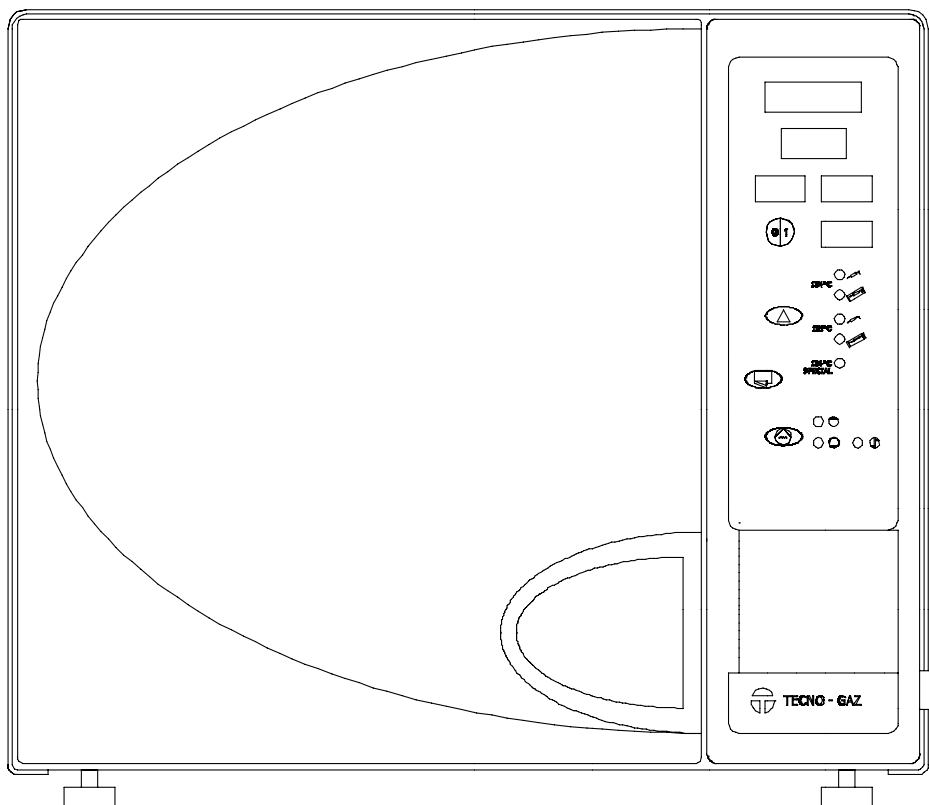


ANDROMEDA VACUUM xp 20

Manuale d'uso / User Manual / Mode d'emploi / Manual de uso / Benutzerhandbuch



CE 0434

In accordo alle prescrizioni della Direttiva 93/42/CEE
Council Directive 93/42/EEC

Conformément aux dispositions de la Directive 93/42/CEE
Acuerdo con lo establecido en la Directiva 93/42/CEE
Vorschriften der Richtlinie 93/42/ EWG

COMPANY
WITH QUALITY SYSTEM
CERTIFIED BY DNV
UNI EN ISO 9001
== UNI CEI EN ISO 13485 ==

IMPIEGO DELL'AUTOCLAVE "ANDROMEDA VACUUM xp 20"

L'autoclave deve essere utilizzata per sterilizzare gli strumenti presenti nello studio, seguendo le indicazioni del costruttore per la sterilizzazione di ogni strumento. Accertarsi della temperatura massima che gli strumenti possono sopportare.

USE OF THE AUTOCLAVE "ANDROMEDA VACUUM xp 20"

The autoclave must be used to sterilize the instruments that are present in the laboratory, by following the instruction of the manufacturer for the sterilization of each instruments. It is important to verify the maximum temperature that is bearable by each instruments.

EMPLOI DE L'AUTOCLAVE "ANDROMEDA VACUUM xp 20"

