

# **"INSTRUMENT WASHING & DISINFECTOR"**

Hospital Application





#### "THE CISA GROUP COMPANY" COMPANY PROFILE

as well as distributors and sales offices worldwide to ensure a constant presence and complete service in all countries in which CISA operates.

CISA takes part in a very important field, **sterilization**, that is in continuous development. For this reason it has focused its activity on a line of products that includes: infection control solutions, machinery for washing and disinfecting, machinery for high and low temperature sterilization, software systems for management control and medical waste treatments. All the products in the different lines are "made in

CISA" from design to manufacture.

CISA has been manufacturing and selling sterilization systems for over 60 years for both hospitals and industrial applications for all sterilization needs.

CISA is an Industrial Group which manufactures hospital and industrial machinery having integrated technological production systems with factories in different continents and its headquarters in Lucca, Italy.

Distributor coordination and technical service centres are managed through CISA branches, located in Joinville (Brazil) for Brazil and Latin America, in Amman (Jordan) for Middle East area, and Singapore for Asia,



Gabriele Pacini CEO Cisa - Infection Control System

#### **"WITHIN THE CSSD"** WHERE YOU CAN FIND ME

The Sterile Processing Department (Central Supply, or Sterile Supply as it is also known), comprises that service within the hospital in which medical/surgical supplies and equipment, both sterile and nonsterile, are cleaned, prepared, processed, stored, and issued for patient care.

The Instrument washing and disinfector CISA (as shown on the legend ) according the regulations of the CSSD is installed in the dirty area with pass through access of the clean area.

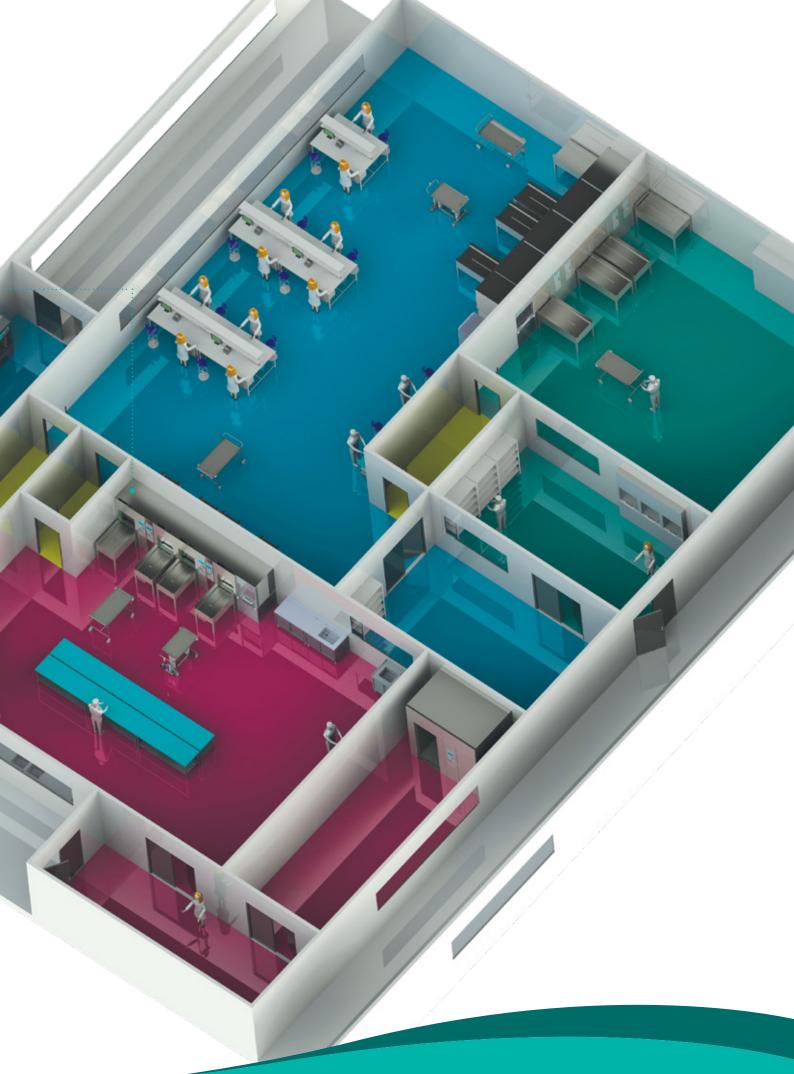
# **"Instrument Washing & Disinfector"** Hospital Application

