

# USER MANUAL

Steam Sterilizer

**A-21**



Dec, 2011



## Warranty

**Kambič laboratorijska oprema guarantees that the product delivered has been thoroughly tested to ensure that it meets its published specifications. The warranty is valid only if the product has been installed and used in accordance to the instructions supplied by Kambič laboratorijska oprema.**

**Kambič laboratorijska oprema shall in no event be liable for incidental or consequential damages, including without limitations, lost profits, loss of income, loss of business opportunities, loss of use, and other related exposures, caused by incorrect use of product.**

**Warranty is valid for 13 months from date of shipping and includes spare parts and labor.**

**Type:** \_\_\_\_\_

**Serial number:** \_\_\_\_\_

**Date of shipping:** \_\_\_\_\_

**Signature/stamp:** \_\_\_\_\_

**Producer:**

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**Thank you for your trust and for buying this device. We hope it will successfully serve the purpose for many years.**

**CAREFULLY READ THESE INSTRUCTIONS BEFORE USING THE DEVICE**

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## 1. WARNINGS AND SAFETY PRECAUTIONS

	<p><b>READ ALL INSTRUCTIONS BEFORE USE!</b> Reduce the possibility of injury and failure.</p>
	<p><b>WARNING</b> Before you perform any kind of maintenance, disconnect all electrical power to the unit!</p>
	<p><b>DANGER</b> Appliance must not be installed in a room where the possibility of explosive atmosphere is present!</p>
	<p><b>DANGER OF BREAK DOWN</b> Service only allowed to authorized personnel!</p>
	<p><b>WARNING</b> Never use with toxic, corrosive, flammable or organic materials unless special precautions are in place to prevent injury to personnel or damage to equipment.</p>
	<p><b>WARNING</b> Never operate the appliance with the housing removed!</p>
	<p><b>WARNING</b> Only a qualified person can use this appliance!</p>

## 2. INTRODUCTIONS

### **CONSTRUCTION:**

Autoclave A –21 is constructed of 4 important unites; sterilization chamber, special system which removes air from chamber, heating system to heat during the drying process, microprocessor control.

Sterilization chamber, water tank, doors and trays are made of high quality CrNi stainless steel.

Closed system enables to use the same water over and over, and also assures that the steam does not spread in the surroundings.

A-21 is designed for sterilization of hard materials of all kinds, plastic, rubber, fabric and fluids.

### *PROCESS CONTROL:*

High capacity microprocessor control offers:

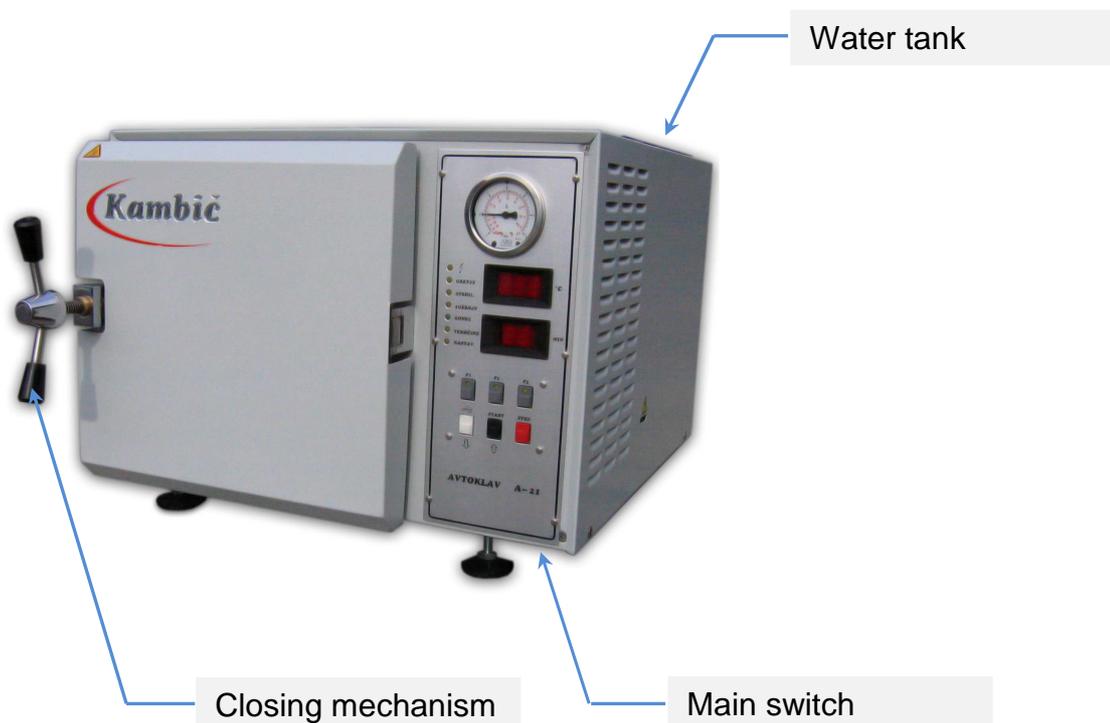
- Sterilization of hard materials all kinds
- Sterilization of fluids in closed and open systems
- Five different programs of sterilization
- Selection of sterilization temperature from 100 °C to 135 °C
- Selection of sterilization time from 1 min to 100 min.
- Selection of drying time from 1 min to 100 min