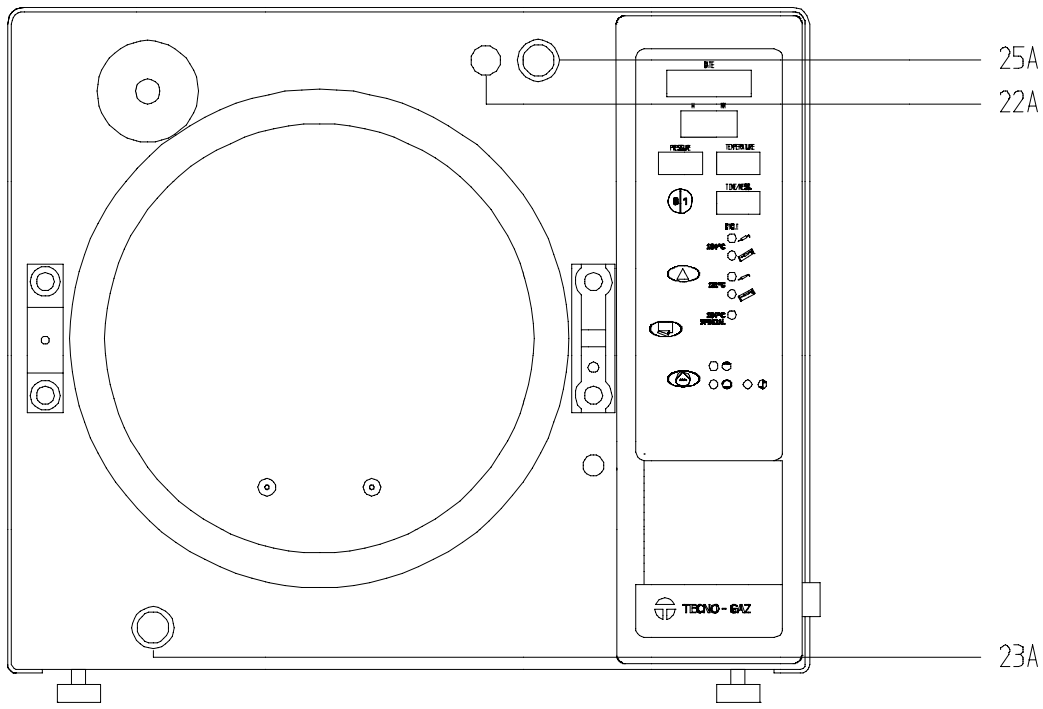
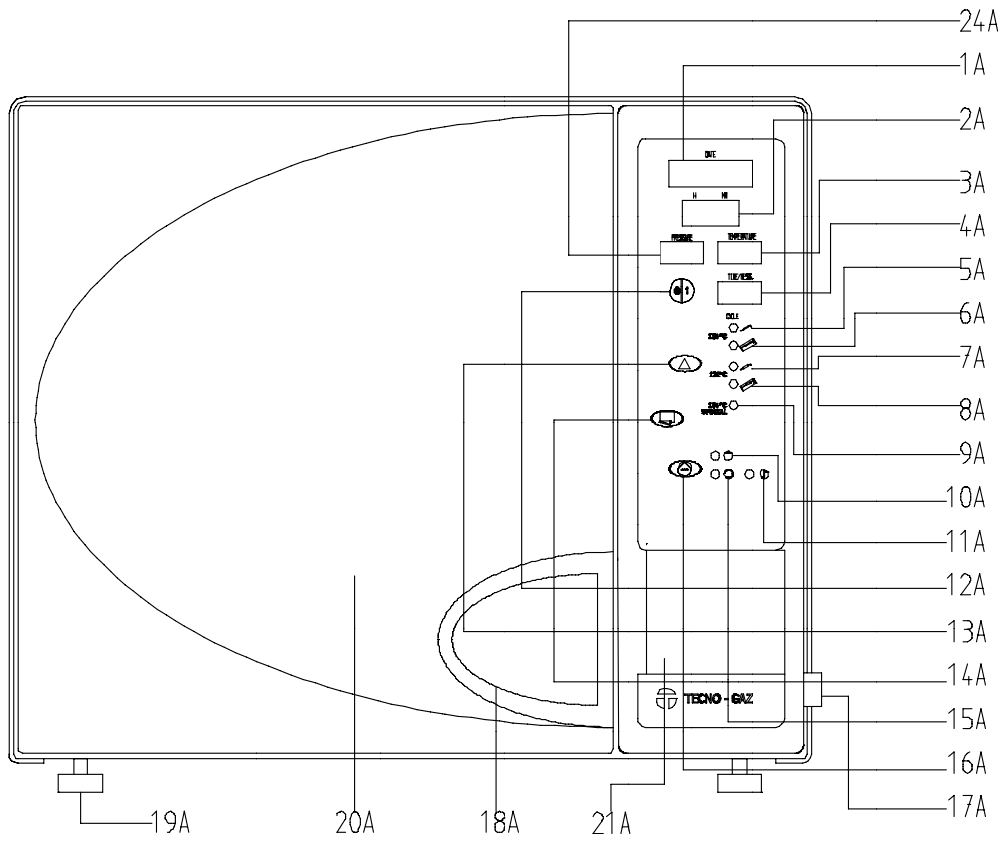
L'autoclave doit être utilisée pour stérilisation des instruments dans le cabinet, suivant les indications du fabricant pour la stérilisation de chaque instrument. S'assurer de la température maximum que les instruments peuvent tolérer.

EMPLEO DE LA AUTOCLAVE "ANDROMEDA VACUUM xp 20"

El autoclave se utiliza para la esterilización de todos los instrumentos presentes en el estudio médico, según las indicaciones del constructor. Verifique la temperatura máxima que los instrumentos pueden soportar.

EINSATZ VON DEM DRUCKKESSEL "ANDROMEDA VACUUM xp 20"

Der druckkessel soll gebraucht wersen, um die in der praxis vorwesenden gerate zu sterilisieren man den anweisungen des herstellere folgt, für die sterilisierung jedes gerats. Die hochste temperatur, die gerate tragen können, feststellen.



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SIMBOLI DI SICUREZZA PRESENTI SULL'APPARECCHIATURA SAFETY SYMBOLS ON THE EQUIPMENT SYMBOLES DE SECURITE' SUR L'APPAREILS SIMBOLOS DE SEGURIDAD PRESENTES SOBRE L'EQUIPO SICHERHEITSSYMBOLE, DIE AUF DER ANLAGE VORHANDEN SIND



TENSIONE
VOLTAGE
TENSION
TENSION
SPANNUNG



TOGLIERE TENSIONE PRIMA DI APRIRE IL PORTELLO
DISCONNECT THE MAINS SUPPLY BEFORE REMOVING THIS COVER
ENLEVER LA TENSION AVANT D'OUVRIR LA PORTE
QUITAR TENSION ANTE DE ABRIR LA VENTANILLA
UNTERBINDEN SIE DIE STROMZUFUHR, BEVOR SIE DIE TUR OFFNEN



ATTENZIONE: ALTA TEMPERATURA
ATTENTION: HIGH TEMPERATURE
ATTENTION: TEMPERATURES ELEVEES
ATENCION: TEMPERATURA ALTA
WICHTIG: HOHE TEMPERATUR



CONNESSIONE A TERRA
EARTH CONNECTION
CONNEXION A' TERRE
CONNECTION EN TIERRA
ERDUNG

PAR. 0

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PAR. 1

ISTRUZIONI FOR PACKAGE AND STORING

The autoclave is packaged in the following way:

It is wrapped in a POLYETHYLENE bag with polystyrene protections and contained in a corrugated board box whose base has two wooden strips.

