



# autoclaves

2021









# **AUTOCLAVES**

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# **BENCH TOP AUTOCLAVES**

# HeraScientific

# Class N Autoclaves - medical devices



### **ATV 20 HYDRA EVO**

Technical data		ATV 20 HYDRA EVO
Capacity	lt	16
Filling tank capacity	lt	4.5
Filling water	D	emineralized or distilled
Dimensions (LxWxH)	mm	510x590x390
Chamber dimensions (Dia*H)	mm	Ø245x318
Chamber material		AISI 304 stainless steel
Opened door dimensions	mm	300
Rated Power	kW	1.5
Max sterilization temperature	°C	134
Max working pressure	bar	2,4
Max vacuum		-
Number of supplied trays		4
Tray material		Anodized aluminium
Tray dimensions (LxWxH)	mm	192x280x165
Weight	Kg	54
Medical class		IIA
Code		608.1000.20

V/HZ 220-240/50-60



Class N sterilization: unwrapped materials without cavities.

General purpose, simple sterilization for laboratories.



Pre-set cycles:

- 121°C cycle: for solid and ferrous materials (unwrapped);
- 134°C cycle: for solid and ferrous materials (unwrapped).



Protected tray holder to safeguard against contact between load and chamber.

Safety thermostat.

Certified safety valve.

3 safety devices on the door:

- mechanic and electro-magnetic device: it blocks the door opening up to the end of the cycle;
- electrical device: it operates when the door is forcibly opened.
- dynamic device: the door gasket does not allow opening of the door if there is pressure within the chamber



AISI 304 stainless steel circular chamber.

5 kg Maximum load per cycle.

Forced ventilation system.

Rear board with prefitting and automatic water filling and discharge.

Insulation of the chamber with certified ceramic material.



Constantly monitored cycles to detect uncommon feature. Pre-set cycles, not manipulable to guarantee a safe sterilization.

Printer included.

Manually operated door.

Deionization connection.

Water filling:

- automatic water filling from water supply by external purification device;
- automatic water filling from external tank with purified water.



Sterilization process:

- preheating system: parameters, temperature and pressure are set;
- sterilization: all the micro-organisms are eliminated.
   Pressure, temperature and time shall be perfectly monitored;
- · drying: perfect drying ensures high sterility.



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<sup>\*</sup> to compare Bench Top Autoclaves models see page 7



# **BENCH TOP AUTOCLAVES**

# Class B Autoclaves - medical devices



Class B sterilization: wrapped and unwrapped materials (cannulas, tubes or devices with small passages):

- porous bodies: simple and compound materials that soak up fluids (tissues, gowns, surgical gauzes, dressing, etc...);
- hollow bodies: materials, device and obstructions with small cavities.



#### Pre-set cycles:

- 121°C cycle: for thermoplastic, hallow bodies, solid and ferrous materials (wrapped and unwrapped);
- 134°C classic cycle: for solid and ferrous materials (wrapped and unwrapped);
- 134°C "flash" cycle for quick sterilization cycles (unwrapped);
- 134°C "prion" cycle for Cruetzenfeld & Jacobs disease (wrapped).



Protected tray holder to safeguard against contact between load and chamber.

Safety thermostat.

Certified safety valve.

3 safety devices on the door:

- mechanic and electro-magnetic device: it blocks the door opening up to the end of the cycle;
- electrical device: it operates when the door is forcibly opened:
- dynamic device: the door gasket does not allow opening of the door if there is pressure within the chamber.



AISI 304 stainless steel circular chamber.

5 kg Maximum load per cycle.

Forced ventilation system.

Insulation of the chamber with certified ceramic material. Rear board with prefitting and automatic water filling and discharge.



Constantly monitored cycles to detect uncommon feature. Pre-set cycles to guarantee a safe sterilization.

Ergonomic structure and easy to use.

Printer included.

Manually operated door.

Deionization connection.

Night cycle.

PID microprocessor.

Automatic barometric alignment system.

Water filling:

- automatic water filling from water supply by external purification device;
- automatic water filling from external tank with purified water.



#### Sterilization process:

- fractional vacuum: pump system alternates negative pressure (vacuum) phases with positive pressure phases;
- preheating system: parameters, temperature and pressure are set;
- sterilization: all the micro-organisms are eliminated.
   Pressure, temperature and time shall be perfectly monitored. A double-probe, microprocessor-controlled system controlled by PID;
- · drying: perfect drying ensures high sterility.