#### Legend:



cisa

) Infection Control System



#### "DESIGN & INSTALLATION" THE POWER OF CUSTOMIZATION



CISA washer and disinfectors for Hospital application are customizable in terms of function and design.

- The machine is available with single or double doors.
- The double door version is appropriate for modern CSSD pass through operations between dirty and clean zones.
- The machines are manufactured to European regulations including EN15883-1/-2 and relevant international standards.
- The machines are equipped with a PLC computerised control system and high quality components to guarantee the best performance and the utmost reliability.
- The structure of the machine is made from the highest quality materials for optimum hygiene, high durability and easy cleaning.
- The machines are designed with a userfriendly interface for the operators and in full compliance with environmental needs and a quiet operating environment.
- Installation and maintenance are possible by means of smooth and clear procedures. (Effortless installation, with ease of positioning and connection to the main utilities.)
- Compact architecture, with overall dimensions in small size compared to the machine capacity.

#### WHY TO USE A WASHER DISINFECTOR CISA

Has a wide range of applications for its washer/disinfectors using thermo-chemical disinfection with the aim of reducing infection risks.

- Provide safety for patients and staff by controlling and preventing contact with contaminated devices.
- Reprocess medical devices that require high level disinfection.
- Reduce the number of micro-organisms present on the devices.
- Remove blood, saliva, and tissue .
- Reduce the microbiological load before the sterilization process.
- Remove dirty and blood residues that become barriers during the sterilisation process.
- Improve the safety of staff who are working in the clean area, packaging and preparation of the load.



# **HOSPITAL WASHING & DISINFECTOR**

A wide range of washer/disinfectors for use in hospitals (and CSSD) to disinfect surgical instruments, anaesthesia and respiratory products, hospital utensils, glassware, containers, operating shoes, and other devices that require high-level disinfection.



#### **"RANGE OF WASHERS"** DIFFERENT SIZES

Based on their applications, CISA washer/disinfectors are classified in series.

P-M: Medium size washer/disinfectors P-KF: Large size washer/disinfectors

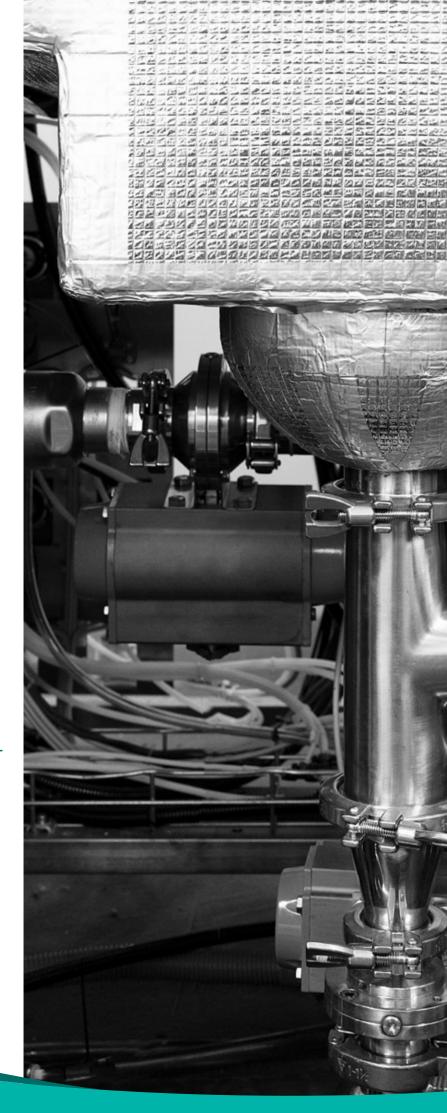
#### **"PRE WASHING & PRE-RINSING"** TOTAL REMOVAL