The package is not sterile. The package and the autoclave are fragile, therefore handle with care, transport without shakes and hits and do not turn upside down. Do not lift the autoclave with sudden strokes; **the package handles are used only for the vertical lifting.** Preserve in dry and protected areas at a temperature (+5;+40)°C. Stocking 3 packaged autoclaves (same model) is allowed.

PACKAGE OVERALL DIMENSIONS: (600X600X830) mm

BOARD MATERIAL: BIWALL, 3 CORRUGATIONS

PACKAGE MATERIAL: FOAMED POLYSTYRENE

BAG MATERIAL: POLYETHYLENE

WEIGHT OF THE PACKAGED MACHINE: 50 Kg

THE PACKAGE MUST BE PRESERVED DURING THE WHOLE GUARANTEE PERIOD; TECNO-GAZ DOES NOT ACCEPT RETURNS WITHOUT ORIGINAL PACKAGE.



PAR. 2

TECHNICAL FEATURES

DEVICE MECHANICAL FEATURES	
Use room temperature	+5°C ÷ +40°C
Device dimensions (X,Y,Z)	450mm,385mm,660mm
Opened door overall dimensions	310 mm
Weight with empty device tanks	45 Kg
Weight with full device tanks	50 Kg
Device furniture colour	RAL 9016
Material making up the device furniture	Steel Fe370
Furniture temperature after 1 working hour	(50÷55)°C
Sound intensity level	50 dB
Package overall dimensions (X,Y,Z)	600 x 600 x 830 mm
DEVICE ELECTRICAL FEATURES	
Supplying voltage	230 V±10% AC
Number of phases	1
Supplying frequency	50/60 Hz
Max. absorbed power	2000 W
Type of protection	PE
Insulation class	1
Length of the supplying cable L=2200mm	2x1.5mm ² + EARTH
Fuses (6.3X32)	12A delayed
Electrical connector (pin)	SCHUKO 16A+EARTH
DEVICE PNEUMATIC FEATURES	
MAX. using pressure	2.2 Bar
FEATURES OF THE FILLING TANK	
Capacity of the filling tank	2 litres
Material making up the filling tank	High density polyethylene
No. of cycles which can be carried out with completely full tank	5 according to the instrument load
Minimum water load to ensure a sterilisation cycle	20 cm ³
Features of the water to be used	Demineralized or distilled
FEATURES OF THE EMPTYING TANK	
Capacity of the filling tank	2 litres
Material making up the filling tank	High density polyethylene
No. of cycles which can be carried out with completely full tank	5 according to the instrument load
FEATURES OF THE STERILIZATION CHAMBER	
Dimensions of the sterilisation chamber	Ø 245 X 430 mm
Material making up the sterilisation chamber	INOX AISI 304
FEATURES OF THE BACTERIOLOGICAL FILTER	
Filter dimensions	Ø 56 mm
No. of sterilisation cycles before replacing	300
Filtering capacity	0.2 micro
FEATURES OF THE SUPPLIED TRAY-HOLDERS	
Material	Anodized aluminium
Number of supplied tray-holders	1
Tray-holder dimensions (X;Y;Z) standard	(192 X 165 X 370) mm
FETAURES OF THE SUPPLIED TRAY	
Material	Anodized aluminium
Number of supplied trays	4
Tray dimensions (X;Y;Z)	(370 x 185 X 17) mm

X = WIDTH Y = HEIGHT Z = DEPTH

PAR. 3 SUPPLIED ACCESSORIES		PAR. 4 PUSH-BUTTON AND DISPLAY ON THE CONTROL PANEL	
The autoclave is sold with the accessories included in the article and contained in the same package; here is a list of these accessories.		The positions indicated on the table are referred on the pictures at the page 3 of the cover.	
PIECE No.	DESCRIPTION	1A	Display DATE
1	Tray extraction and door adjusting key	2A	Display H – MM
4	Tray	3A	TEMPERATURE Display
1	Instruments holder	4A	TIME/MESS Display
1	Funnel	5A	134°C cycle Led, not wrapped
1	Tank outlet hose	6A	134°C cycle led, wrapped
1	Rilsan hose	7A	121°C cycle Led, not wrapped
1	Sponge	8A	121°C cycle Led, wrapped
1	Tray holder	9A	134°C cycle Led, SPECIAL
1	Loading hose + filter	10A	Clean water Led, maximum level
THE EQUIPMENT LISTED ABOVE DO NOT REQUIRE ADVICES		11A	Used water led, maximum level
		12A	0/1 (START/STOP) push-button
		13A	Cycle selection push-button
		14A	Door opening push-button
		15A	Clean water Led, minimum level
		16A	Push-button for water loading in the clean water tank
		17A	ON/OFF main switch
		18A	Door opening handle
		19A	Adjusting feet
		20A	Autoclave door
		21A	Printer
		22A	Cap manual filling
		23A	Discharge tap
		24A	PRESSURE Display
		25A	Water loading plug

NOTE: FOR ALL REFERENCE AT THE OPERATIONS SPECIFIED ON THIS MANUAL, TO KEEP AT THE PRESENT TABLE.

PAR. 5

REPLACING THE PRINTER ROLL

To replace the printer roll, it is necessary to open the door on the autoclave front panel, insert a roll of thermal paper (whose maximum width must be of 57 mm) in the suitable place making the paper come out from the door while it is closed.

