

# NC SERIES Horizontal Steam Sterilizers



N-221ise



HORIZONTAL STEAM STERILIZERS

Our continuous investments in research and development have enabled us to develop our horizontal steam sterilizer series with innovative Air Cooling System

The reliability, performance, ease of use and safety features of NC Series Horizontal Steam Sterilizers optimize the steam sterilization process and they are convenient for steam sterilizing packed or unpacked surgical and dental instruments, operation linen, glass, plastic, rubber and silicon materials, infusion liquids, microbiological cultures and medical waste.

Double door versions are ideal for central sterilization centres having dirty and clean sides.

#### RUGGED AND RELIABLE DESIGN

- The chamber, steam jacket, door and the steam generator made of 316L stainless steel and they are tested according to EN285, European Standard for Large Steam Sterilizers and PED 2014/68/EC Pressure Equipment Directive.
- Efficient insulation for the chamber, door and steam generator
- Pneumatically controlled sliding door
- Steam driven chamber gasket made of silicon as single piece
- Carefully chosen high quality valves, sensors and transmitters for a problem free and safe operation
- Pneumatically controlled valves used in the steam lines which have longer service life than electrically operated valves.
- Steam jacket surrounding the chamber for homogenous heating and preventing condensation on the loads.





#### POWERFUL AND EFFICIENT VACUUM

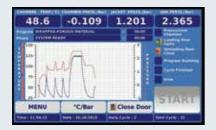
- High capacity and silent water ring pump which has low energy and water consumption
- Pre-vacuum by pulsating steam and vacuum in sequential pulses
- Post-vacuum for efficient drying



# INNOVATIVE AIR-COOLING SYSTEM TO SAVE NATURAL SOURCES

- Steam Sterilizers have high operational cost. Besides the power consumption, high amount of water is used to produce steam and to condense and cool down the steam at the end of the cycle.
- Steam Sterilizer with a chamber capacity of 500 litres, has approximately 500 litres water consumption per cycle in a classic system.
- Different than the classical method to condense and cool down the steam, an innovative system is used in NC series Steam Sterilizers: AIR-COOLING. The steam is condensed and cooled down while passing through a condenser which is cooled by ambient air. Thus, there is no water consumption to condense and cool down the steam for NC Series Horizontal Steam Sterilizers





#### RELIABLE AND POWERFUL CONTROL SYSTEM

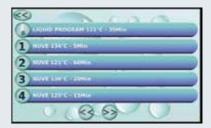
- Steamart<sup>™</sup> Microprocessor control system with 800x480 pixels 7" colourful touch screen
- Icons making the operations easier for immediate understanding
- Displayed parameters during sterilization cycle:
- Chamber temperature and pressure
- Jacket temperature and pressure
- Generator temperature and pressure
- Gasket pressure
- Name of operating program
- Program phase
- Graphic of temperature and pressure
- Date and Time
- Number of operated programs in the same day
- Total number of operated programs

### **EASY STERILIZATION**

• Seven pre-set programs which guarantee safe sterilization of the treated material

Program Name	Temperature	Sterilization Time
Wrapped porous materials	134°C	7 minutes
Sensitive materials	121°C	20 minutes
Rubber materials	125°C	20 minutes
Heavy wrapped materials	134°C	7 minutes
Unwrapped materials	134°C	4 minutes
Prion	134°C	20 minutes
Gravity	121°C	25 minutes





- 50 custom made programs:
- Programmable parameters for custom made programs :

Sterilization Temperature: 121°C – 125°C – 134°C – 136°C

Sterilization Time: 01 - 60 minutes

No. of pre-vacuum: 1 - 4

Drying time: 0 - 60 minutes

• Special liquid program at 121°C with 1-60 minutes programmable sterilization time



#### **TEST PROGRAMS**

• Vacuum leakage and Bowie & Dick test programs



#### FULL TRACEABILITY AND REMOTE ACCESS

- Operating parameters can be tracked graphically against time
- Internal memory which stores the records of last 1000 cycles
- Memory for the last 100 failures
- Cycle counter
- USB port to record the operated cycles in the memory to a memory stick
- PC connection through USB / RS 485 port
- Ethernet port for remote access through internet by means of optional NüveCloser™ software
- NüveCloser™ allows to access operating parameters, memory, failure history and other technical parameters
- Panel type printer to keep the records of the sterilization cycle