### *AUTOMATIC AND FAST OPERATION:*

From selecting the desirous program the process is totally automatic. Efficient heating and excellent isolation gives a short time of sterilization cycle.

### 3. TECHNICAL DATA

<b>A-21</b>	
Exterior dimensions	500 x 400 x 550 mm (WxHxD)
Chamber dimensions	∅250 x 400 mm
Volume	21 L
Sterilization temperatures	101 ÷ 135 °C, programmable
Sterilization time	1 ÷ 90 min programmable
Drying time	1 ÷ 90 min programmable
Number of programs	3
Process control	Microprocessor controller
Temperature display	Digital
Pressure display	Analogue gauge
Shelves for material	4
Execution	Horizontal, table top
Power supply	2000W / 230 V - 50 Hz

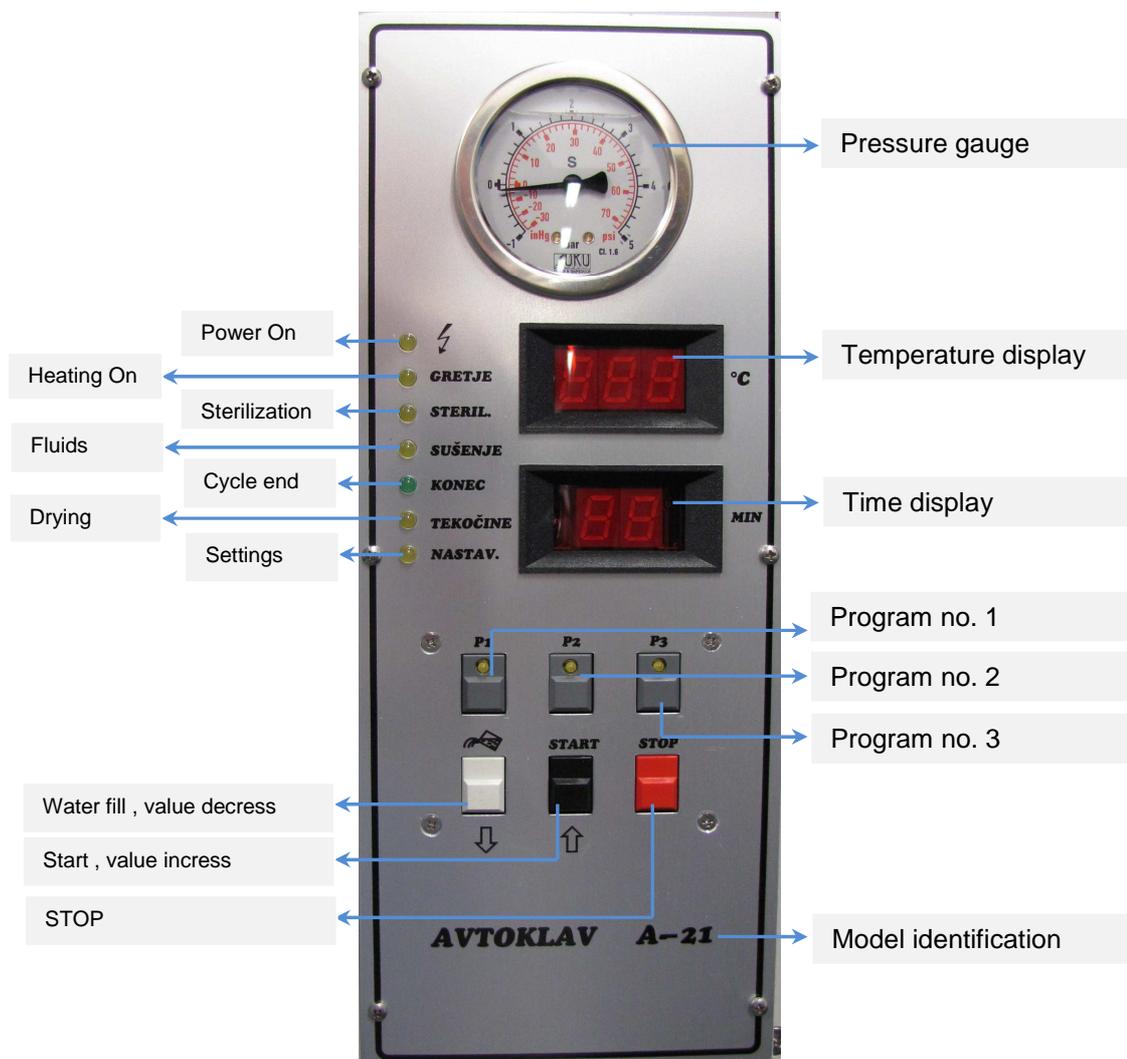


## 4. INSTRUCTIONS FOR USE

### 4.1 Basic setup

1. Connect the power cord into the power supply 230V±10%; 50Hz, 60Hz
2. Fill the water tank distilled or demi. water to max level
2. Insert material on treys, close the chamber door
3. Put the main switch in position 1 (on the bottom below the control panel)
4. Press water fill to fill the water till few mm of chamber edge!
5. Select the desired program and press **"START button "**
6. From this moment on the device runs completely automatically
7. Press **"STOP"** to stop the device
8. Never open the door when chamber under pressure! Pressure gauge must be on 0!

### 4.2 Control panel with displays



### 4.3 Programing

All 3 programs are open for programming and all 3 can be set for sterilization of hard materials as well as fluids.

In each of this programs you can set the following parameters:

- Sterilization temperature ( 101°C...135°C )
  - Sterilization time ( 1 min .... 90 min)
  - Drying time (when selected program for solids) ( 1 min .... 90 min)
  - Cooling speed (when selected program for fluids) ( 1-slowest...20-fastest )
1. Power On
  2. Press P, activation indicated with LED on button
  3. To program the selected Press again and hold for min 3 sec. LED light next to “NASTAVITVE” settings is ON
  4. Press P1 LED next to “STERIL” is ON. Upper display is blinking selected sterilization temperature. Use Up & Down buttons to set sterilization temperature of program P1.
  5. Press P1. Lower display is blinking selected sterilization time. Use Up & Down buttons to set sterilization time of program P1.
  6. Press P1. LED next to “SUŠENJE” (drying) is ON. Lower display is blinking selected drying time. Use Up & Down buttons to set Drying time of program P1.