After the sterilisation cycle, the autoclave finishes to print the convalidation ticket; after printing, cut the ticket by pulling it upwards. The cutter built in the printer will cut the ticket.

Pay attention to the thermal paper orientation sense; it can be printed only on one side.

For a correct and long storage of the sterilisation ticket, it is necessary to preserve the same in a place protected by light and heat sources.

PAR. 6**INSTALLATION**

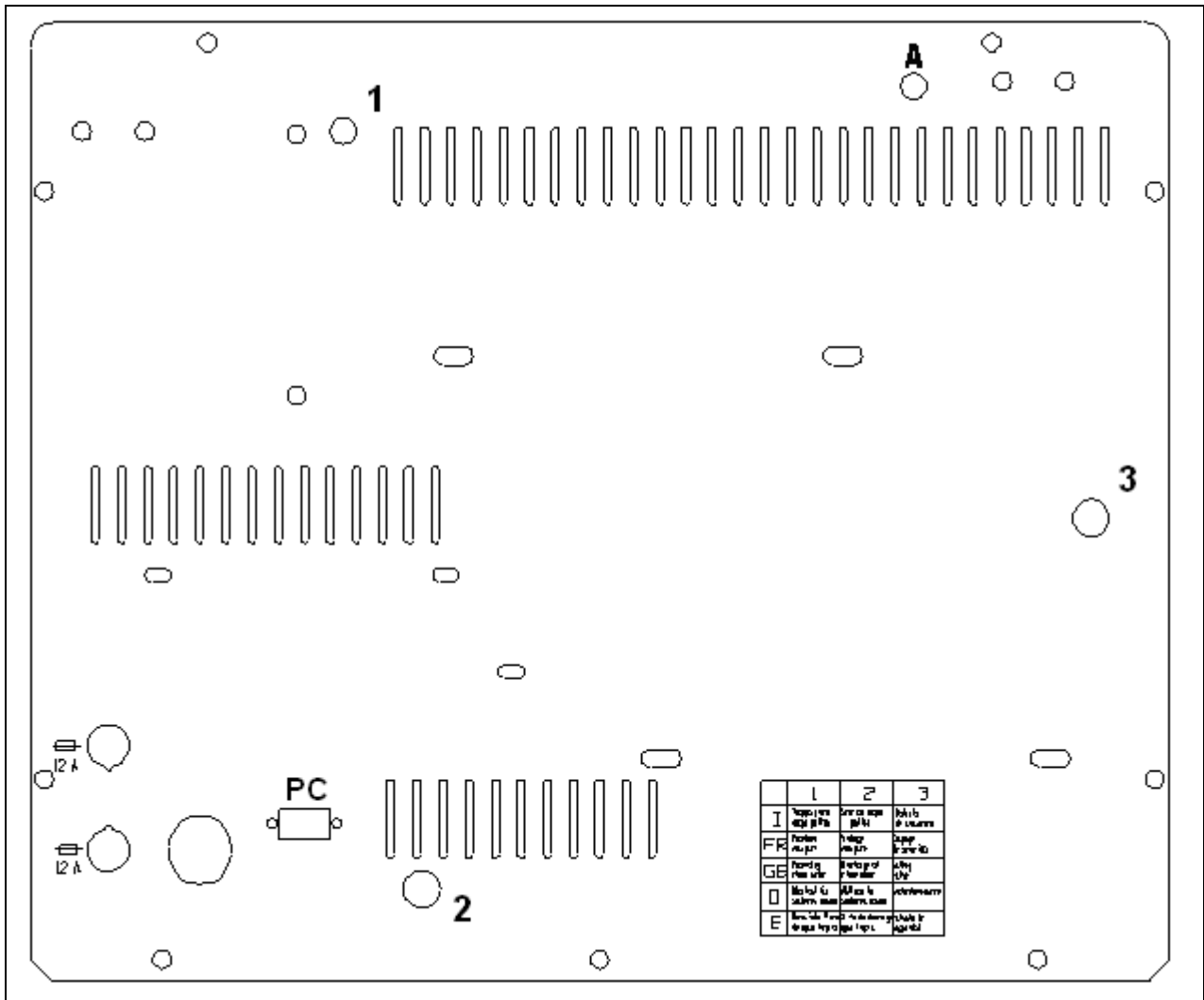
The installation is a fundamental operation for the following use and good operation of the device.

Here is a list of the points to be followed in order to achieve a good installation.

1. The device must be installed inside a laboratory accessible only to authorised personnel.
 2. The room in which the autoclave is installed must comply with current work place illumination regulations.
 3. Position the device on a plane surface with minimum capacity 60 Kg.
 4. Make sure that the sterilisation chamber is slightly tilted towards the bottom. Pour half a glass of distilled water into the chamber; the water must flow towards the chamber bottom, otherwise act on the two front feet to adjust the autoclave level.
 5. Leave at least 10 cm between the device rear part and the wall.
 6. Position the autoclave at such a height as to make it possible for the operator to check the whole sterilisation chamber and carry out the normal cleaning operations.
 7. The room where the device is installed must be enough ventilated.
 8. Do not install the autoclave near washing basins, taps, because the device furniture is not waterproof.
 9. Do not place trays, papers, fluid containers, etc. on the device, because the device grids are used to ventilate must not be obstructed.
 10. Do not lean on the door when it is opened.
 11. Do not install the device near sources (for instance: autoclave, bunsen, burner and kiln); keep a minimum distance of 40 cm.
 12. Install the device in such a way as not excessively bend the supplying cable.
 13. In case the filling tank is directly discharged in waste waters, position the device at a height which is higher than the discharge.
- In case the device is built in we recommend to remove the housing. Avoid the possibility to accidentally access to the hot and electrical parts of the device. (PROOF OF THE FINGER).
15. When the autoclave is embedded it is necessary to follow these instructions:
 - Place the rilsan pipe (Diam.8) supplied with the autoclave in POS.1 Photo A or in the fitting pipe **A** (if present)
 - Discharge by gravity the other extremity of the pipe in an open container, to allow the discharge of the steam. **THE PIPE MUST NEVER GET IN TOUCH WITH THE WATER INSIDE THE CONDENSE CONTAINER.**
 16. Make sure that the electrical system to which the device is connected is produced according to the laws in force and has the suitable dimension for the device features; see PAR.2 of this manual.
 17. Plug the unit to a socket with a rated voltage of 230V±10% MONOPHASE+EARTH, frequency 50/60Hz, current 16A, as shown on the identification plate place in the rear side of the device.
 18. Never connect the device pin to reductions of any type.
 19. Load the filling tank as explained on PAR.9, of this manual.
 20. After the installation, carry out a LOADED sterilisation cycle as explained on PAR.12 of this manual.