The Pre-Washing is an important phase of the cycle with the aim to remove all dirty, blood residues, saliva, and tissues; the washing action is mechanically operated using high pressure water sterilization, and special racks to be able to reach all the points, even those hard to reach when, manual washing. The quality of this phase is fundamental for the next phase of sterilization

#### "DISINFECTION" THERMAL/THERMO CHEMICAL

Disinfection can be either thermal for materials that are heat stable, and/or thermo-chemical for materials that are heat sensitive.

All CISA washers and disinfectors are provided with both disinfection possibilities to increase the range of applications. Different cycles that have varying disinfection temperatures and timings are available across the range.



#### **"FINAL RINSE"** TOTAL PROTECTION

The final rinse is an important phase post-disinfection. Demineralized water or similar to protect the material is recommended for the final rinse.

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#### **"DRYING" POWERFUL SYSTEM**

Drying is an important phase that follows the final rinse. The quality of drying is guaranteed using a powerful system of heated, pre-filtered air with proper air circulation within a minimum time for a quick, high speed disinfection process. Air filtration is through a 0.2 micron Absolute filter.

#### **"LUBRICATION" REDUCTION TIME**

In CISA washers, as an optional is available an integrated system to obtain the lubrication of the instruments in the last phase of the process, using a special consumable that reduce the drying time.



With more than 65 years of experience in washing technologies, CISA introduces a new line of double door washer disinfectors, reducing space without renouncing a big load capacity (from 8 to 12 DIN baskets) which is one of the main concepts behind the design of CISA new washer disinfector .

The CISA thermal washer disinfector can be used for washing and thermally disinfecting various types of equipment namely anesthesia, endoscopy, microsurgery, ophthalmology, surgery shoes, baby bottles, containers, laboratory glassware etc. It is suitable in the following fields of application: general surgery, gynecology, otolaryngology, urology, orthopedics and others.

#### SMART SAVING TIME, ENERGY AND WATER

The new instruments washers are built with an innovative technology which save about 50% of time and up to 25% of water consumption depending on the SMART program used and without sacrificing the traditional accurate and perfect washing results.

#### INTELLIGENT DRYING

The intelligent high-pressure drying system automatically adjusts the drying temperature according the selected cycle.

Thanks to the special shape of spray arms and diffusers, the airflow is spread uniformly on the instruments load and in the entire chamber volume.

#### EASY CLEANING AND MAINTENANCE CONCEPT

The new generation of washers are realized with inner surfaces with rounded corners and smooth panels, the stainless steel parts in contact with water like spray arms and filters can be easily removed, cleaned and inspected.

This specific attention to hygienic details allows the user to clean the machines quickly, preventing the risk of contamination and bacterial proliferation.

#### STRONG POINTS TWIN WASHING

The new washer disinfector ensure optimum performances and maximum reliability.

Easy to use, with a colour graphic touch screen, the control panel is clear and intuitive.

The user friendly interface, integrated into the glass panel, shows all the relevant machine parameters and ensures high standard of cleanliness.

Advanced technical solutions designed specifically to guarantee high washing performances. The twin spray arm system allows to direct the water jet to all corners of the washing chamber.

This system ensures that the whole load gets water coverage, meaning everything gets a thorough wash. The spray arm jets are perfectly shaped to direct the water with precision, ensuring an excellent wash quality and a greatly reduced noise level.

The twin washing system is combined with a couple of high power washing pumps: the main one devoted to the racks and hollow instruments and the auxiliary dedicated to the washing chamber.