  7. When time of drying decreased below 1 min lower display will show “ □ “ meaning program is set for fluids! At the same time LED next to “TEKOČINE” (fluids) is on At this status use Up & Down buttons to set cooling speed on upper display. 1 means slowest speed 20 means fastest.

	<p><b>WARNING</b>  <b>When cooling set too fast, might result boiling and fluid overflow!</b>  <b>Adjust accordingly!</b></p>
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8. Finish and save settings by pressing STOP. Program number 1 is now set.

Do the same for P2 & P3.

## 5. SERVICE AND MAINTENANCE

**WARNING**

**In case of maintenance interventions, disconnect power supply !**

Maintenance and service within the warranty period may only be performed by the authorized service person.

Please advice Kambic in before alternation & modification.

All spare parts are in stock in the producer's magazine. It is only allowed to use the original spare parts.

Keep the inside and outside surfaces of the chamber clean. For cleaning use some soft cleaning detergents and soft cloth.

Check and remove condensate from internal chamber.

**Regulary or a least every 10 sterilizations replace water in reservoir!**



Drain valve, unscrew to drain!

**In the event of failure, call the service!**

Troubleshooting & self diagnostic	
Message	Error & description
Er.01	STOP pressed during cycle
Er.02	Error on temperature sensor
Er.03	<p>Error on over temperature shut off device (reset by pressing spring next to thermostat shaft)</p>  <p>Heater malfunction (no temperature increase in 8 min period)</p>
Er.04	Power supply failure
Er.05	Program parameters undefined (set program parameters)
Er.06	Fill water time too short. Repeat fill water and keep pressed for at least 5 sec.

## 6. REQUIRES SPACE AND CONECTIONS

The appliance must be positioned at least 100 mm away from a wall to allow ventilation.

Additional space or relocation of the apparatus may be necessary when carrying out any maintenance or servicing.

The user must provide electrical connection: 2000W / 230V $\pm$ 10% / 50Hz, 60Hz.

Environmental and operational conditions:

- Temperature            +23°C  $\pm$  5°C
- Relative humidity    from 15 % to 75 %

## 7. DISMANTLING AND DISPOSAL



This symbol means do not dispose of your product with your other household waste. Instead, you should protect human health and the environment by handing over your waste equipment to a designated collection point for the recycling of waste electrical and electronic equipment. For more information please contact your household waste disposal service.