REAR PANNEL CONNECTIONS

PHOTO A



LEGEND

- 1 – Drain Exceeding clean water – condensate discharge
- 2 – Discharge of clean water
- 3 – Safety Valve
- A** – Condensate Discharge (IF PRESENT)

PAR. 7**PREPARATION FOR STERILISATION**

Please comply with the following instructions to assure perfect sterilisation and longest life of all autoclave parts:

1. Right after use, disinfect/clean the instruments by means of some disinfecting/cleaning agent making sure to comply with the recommendations of the manufacturer as far as dosage and treatment time is concerned .
2. Treat the instruments in your ultrasound equipment.
3. Carefully rinse off the instruments with clean water. Make sure to remove all traces of residual cleanser/disinfecting agent from the instruments. To this purpose we recommend carefully brushing the instruments.
4. Residual chemicals left over after cleaning/disinfecting may damage and corrode parts of the autoclave. So we recommend you to always rinse off the instruments using desalted or distilled water.
5. Accurately dry the instruments.
6. Wash, rinse and dry trays as well.
7. Make sure that to load instruments of the same on the same tray.
8. Should your instruments be unwrapped, it we recommendable to cover the tray with a paper or fabric napkin to prevent the instruments touching directly the naked tray surface.
9. Small mirrors must be positioned with the glass face downwards.
10. For better sterilisation purposes, instruments such as forceps, shears and alike should be left opened.
11. Do not stack instruments on the trays. Instruments must be sterilised separately. An overload could compromise the sterilisation.
12. When sterilising wrapped instruments, do not stack the bags on the trays. Bags must be positioned with their clear side downwards. Instruments must be wrapped separately.
13. When sterilising empty containers, place them upside down to avoid water accumulation.
14. Only perform sterilisation of the instruments with trays resting in the tray-holder. Make sure that enough gap is available trays so that vapour can circulate during the sterilisation improving the drying process.

The above steps show that due preparation is crucial for top sterilisation.

The same preparation steps are required for brand new instruments that could be affected by residual production materials (oil and/or grease).

The production of corrosive agents on the inner parts of an autoclave strictly depends on external agents. Trying to sterilise even one single instrument affected by corrosion may further lead to chemical/physical contamination of the other instruments and of the autoclave parts.

PAR. 8

STERILIZATION TABLE

CYCLES	MATERIALS	TIME OF STERILIZATION	TIME OF DRYING	MAX. LOADING.	WORKING PRESSURE
C1 Not wrapped 134°C	<ul style="list-style-type: none"> Stainless metal solids, stainless hole instruments 	6 minutes	17 minutes	2.8kg Whole full load	(2.1÷2.2) bar
C2 Wrapped 134°C	<ul style="list-style-type: none"> Wrapped stainless metal solids 	11 minutes	17 minutes	2.8 Kg Whole full load	(2.1÷2.2) bar
C3 Not wrapped 121°C	<ul style="list-style-type: none"> Fragile solids Rubber solids Turbines if indicated by the producer Fragile hole instruments 	18 minutes	17 minutes	2.8 Kg Whole full load	(1.1÷1.2) bar
C4 Wrapped 121°C	<ul style="list-style-type: none"> Wrapped rubber Fragile solids Wrapped and not wrapped turbines Fragile hole instruments 	21 minutes	17 minutes	2.8 Kg Whole full load	(1.1÷1.2) bar
C5 SPECIAL 134°C	<ul style="list-style-type: none"> Not wrapped metal solids 	6 minutes	2 minutes	2.8 Kg Whole full load	(2.1÷2.2) bar

It is compulsory to wrap the devices aimed at an invasive use (for instance; Surgical instruments, etc.) to ensure a higher sterility.

The data of this table are indicative; the choice of the sterilisation cycle must be based on the data supplied by the producer of the object you want to sterilise.

PAR. 9

FILLING OF WATER TANK

TURN ON THE DEVICE PRESSING THE MAIN SWITCH.

Connect the suitable supplied hose to the loading plug and insert the other end (the one with the filter) inside the demineralised or distilled water tank.

NOTE: The use of feedwater with contaminants at levels exceeding those given in the table above can greatly shorten the working life of the device, with damage at the components of the autoclave and then invalidate the manufacturer’s warranty.

Pressing the button "16A", the pump is automatically turned on. By sucking, the pump fills the tank.

The pump supplies water for 120 seconds; after reaching the maximum level, it is turned off.

In case during these 120 seconds the pump does not reach the maximum level, the operator must press the button "16A" up to switching off the pump in automatic mode (for the maximum reached level).

The autoclave does not work in case the tank level is on MIN. as signalled by the LED.