#### ERGONOMICS

Trying to minimize the operators effort in loading and unloading phases, CISA designers have produced special accessories such as the manual and automatic transport system to move only light baskets instead of the whole heavy loaded racks.

Moreover, the detergent compartment integrated into the unclean side of each machine is an easy solution for storing detergent tanks and keeping clear the area around the washer.

#### TRACEABILITY AND REMOTE CONNECTION

As requested by the European law EN15883, washer disinfectors have to store all data related to washing cycles.

This is the reason why all CISA machines are equipped with an internal memory that collects all relevant machine data.

Applying the most recent technologies, the processed loads can be registered with barcode readers and combined with specific washing programs. In a second time the cycle data can be printed out or directly downloaded on an USB key. In addition, it is possible to connect the washer disinfector to the Ethernet network and link it to the most common traceability software, for a complete and effective trace of the entire line of sterilisation.

#### CONTROL SYSTEM

The Control System is made up of intercommunicating electronic boards

There is an automatic storage on compact flash internal memory of each event of the machine (program phases, wash cycles, alarms and warnings, etc.). Automatic storage system operating even in the event of a power failure

There is a real-time control of all operating parameters of the current program, displayed on the touch screen.

The user interface on both clean and unclean sides (1P or 2 P) with color graphic touch screen (4.3").

There are 4 password levels: for the operator, the department head, the authorized technician, and for CISA technitians to access the personalization and customization of the machine parameters of the washing cycles.

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#### **"TECHNICAL CHARACTERISTICS"** SOME MORE FEATURES TO KNOW

- Front loading with drop down doors.
- Self-cleaning wash chamber and inner door made in stainless steel AISI 316L, anti-acid in molybdenum nickel – chrome, with rounded angles.
- Outer panels in polished stainless steel AISI 304 for easy cleaning.
- Hydraulic system made entirely of stainless steel AISI 304
- Doors made with double tempered glass
- Doors activated via touch screen.
- Heat and sound insulation of the chamber and doors made with compact material.
- Duct for the introduction of external probes into the wash chamber (according to EN15883).
- Tap for sampling water from the wash chamber for validation purposes (optional).
- Integrated detergent cabinet, extractable on the unclean side, capacity: two 5lt canisters + one 2lt canister.
- Electrical control panel on the unclean side, for easy electrical and mechanical maintenance of the machine.
- Unclean side panels easily removable for easy access to the main components of the machine (pumps, pipes, valves, etc.)
- Spray arm at the bottom of the chamber, spray arm on the ceiling of the chamber and injection system with rapid direct coupling.
- Washing circuit with recirculation system equipped with one wash pump, dedicated to the spray arms in the chamber and to the washing trolley in the wash chamber.
- Hydraulic circuit, with automatic draining system at the end of the wash cycle, for the complete elimination of any contaminated residues.
- 40 programs: 20 pre-set factory programs according to the selected A0 value and 20 programs that can be memorized on the basis of the user's needs.
- Each program offers the possibility of setting up to 10 and washing /rinsing phases + N.1 drying phase
- For each washing and rinsing phase it is possible to set:
  - 2 washing temperatures (water temperature range from 5°C to 95°C);
  - The duration of each phase;
  - Type of detergent;
  - Volume of detergent;
  - Washing chamber temperature at which to introduce the detergent;
  - Type of water (cold, hot, de-mineralized);
  - Volume of water required;
- For each drying phase it is possible to set:
  - The duration;
  - The drying temperature (air temperature range from 50°C to 130°C);