#### PROCESS EVALUATION AND SELF DIAGNOSTIC SYSTEM

- Compare the preset values with operating parameters using the process evaluation system
- When the operating parameters do not match the preset values, the sterilization cycle is cancelled and the user is warned
- Comprehensive self-diagnostic system for 19 possible failures such as power failure, heater failure, low water level, high pressure and temperature, sensor failure
- Help menu with the description of the failures







#### SAFETY OVER STANDARDS

- · Authorization key to operate the steam sterilizer
- Password protected control system, service and calibration menu
- The door stops automatically in case of an obstruction on the door closing direction.
- The door is prevented from opening unless the safe unloading temperature has been reached and pressure has dropped to atmospheric pressure at the end of the sterilization cycle.
- The sterilization cycle can only be started if the steam pressure under the gasket is adequate for the operations.
- Manual control system for steam discharge, air intake, gasket vacuum and door opening in case of any failure
- Manometers for chamber, jacket, gasket and generator to easily follow the pressure levels
- Emergency stop button
- Colour of the display changes to red in case of any alarm condition along with an audible alarm
- Remote failure diagnostic by means of NüveCloser™ software
- Sending e-mails up to five e-mail addresses with the details of failure
- Optional AlerText<sup>™</sup> SMS alarm system for ultimate security
- Safety valves against over pressure in the chamber, jacket and steam generator
- HEPA filter at air intake line
- Chamber and generator manufactured according to PED 2014/68 EC
- · Validation port as standard









# **DOUBLE DOOR VERSIONS**

- NC 430, NC 570 and NC 710 are available as double door
- 4,3" colourful LCD display for the clean side
- Displayed parameters during sterilization cycle:
- Chamber temperature and pressure
- Name of the operating program
- Phase of the operating program
- Total elapsed time
- Elapsed time of the phase
- Both doors cannot be opened at the same time and if the sterilization fails, the door of the clean side cannot be opened.



# **TECHNICAL SPECIFICATIONS**

	NC 300	NC 430	NC 430D*	NC 570	NC 570D*	NC 710	NC 710D*
Chamber Capacity , litres	300	430		570		710	
Capacity For STU 1 STU 300x600x300 mm ( WxDxH)	4 pcs.	6 pcs.		8 pcs.		10 pcs.	
Sterilization Temperatures	121°C / 125 °C / 134 °C / 136°C						
No of Preset Programs	7+1 Liquid Program+1 Drying						
No of Free Programs	50						
Test Programs	Vacuum Leakage and Bowie & Dick						
Minimum Vacuum Level	100 mbar						
Control System	Steamart™ Programmable Microprocessor Control System						
Display	800x480 pixels 7" Colourful Touch Screen						
Chamber Material	316L Stainless Steel						
Jacket Material	316L Stainless Steel						
Steam Generator Material	316L Stainless Steel						
External Material	304 Stainless Steel						
Standard Accessories	STU and STU Carrier, 200 lt. Water Tank						
Power Supply	400 V 50/60 Hz, 3 phases + N + G						
Power Consumption	29 kW	38 kW		50 kW		62 kW	
Chamber Dimensions ( WxDxH ) mm	635x722x655	635x1034x655	635x1064x655	635x1371x655	635x1401x655	635x1708x655	635x1738x655
External Dimensions (WxDxH) mm	1140x1290x1910	1140x1330x1910	1140x1410x1910	1140x1660x1910	1140x1740x1910	1140x2000x1910	1140x2080x1910
Packing Dimensions (WxDxH) mm	1560x1330x2200	1450x1400x2100	1450x1400x2100	1230x1820x2100	1230x1820x2100	2170x1300x2100	2170x1300x2100
Net / Packed Weight kg.	860 / 990	980 / 1035	1140 / 1165	1120 / 1245	1280 / 1460	1260 / 1365	1420 / 1595

<sup>\*</sup> Double door versions

#### **ACCESSORIES**

A 08 166	Loading cart NC 300
A 08 162	Loading cart NC 430
A 08 167	Loading cart NC 570
A 08 187	Loading cart NC 710
A 08 080	Water softening unit
A 08 102	Air compressor 10 bar, 50 lt.
A 08 192	AlerText™ GSM alarm module
A 08 201	NuveCloser™ Software CD

