RS-232	✓	
	Batch printers	Integrated printer	0	
		External printer	0	
	Sterilization chamber and door specifications	Sterilization chamber volume	22 L	
		External building materials	Metallic & AISI-304	
		Sterilization chamber material	AISI-316L	
		Heating elements material	Incoloy® 825	
		Gasket material	Silicone rubber	
		Sterilization temperature min. - max.	100 - 134°C	
		Maximum pressure (above atmospheric pressure)	2,1 Barg	
		Mechanism to open the door	Handle	Wheel
		Direction in which the door opens	Frontal	
		Automatic locking with pressure	✓	
		Thermally insulated door	✓	
			User interface and microprocessor	Screen display
Screen size	2 lines x 16 digits			
Total number of available programs	10			
Automatic microprocessor control	✓			
Timer start	✓			
	Special cycles and process optimization	Agar mode (temperature holding after cycle ends 40-80°C)	✓	
		Final vacuum drying (to completely dry solid loads)	✓	
		Temperature control by flexible probe	0	
	Adjustable cycle parameters	Agar mode	40 - 80°C	
		Temperature of sterilization phase	100 - 134°C	
		Duration of sterilization phase	1 - 250 min	
		Duration of drying phase	3 - 99 min	
		Temperature control by flexible probe	On/Off	
		Sterilization mode (solids or liquids).	✓	
	Other specifications	Air inlet with bacteriological filter	✓	
		Independent water tank capacity	6 L	10 L
		Flexible temperature probe	0	
		Rubber feet	✓	
		Pressure gauge	✓	
		Custom electrical features (115-230M V / 230-400T V)	0	
		Services	Third-party qualification (IQ-OQ-PQ)	0

++ Recommended ✓ Included 0 Optional

## TECHNICAL DATA



### Specifications

References	AH-21-L	AHS-50-DRY	AHS-75-DRY
Total/usable volume of the chamber L	22/21	55/50	79/75
Usable dimensions of the chamber Ø max. x D mm	210 x 430	360 x 400	360 x 600
Volume of the built-in water tank L	6	10	10
External dimensions L x D x H mm	560 x 660 x 425	805 x 805 x 650	805 x 1005 x 650
Maximum number of trays	4 or 5	5	5
Tray size L x D mm	190 x 350	315 x 330	315 x 530
Net weight Kg	49	109	126
Power W	2000	2800	3200
Standard voltage* V	230	230	230
Frequency Hz	50/60	50/60	50/60

\*Other voltages and electrical configurations available on request.

### Safety features

- Safety valve.
- Safety thermostats with manual rearm for the heating jacket and the heating elements.
- Pneumatic door blocking system while positive pressure exists inside the sterilization chamber.
- Open door sensor.
- Thermally insulated door.
- Water level detector in the sterilization chamber.
- Water level detector (min. - max.) in the independent water tank with overflow drainage.
- Bacteriological filter for air inlet.
- Heating elements cover.
- Several visual and acoustic safety and warning alarms.

### Regulations

All our AHS-DRY Series autoclaves are designed to comply with the strictest international directives and standards, including the following regulations:

- **EN-61010-1** Safety requirements for electrical equipment for measurement, control and laboratory use. **Part 1:** General requirements.
- **EN-61010-2-040 Part 2-040:** Requirements for laboratory autoclaves.
- **EN-61326** Electrical equipment for measurement, control and laboratory use. EMC requirements.
- **AD 2000 Merkblatt** Pressure vessels.
- **2014/35/EU** Low voltage.
- **2014/30/EU** Electromagnetic compatibility.
- **2014/68/EU** Pressure equipment.

### General features

Adjustable sterilization temperature	100 - 134 °C
Adjustable sterilization time	1 - 250 min
Adjustable drying time	3 - 99 min
Max. pressure	2,1 Barg
Sterilization control system	Fully automatic microprocessor control by chamber temperature probe or flexible temperature probe
Air purge system	Mechanical displacement by vacuum pump
Vacuum drying system	Vacuum pump plus heating jacket
Single prevacuum pulse system	Vacuum pump
Sterilization chamber material	AISI-316L stainless steel
Heating elements material	Incoloy® 825
Gasket material	Silicone rubber
Connection to PC	RS-232
Connection to printer	RS-232 or integrated
Number of programs	10 (4 preset and 6 user free)
Programmable auto-start	Up to 24 h
Screen type	LCD display
Opening door mode	Front-loading swiveling door
Monitoring of sterilization parameters	Self-control of obtained values (T° & t) vs programmed values. Cycle is automatically interrupted if obtained values differ from programmed values
Pressure display	Pressure gauge on control panel
Water management	Independent manually filled water tank that automatically feeds the sterilization chamber. Water automatically returns to the independent water tank after the cycle is completed. Optional upgrade to fully automatic water feed directly from water network.
Drainage system	Drainage connections for both drainage and overflow of the independent water tank and a screw to manually clean the drainage filter and drain the sterilization chamber
Feet	Feet with resistant rubber



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