- Washing circuit composed of one centrifugal wash pump with closed impeller and high hydraulic efficiency, dedicated to the spray arms on the washing trolley and to the spray arms in the wash chamber (upper and lower).
- Peristaltic pump for dosing alkaline liquid detergent
- Peristaltic pump for dosing acid neutralizer
- Dosing control through volumetric flow meters
- Level sensor for detergent control (Lack of detergent warning on the display)
- Electrical heating for washing chamber water.
- Double temperature control of the wash chamber recorded by PT1000 probes:
- Immediate visualization on the display of the parameter AO obtained (up to a maximum value AO of 999999)
- Automatic cycle counter incorporated with visualization on the display
- Independent electrical power switch-box and control panel
- Security thermostats (manual reset), easily accessible.
- Service call indicator.
- Input/output Menu for the diagnostic monitoring of inputs and outputs.
- RS232 connection for technical actions
- Door interlock during the washing phases
  - System of interlocking doors to prevent the simultaneous opening of the two doors.
  - Manual door opening in case of power failure.
  - Checking the maximum water level in the tank, with emergency outlet to prevent any overflow.
  - Safety thermostats in case of overheating.
  - Main switch.
  - Error messages / warnings indicated on the display
  - Control of the malfunctioning of the pump.
  - Self-draining wash pump with complete elimination of residual water.
  - Over temperature control in the wash chamber by means of two PT1000 probes.
  - Over temperature control in each boiler by PT1000 sensor (if provided).
  - Over temperature control of drying by means of a PT1000 probe.
  - Redundant control of the dosing system through flow meters.
  - System FDS foam detection system.
  - System PRC rinse quality detection system (Optional).
  - Operator safety system: cooling down of the wash chamber at the end of the cycle.
- Separate water supply for cold, hot (pressure 1.5 5 bar) and de-mineralized water.

## "OPTIONALS"

- Internal tank LED light to check washing process
- Security lock for detergent cabinet
- Quality control of drain water by means of a conductivity sensor

- Drain pump for wall mounted drain connection.
- Electrical/steam heating tank system with pneumatic control
- Steam Condenser for exhaust air present in the wash chamber
- Boiler for mains water pre-heating in order to reduce cycle time - electric heating or electric/steam heating.
- Boiler for de-mineralized water pre-heating in order to reduce cycle time - electric heating or electric/steam heating.
- Spray arms rotation detector
- Automatic selection system of the washing programs through the trolley identification system
- Peristaltic pump for chemical dosing
- Peristaltic pump for lubricant dosing
- Panel printer available on loading/unloading side
- Predisposition of bar code system on loading/unloading side operator/baskets recognition
- Predisposition of automatic racks recognition system
- Possibility to prepare the control software to provide to an external traceability system a structured file that registers all the cycle parameters of the machine.

# **MODEL: P-M 104 SV**

The CISA washer disinfector for CSSD application is used for the following items as part of a CSSD, as main function for reprocessing medical devices:

- Surgical instruments, using ST specific surgical instruments rack. The rack is provided with rotating nozzles between each level from the top and the bottom (8 to 10 DIN)
- Anesthesia and respiratory products using specific AN rack with connections for entire patient circuit including hoses, breathing bags, masks, guide air ways, etc.
- Containers and hospital utensils like kidney dishes, basins, and similar using specific CO rack
- Tubular instruments, rigid endoscope devices and micro instruments using specific MIC rack
- Operating shoes using specific ZO rack
- Glassware using specific GL rack

# DOSAGE PUMPS & CHEMICAL DISPENSING

Dosage pumps are used for the addition of chemicals during cycle process; the dosage pumps can be preconfigured for different chemicals with an open system that accept any validated chemicals. The M series has 2 dosage pumps.

As an optional an additional extra dosage pump is possible. The chemical containers can be connected to central dosage system as space has been made inside the washer. The containers are provided with sensor for level detection and alarm activation when the container is empty or not full enough to run the selected cycle.