The attempt to start the autoclave with MIN. level state is visualised with the message "ER2" on the display "TIME/MESS".

TABLE OF QUALITY LEVEL IN ACCORDING TO DIRECTIVE DIN EN 285

CEN STANDARD DIN EN 285			
Evaporation residue	≤	10	mg/l
Silicium oxide, SiO ₂	≤	1	mg/l
Iron	≤	0.2	mg/l
Cadmium	≤	0.005	mg/l
Lead	≤	0.05	mg/l
Rest of heavy metals except iron, cadmium, lead	≤	0.1	mg/l
Chloride (Cl')	≤	2	mg/l
Phosphate (P20s)	≤	0.5	mg/l
Conductivity (at 20°C)	≤	15	µs/cm
PH value (degree of acidity)	5 to 7		
Appearance	Colourless clean without sediment		
Hardness (E lons of alkanin earth)	≤	0.02	mmol/l

PAR. 10

MANUAL FILLING OF THE WATER TANK

In case the pump does not work, the loading tank can be filled by the operator in the following way:

1. Turn on the device.
2. Unscrew the cap.
3. Insert the supplied pipe for manual filling outside of which you can find a funnel.
4. Pour the distilled water in the funnel which is kept higher than the loading cap;
5. Pour up to when the pilot light "LEVEL WATER TANK, max." is turned on.
6. Screw the cap checking its tightening.

PAR. 11

EMPTYING THE TANK

The device is fitted with a tank for collecting the waste waters used during the sterilisation cycle; this tank is separated from the loading tank.

When the discharge tank is full, the max level pilot light "EXHAUST TANK", is turned on.

To discharge the tank, proceed as follows:

- Connect the supplied pipe to the discharge tap.
- Unscrew the discharge tap in counterclockwise direction.
- Flow the waste waters.
- Screw the discharge tap without forcing it and checking it is closed properly.
- In case of sterilization failure, the used water in discharge tank, can have contaminated residual. This water must be disposed in the black water, use protective latex gloves to carry out the operation.

The device does not work in case the discharge tank is full. In case the operator tries to start a cycle even in this state, the device locks visualising "ER3" on the "TIME/MESS". display.

PAR. 12**COMMISSIONING AND PREPARING THE STERILIZATION**

1. Carry out the installation operations as described in PAR.6, the autoclave is ready to be used. Pay attention to the instructions below.
2. Turn on the autoclave pressing the main switch. The autoclave pre-heats at 80°C; if it is not used, it remains in the stand-by cycle for 60 minutes.
3. Open the door using the lever. In case you cannot open the door, check that the door lock is not inserted. Pressing the “14A” to operate the door interlock, to carry out the door release.
4. Load the instruments placing them on the supplied trays. It is fundamental not to overlap the instruments or the bags and not to overload the trays. The max. capacity is of 700 g for each tray.
5. To obtain a good drying it is important that the wrapped instruments are placed in the trays with plastic side downwards and obviously the paper side upwards. This is done to ease the output of air bubbles during sterilisation and the vapour drops condensed during drying, as specified in PAR.7.
6. Each time a sterilisation cycle is carried out insert an integrator in the sterilisation chamber to have the confirmation of the carried out sterilisation; we recommend to place the integrator in the middle of the sterilisation chamber. It is recommended the use of VAPOR LINE EXTENDER integrators.
7. Check the level of the distilled water making sure that the LED “LEVEL WATER TANK, min.” has turned on. If the LED has turned off, you can sterilise otherwise fill the tank as described in PAR.9.
8. Close the door using the handle.
9. Select the cycle using the button “13A”.
10. On the “TIME/MESS.” display, the initials relating to the set cycle **C1** (if the cycle 134°C, not wrapped, has been set), **C2** (if the cycle 134°C wrapped, has been set), **C3** (if the cycle 121°C, not wrapped, has been set), **C4** (if the cycle 121°C, wrapped, has been set) or **C5** (if the cycle 134°C SPECIAL, without drying, has been set).
11. Press button “START/STOP”. In this way, you start the fast cycle for pre-heating and on the “TIME/MESS.” display, the figure indicating the sterilisation time and including drying time (without pre-heating time) will blink. The fast pre-heating cycle changes according to the load to be sterilised and the temperature of the sterilisation chamber. During the pre-heating cycle, the vacuum pump is started and creates vacuum in the chamber. On the “TIME/MESS.” display, the initials UAC indicating the operation of the vacuum pump are displayed. Once the pre-set vacuum has been reached, some water is inserted in the sterilisation chamber. Pressure and temperature increase to reaching the sterilisation parameters. (The pressure and temperature parameters which are present in the chamber are always visualised on the “PRESSURE” display, and on the “TEMPERATURE” display.
12. During the pre-heating phase when the autoclave is heating to reach the right pressure, on the “TIME/MESS.” display the letter H is displayed followed by the blinking time. After reaching the selected sterilisation parameters, on the “TIME/MESS.” display, the letter H disappears and a blinking letter S is followed by the sterilisation time which progressively decreases up to the end of the cycle.
13. After the sterilisation time, the “TIME/MESS.” display, visualises letter A followed by the drying time which indicates when the autoclave is in drying phase and then the vacuum pump starts working. The vacuum pump is started to suck the rest steam enabling a better drying.
14. In case after starting the sterilisation cycle you wish to stop it, proceed as follows: Press the “START/STOP” button, wait that the pressure indicated by the “PRESSURE” display, is at 0 bar. On the “TIME/MESS.” display, the writing “Int” (interrupted cycle) is displayed, press the “13A” button, to cancel the alarm. Press the “14A” button, to activate the door unlocking device: now it is possible to open the door with the handle.
15. If at the end of the sterilisation cycle on the “TIME/MESS.” display, an alarm code is displayed, for

instance: (AL6, AL7, etc.... see PAR. 16), this means that the sterilisation cycle has not taken place in the right way, so it is necessary to repeat the cycle.