## **ATV 50 EUROPA B EVO**

Technical data	A <sup>-</sup>	TV 50 EUROPA B EVO
Capacity	It	16
Filling tank capacity	lt	4.5
Filling water	Der	mineralized and distilled
Dimensions (LxWxH)	mm	510x590x390
Chamber dimensions (Dia*H)	mm	Ø245x320
Chamber material	A	ISI 304 stainless steel
Opened door dimensions	mm	300
Rated Power	kW	1.7
Max sterilization temperature	°C	138
Max working pressure	bar	2,4
Max vacuum		-0.9
Number of supplied trays		4
Tray material		Anodized aluminium
Tray dimensions (LxWxH)	mm	184x280x17
Weight	Kg	54
Medical class		IIA
Code		608.1000.50

V/HZ 220-240/50-60

<sup>\*</sup> to compare Bench Top Autoclaves models see page 7



# MANDATORY TEST FOR AUTOCLAVE ATV 50 – CLASS B



The user of a medical device must periodically check its efficiency according to procedures established by directives, standards or guidelines.













	Helix Test	Bowie & Dick	SteamPlus Chemical integrators	VaporLine Chemical integrators	B Test Plus Biological test	Spore	Vaccum Test
Aim	Physical test used to assess the capacity of steam penetration in hollow objects.	Physical test used to assess the capacity of steam penetration in porous objects.	The chemical integrators are more suitable devices for the control of steam sterilization, as they interact with all the cycle parameters (temperature, time, steam presence), certifying proper stability.		ble devices for the control of a sterilization, as they interact thall the cycle parameters temperature, time, steam  Used to asses the ability of the autoclave to destroy all the microorganisms, including spores.		Vacuum test is used to reveal chamber leakage or loss of vacuum.
Frequency	Recommended every 30 days, even if hollow object sterilization is not carried out.	Recommended every 30 days, even if porous object sterilization is not carried out.	Recommended once a day.		Spores must be i	l every 30 days. ncubated within 1 rilization process.	Recommended every 7 days.
Stardard compliance	EN ISO 11138-1	EN ISO 11140-4	EN ISO 11140-1 CLASSE 5		EN ISO	11138-1	-
Pieces in pack	50 strip	20 pcs	100 pcs	250 pcs	-	20 phials	-
Code	608.1000.09	608.1000.10	608.1000.11	608.1000.12	608.1000.13	608.1000.14	-



# HORIZONTAL AUTOCLAVES COMPARISON

# Features tables

	ATV 20 HYDRA EVO CLASS N	ATV 50 EUROPA B EVO CLASS B
Included printer	yes	yes
Manually operated door	yes	yes
Deionization connection	yes	yes
Night cycle	no	yes
PID microprocessor	no	yes
Automatic barometric alignment system	no	yes

# Sterilization cycles table

	121°C unwrapped	121°C wrapped	134°C unwrapped	134°C wrapped	134°C Flash unwrapped	134°C Prion wrapped
ATV 20 HYDRA EVO CLASS N	Х		Χ			
ATV 50 EUROPA B EVO CLASS B	Χ	Χ	Χ	Χ	Χ	Х

Technical		ATV 20 HYDRA EVO	ATV 50 EUROPA B EVO
data		CLASS N	CLASS B
Capacity	lt	16	16
Filling tank capacity	lt	4.5	4.5
Filling water		Demineralized or distilled	Demineralized or distilled
Dimensions (LxWxH)	mm	510x590x390	510x590x390
Chamber dimensions (Dia*H)	mm	Ø245x318	Ø245x320
Chamber material		AISI 304 stainless steel	AISI 304 stainless steel
Opened door dimensions	mm	300	300
Rated Power	kW	1.5	1.7
Max sterilization temperature	°C	134	138
Max working pressure	bar	2.4	2.4
Max vacuum		-	-0.9
Number of supplied trays		4	4
Tray material		Anodized aluminium	Anodized aluminium
Tray dimensions (LxWxH)	mm	192x280x165	184x280x17
Weight	Kg	54	54
Medical class		IIA	IIA
Code		608.1000.20	608.1000.50

V/HZ 220-240/50-60



# Small autoclave for routine applications



Vertical loading autoclave for routine applications



Sterilization cycles:

- 4 pre-set cycles: 121°C 135°C cycles for unwrapped solid and liquids
- 1 customized cycle



Pressure safety valve preset to 3 bar
Over temperature protection
Temperature monitoring
Over current and short circuit protection
Electric leakage protection
Anti-scald chamber cover and bench
Automatic troubleshooting
Safety devices: mechanical lock to insert before starting the



Microcomputer control system monitors sterilization process. Saturated steam monitoring creates a sterilization envronment and discharges the steam



Built-in printer detecting the time, pressure and temperature parameters, serial number of the autoclave, the selected program, the progressive cycle counts, date, month, year Manual water filling