16. At the end of the cycle on the "TIME/MESS." display the writing "END" is displayed followed by an acoustic sign: Now it is possible to open the door by following the warnings below.
17. Before opening the door, make sure that there is no pressure inside the sterilisation chamber; the "PRESSURE" display, must indicate 0 bar. IF THE PRESSURE VALUE IS HIGHER THAN 0, IS NOT POSSIBLE OPENING THE DOOR.
18. USE PROTECTIVE GLOVES TO REMOVE THE LOAD FROM THE STERILIZATION CHAMBER.
19. WHEN OPENING THE DOOR, DO NOT STAY ABOVE OR IN FRONT OF IT TO AVOID BURN DUE TO THE VAPOUR COMING OUTS.
20. When opening the door it is normal to find residual water inside the door seal.
21. If the sterilisation chamber is not opened after the end of the sterilisation cycle, the inner vapour tends to condense on the closing door, thus forming condensate drops which fall on the floor while opening.
22. Remove the instruments from the autoclave.

PAR. 13

NIGHT CYCLE

The autoclave is programmed by the factory to stop heating after 60 inactivity minutes (STAND BY). So it is possible to carry out sterilisation cycles even in the absence of the operator, because once the cycle has been ended after 60 minutes, the autoclave is automatically switched off. All LEDS turn off and only the main ON/OFF switch remains on.

To check that sterilisation has taken place, the operator must press the "START/STOP" button to reset the autoclave. In this case, the unit will display the last sterilisation cycle run by the operator.

In case the "TIME/MESS." display shows "END", this means that sterilisation was successful. If an alarm or an error message are displayed, see PAR.16 for more help about possible troubles occurred during sterilisation.

PAR. 14

MAINTENANCE

CAUTION: DISCONNECT ALWAYS THE MAIN SUPPLY BEFORE EACH TECHNICAL INTERVENTION

14.1. DAILY ROUTINE MAINTENANCE

CLEANING THE DOOR SEAL

- Clean the seal on the door and on the outer edge of the sterilisation chamber sealing the gasket using a wet cloth or the soft part of the supplied sponge.

This cleaning operation must be carried out to remove possible dirt which can cause a pressure loss in the sterilisation chamber and a possible seal cut.

- Check the water level in the tank(see PAR.9)

14.2. WEEKLY ROUTINE MAINTENANCE

CLEANING THE STERILIZATION CHAMBER

- To remove the deposits on the chamber floor, clean with the abrasive part of the supplied sponge after removing the tray-holder.

- To moisten the sponge, only use distilled or demineralized water.

- Empty the water tank (see PAR.11).

14.3. QUARTERLY MAINTENANCE

- Lubricate the hinges and the closing pin with silicon oil.

- Replace bacteriological filter.

- Adjusting the door:

If the autoclave handle is too loose while closing, adjust as shown in the following pictures. Rotate in clockwise direction (fig. 11) to increase the seal pressure on the chamber. In case it has loosened too much and you are not able to close the handle, rotate in anticlockwise direction.

FIG. 11

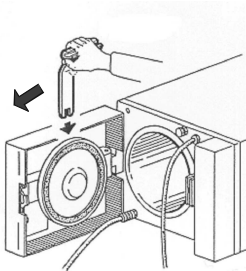
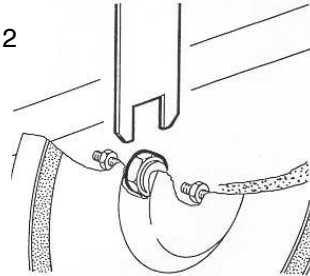


FIG. 12



PAR. 15

SETTING THE DATE AND TIME

(PLEASE PERFORM THE FOLLOWING STEPS WITH DOOR OPENED)

To set the date and time which are shown on the display, proceed as follows:

1) Turn on the autoclave with the "ON/OFF" main switch, located on the right side of the control panel and keep pressing the "START/STOP" button. After some seconds the "TIME/MESS." display shows the writing - 1-. This means you accessed the first programming page and you can now release the "START/STOP" button.

The "TEMPERATURE" display shows the blinking seconds. Press the "14A" button, to access selection of the minutes (MM display). To change the values displayed on "MM" press the "13A" button or the "16A" button to increase or respectively decrease them.

Now, press the "14A" button, to enter hours selection (H display). The minutes stop blinking and the hours start blinking. Set the hours to the desired time data pressing the "13A" button or the "16A" button, to increase or respectively decrease the current setting.

Press "14A" to enter setting of the day (DATE display). Press "13A" or "16A" to increase or respectively decrease the current day value. Press "14A" to enter setting of the month (DATE display). Press "13A" or "16A" to increase or respectively decrease the current month value.

Press "14A" to enter setting of the year (DATE display). Press "13A" or "16A" to increase or respectively decrease the current year value.

2) After setting the new date and time, press the "START/STOP" button, to confirm the data and enter the next programming page. The "TIME/MESS." display shows the writing -2-. On this page, it is possible to align the atmospheric pressure. The "PRESSURE" display shows the blinking message 0. Press the "START/STOP" button, to confirm the new value. This setting is required to align the atmospheric pressure which changes based on the local altitude. An acoustic alarm warns you when the new data are saved.

3) Now, the system automatically enter the next programming page -3-. Here it is possible to set the type of external units connected to the system (TEMPERATURE display). Pressing "13A" button or the "16A" button to increase or respectively decrease the number of connected units: 0=None – 1=Internal Printer – 2=External Printer – 3=Computer – 4=Internal Printer+Computer.

4) Press the "START/STOP" button to confirm the new data and enter the following programming page -4- ("TIME/MESS." display.). This page shows the autoclave serial number. **Do not change this setting. Only authorised MEDILINE staff may change this setting.** Turn off the "ON/OFF" main switch, to exit this menu.

PAR. 16

MESSAGES OF THE ALARM AND ERROR DISPLAYS

The “TIME/MESSAGE” display warns you about possible troubles and errors occurring during autoclave operation.

MESSAGE	TYPE OF TROUBLE	WHAT TO DO
Int	Interrupted cycle. It takes place when the sterilisation cycle is interrupted pressing the “START/STOP” button.	Press “13A” to reset the alarm.
AL1	Failed vacuum. The pre-set vacuum is not reached.	Reset by pressing on “13A”. Start a new sterilisation cycle and ask for technical service if the alarm is repeated.
ER2	Water level error. Cycle was started with water level under the minimum sign (the “minimum level” lamp is on).	Fill the tank with water. Fit the available hose into the special connector on the rear autoclave side.
ER3	Water level error. Used water tank is full.	Empty the tank by means of the outlet cock located on the front autoclave side.
ER4	Door opened. Check for proper cover closing.	Check the door closing by repeated closing. Bad lever adjustment. Use the special adjustment key and perform a slight clockwise rotation of the door adjuster located between the locking rod and the door cover.
AL5	Pressure drop. It takes place whenever a remarkable pressure drop occurs inside the chamber during the process of sterilisation.	Reset the system by pressing the “13A” button. Let the sterilisation cycle start again. If the alarm is repeated call for technical service.
AL6	TIME OUT, pre-heating on stand-by. The autoclave is not capable of reaching the pre-heating temperature.	Reset the system by pressing the “13A” button. Let the sterilisation cycle start again. If the alarm is repeated call for technical service.
AL7	Pressure TIME OUT. After 40 minutes the chamber still fails to reach the pressure required to carry out the sterilisation cycle.	Reset the system by pressing the “13A” button. Let the sterilisation cycle start again. If the alarm is repeated call for technical service.
AL8	PRESSURE FAILED TO EXHAUST FROM THE STERILIZATION CHAMBER.	Reset the system by pressing the “13A” button. Let the sterilisation cycle start again. If the alarm is repeated call for technical service.
AL9	Overall alarm. Cause: 1. No power supply. 2. Voltage reduction higher than 10%.	Reset the system by pressing the “13A” button. Let the sterilisation cycle start again. If the alarm is repeated call for technical service.

All ER-errors are shown on the display for 4 seconds and accompanied by a sound signal. They are often caused by lack of user attention.

All AL-alarms are accompanied by no sound signal. They keep showing on the display and they are stored by the microprocessor. To reset the system and clear any alarm press the “13A” button.

“MEDILINE ITALIA S.r.l. IS NOT RESPONSIBLE FOR TECHNICAL WORKS CARRIED OUT BY UNAUTHORIZED STAFF”

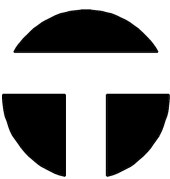
17. WARRANTY

1. The appliance is covered by a warranty period of five years, except for electrical and electronic parts which are covered for twelve months.
2. The warranty begins the date the machine is delivered to the customer. This date must appear on the warranty coupon, which must be properly filled in, stamped and signed by the dealer and then returned to TECNO-GAZ.
3. In case of complaint, the date appearing on the bill of sale will be considered.
4. Repairs or replacement under warranty conditions of any components will be exclusively carried out by TECNO-GAZ ; the warranty does not cover the travel expenses of personnel, packaging or transport expenses.
5. The warranty does not cover lamps, fuses, glass or failures or damage caused by incorrect maintenance, negligence, lack of expertise or any other cause the manufacturer may not be held responsible for.
6. Those parts and equipment subject to normal wearing (e.g. buttons, pump moving parts, etc.) are not covered by the warranty.
7. TECNO-GAZ does not recognize any right the complete replacement of the machine.
8. The warranty does respond to any claims for damages, direct or indirect, to persons or things caused by the inefficiency of the machine.
9. TECNO-GAZ shall not be liable for failures or damage caused by incorrect use of the product or by failure to carry out ordinary maintenance or to observe the basic rules of its proper maintenance (negligence).
10. TECNO-GAZ does not recognize any right to indemnity in a case where the machine is not used.
11. The warranty will automatically fail to apply where the machine has been tampered with or repaired or modified by the client or third parties not authorized by TECNO-GAZ.
12. The purchaser must contact the dealer or after-sales services centre indicated by TECNO-GAZ for repairs etc.
13. Components repaired during the warranty period must be returned, carriage paid, to TECNO-GAZ.
14. If replaced components are not returned to TECNO-GAZ the purchaser will be charged for them.
15. TECNO-GAZ does not admit restitution from final users.
16. Only the dealer or the after-sales assistance centre chosen by the user will be admitted to return to TECNO-GAZ components repaired according to commercial procedure CM-P-003 called " MANAGEMENT OF REQUESTS FOR THE RESTITUTION, REPAIR OR REPLACEMENT OF TECNO-GAZ EQUIPMENT AND CLIENT COMPLAINTS".
17. Components sent back to TECNO-GAZ must be accompanied by the correct documentation according to our internal procedures.
18. The products sent back to TECNO-GAZ must come with attached documentation authorising the return and a note describing the failure.
19. All components that need to be repaired must be sent to TECNO-GAZ carriage paid and properly packed (original packaging is recommended).



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