**ATV 80** 

Technical data		ATV 80			
Capacity	Lt	24			
Filling water	De	emineralized or distilled			
Dimensions LxWxH	mm	500x450x950			
Chamber dimensions (Dia*H)	mm	243x500			
Chamber material		AISI 304 Acciaio inox			
Rated power	W	2500			
Stainless steel basket (Dia*H)	mm	240X430			
Working environment	5-45	°C, relatively humidity 10-85%			
Sterilization temperature	°C	100-136			
Sterilization time range	min	1-99			
Lid opening type		Flip (up and down)			
Max working pressure	Мра	2,2			
Weight	Kg	60			
Code		608.1000.80			
V/HZ 220-240/50-60					



#### **ACCESSORIES INCLUDED**



Stainless steel AISI 304 Size Φ240xH430 mm

Code 608.1000.82

## **OPTIONAL ACCESSORIES**

Steriscan
Strip for measuring the effectiveness of the sterilizartion (pack 250)

Codice 608.1000.05

#### **GREEN PAPER FOR STERILIZATION**

Size mm	Pack
500x500	500
750x750	250
1000x1000	250
	500x500 750x750

SPARE PARTES

Not divisible paper for printer 10 pcs pack

Codice 608.1000.84





# High-performing autoclaves with drying



ATV 600/850/1100



Vertical loading autoclave for solid and liquid materials



Sterilization cycles:

- Solid cycle
- Liquid cycle
- · Liquid and warming cycle
- Agar cycle
- Solid with drying cycle
- Medical waste cycle
- Customized cycle



Dry scorch protection Over pressure protection Safety valve Water level sensor Over temperature protection Temperature monitoring Over current and short circuit protection Electric leakage protection Anti-scald chamber cover and bench Automatic troubleshooting

- 3 safety devices:
  - · Cooling lid lock blocks the lid opening at set temperature
  - · Mechanical lock to insert before starting the
- · Electric double inner lock avoids accidental opening



Microcomputer control system monitors sterilization process, maintenance, calibration, traceability and recording. Saturated steam monitoring creates a sterilization envronment and discharges the steam



Preset and auto start up to 6 days in advance Automatic internal discharging with a steam collecting bottle, speed selected by 6 levels. Automatic water filling from external tank with reverse osmosis water

Technical data		ATV 600	ATV 850	ATV 110
Capacity	Lt	60	85	110
Filling water			Reverse osmosis wate	r
Dimensions LxWxH	mm	660x644x980	660x644x980	660x644x1180
Chamber dimensions (Dia*H)	mm	Ф400x505	Ф400x700	Ф400x895
Chamber material			SUS 304	
Rated power	W	2900	4600	4600
Stainless steel basket (Dia*H)	mm	(Ф360x200)x2	(Φ360x280)x2	(Ф360x250)x3
Temperature accuracy	°C	,	0.1	,
Working environment		5-45°(	C, relatively humidity 10	0-85%
Sterilization temperature	°C		105-138	
Sterilization time range	min		1-6000	
Melting temperature	°C		60-100	
Melting time range	min		1-6000	
Warming temperature	°C		45-60	
Warming time range	min		1-9999	
Drying temperature	°C		80-140	
Drying temperature range	min		1-300	
Temperature range for Iid lock		°C40-80 for	liquid cycles, 40-99 for	other cycles
Memory			60 cycles	•
Lid opening type			Flip (up and down)	
Steam collector			included	
Inner water tank	Lt		28	
Display range of pressure gauge	Мра		-0.1-0.5	
Max working pressure	Mpa		0.27	
Design pressure	Mpa		0.35	
Weight	Kg	101	113	125
Code		608.1002.06	608.1002.08	608.1002.11

V/HZ 220-240/50-60



# **ACCESSORIES**



## **ACCESSORIES INCLUDED**



#### Stainless steel baskets

Code	Dia*H mm	Model	Quantity
608.1002.50	360x200	ATV 600	2
608.1002.51	360x280	ATV 850	2
608.1002.52	360x250	ATV 1100	3

The diameter and the height of the baskets can be customized

# **OPTIONAL ACCESSORIES**



Stainless steel pail

Size 1:

ф 315mm (Dia)x200mm (H) Code 608.1002.58

ф 240mm (Dia)x200mm (H) Code 608.1002.59



Load thermometer (Liquid temperature sensor) Code 608.1002.62



Printer Code 608.1002.64





Printer paper (2 rolls)
Code 608.1002.63

5 printing sets (pressure sensor + printer)
Code 608.1002.65



# **Autoclaves for routine applications**



ATV-E 500/800/1000



Vertical loading autoclave for solid and liquid materials



Pre-set cycles:

- Solid cycle
- · Liquid cycle



Dry scorch protection Over pressure protection Safety valve

Over temperature protection

Over current and short circuit protection

Electric leakage protection

Anti-scald chamber cover and bench

Automatic troubleshooting with 13 error detection procedures 2 safety devices:

- · Self-induction interlocking device to avoid misuse
- · Safety pressure lid locking



Microcomputer control system



Automatic cold air discharging monitoring to guarantee pure steam sterilization environment Manual water filling

Dati tecnici		ATV-E 500	ATV-E 800	ATV-E 1000
Capacity	Lt	50	80	100
Filling water			Reverse osmosis wate	r
Dimensions LxWxH	mm	460x542x1070	620x680x1042	620x680x1222
Chamber dimensions (Dia*H)	mm	Ф325х670	Ф400x709	Ф400x889
Chamber material		,	SUS 304 stainelss stee	el
Rated power	W	2600	4600	4600
Stainless steel basket (Dia*H)	mm	(Ф300x200)x2	(Φ360x280)x2	(Ф360x220)x3
Working environment		. 5-45°	C, relatively humidity 1	0-85%
Sterilization temperature	°C		105-138	
Sterilization time range	min		1-300	
Lid opening type			Slide (left to right)	
Display range of pressure gauge	Мра		0-0.4	
Max working pressure	Mpa		0.27	
Design pressure	Mpa		0.3	
Peso	Kg	95	110	120
Code	· ·	608.1001.05	608.1001.08	608.1001.10

V/HZ 220-240/50-60

### **ACCESSORIES INCLUDED**



Stainless steel baskets

Code	Dia*H mm	Model	Quantity
608.1001.50	300x200	ATV-E 500	2
608.1001.51	360x280	ATV-E 800	2
608.1001.52	360x220	ATV-E 1000	3

The diameter and the height of the baskets can be customized

## **OPTIONAL ACCESSORIES**



Stainless steel pail

Size 1:

ф 300mm (Dia)x200mm (H) Code 608.1001.58

C:=0 2:

ф 360mm (Dia)x220mm (H) Code 608.1001.59



Printer

Code 608.1002.64

Printer paper (2 rolls) Code 608.1002.63





**COMPARISON** 





	•	_		
Model	ATV 600/850/1100	ATV -E 500/800/1000		
Capacity	60 - 85 - 110 LT	50 - 80 -100 LT		
Cover Open Way	Flip (up and down)	Slide (left to right)		
Design Pressure	0.35MPa	0.3Mpa		
Waste Mode	Yes	No		
Agar Mode	Yes	No		
Drying Mode	Fully automatic	No		
Automatic Water Feeding	Yes	No		
Safety Features	Dry scorch protection, Over pressure protection, Safety valve, Water lever sensor, Over temperature protection, Temperature monitor, Automatic troubleshooting, Anti-scald chamber cover and bench, Over current and short circuit protection, Electric leakage protection, Cooling lid lock, Mechanical lock, Electric double inner lock	Dry scorch protection, Over pressure protection, Safety valve, Over temperature protection, Automatic troubleshooting, Anti-scald chamber cover and bench, Over current and short circuit protection, Electric leakage protection, Self-induction interlocking devise, Safety pressure lid locking		
Safety opening	Yes, you can set a lower temperature to open the cover	No, the temperature of cover opening is 96°C for solid, 79°C for liquid		
Cycles	Solid cycle Liquid cycle Liquid and warming cycle Agar cycle Solid with drying cycle Medical waste cycle Customized cycles	Solid cycle Liquid cycle		
Optional	printer, liquid sensor	printer		



# **THERMOSEALER**





Useful to seal all types of paper for sterilization, including folded paper



Digital control



Signal of bad sealing



The maximum seal lenght is 320 mm The maximum seal width is 12 mm

## **SPARE PARTS**

cartridge heater Code 638.1434.42

Technical data		ONE
Seal lenght	mm	320
Seal width	mm	12
External dimensions LxWxH	mm	460x400x170
Power	W	320
Weight	Kg	8
Code		638.1434.40

V/H7 220-240/50-60	SAFETY CLASS 3.1	PROTECTION CLASS 30



# **ACCESSORIES**

T-Paper: flat sterilization reels are designed for hospital, medical, dental, cosmetic, veterinary and podology uses and for all steam and gas sterilization processes.

Pipe lenght m 200						
Diameter	mm	75	100	150	200	250
Code		638.1435.07	638.1435.10	638.1435.15	638.1435.20	638.1435.25





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