# MODEL: P- 155 KF & P- 305 KF

CISA washer disinfectors are used for reprocessing CSSD medical devices including:

- Surgical Instruments using proper surgical instrument rack (ST)
- The rack has rotating nozzles between each level such as on the top and bottom
- Anaesthesia and respiratory products are using AN rack with connections for whole patient circuit including hoses, breathing bags, masks, airway guides, etc.
- Containers and hospital utensils such as containers, kidney dishes, basins, etc. using the CO rack
- Tubular instruments, rigid endoscope devices, and micro instruments using the MIC rack
- Operating shoes using the ZO rack
- Glassware using the GL rack
- Others

#### **CIRCULATION WATER PUMP**

The capabilities of the water pump define the quality of operation of any washer disinfector.

The water pump used with the KF series has a high capacity, offering 600 l/min for the P- 155 KF model, while for the larger model P- 305 KF there are two water pumps, one with a total rating of 1200 l/min, and the other used for internal recirculation.





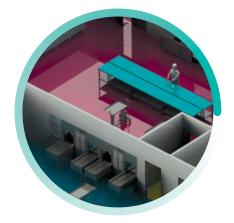
#### MODEL P- 104 SV P- 155 KF & P- 305 KF SAME TECHNICAL CHARACTERISTICS "DESIGN & INSTALLATION

#### **"DESIGN & INSTALLATION"** CSSD ADEQUATE

The machine can be preconfigured with single or double doors, the latter being more popular in current CSSD designs as a pass through between the dirty and clean zone. The machine is manufactured respecting European regulations including EN15883-1/-2 and almost all international health and safety standards. The machine is designed with a Microprocessor Control System and high quality elements to guarantee best performance and high reliability. The structure of the machine is of the highest quality material for perfect hygiene, functionality and durability.

The machine is designed with user friendly system for operators and is in full compliance with low noise operations. Installation and maintenance of machine has been designed with smooth and clear steps. (Effortless installation, with ease of positioning on floor and connection to main utilities).

Connection to main utilities). Compact architecture, with overall dimensions always restricted in relation to the machine capacity. Stainless steel base with drain for water leaking is included.



#### **"WASH CHAMBER"** STAINLESS STEEL

The washing chamber is made entirely from AISI 316L stainless steel. The chamber is curved to permit good drainage and to make cleaning easier. The internal chamber surfaces have a "Scotch Brite" type finish, and are subject to electrolytic polishing to obtain a surface with a roughness of less than 0.3 microns, and with a high resistance to corrosive attack. The heaters to maintain the water at the selected temperature are situated in the chamber bottom, protected by a metal filter. Another protective metal filter, placed at the bottom level of the chamber, protects the reservoir from any items that might fall and block the passage of the water.

The upper part of the chamber is designed to encourage any condensate to drop straight into the reservoir below. The wash chamber has a lamp situated over the top of the chamber, and is hermetically enclosed by a glass.

#### "CONSTRUCTION" LOW THERMAL CONDUCTIVITY

All internal parts have perfectly rounded edges. The frame, front, side, and rear panels are all manufactured in stainless steel. All control valves, and hydraulic circuitry and piping are made from stainless steel. Non-toxic, fire-resistant foam, with extremely low thermal conductivity and no particulate release is used to provide insulation for thermal efficiency. A stainless steel base with a drain to catch any water leaks is an extra optional.



### **"DOOR CONSTRUCTION, SLIDING, AND SEALING"** HEAT RESISTANT GLASS

The washers are provided with doors made from heat-resistant tempered glass, framed in stainless steel which allows visualization of the washing process. The doors are automatic vertical sliding (SV) controlled from a touch screen and operated by a pneumatic or motorized device. The double door configuration is fitted with a safety lock so that the two doors cannot open at the same time, and prevent cross contamination. The doors are fitted with gaskets for perfect closure during the cycle. The single door configuration (1P) and double door configuration (2P) are both meeting any CSSD design.

#### "CABINET" NO HEAT LOSS

The external cabinet holds the body of the washer and the components. The face of the cabinet and the side panels are made from stainless steel.

The external temperature does not exceed 55°C, preventing the loss of heat in the working environment. The front panels, both the dirty and clean side, are mounted on hinges and locked with a special key.

#### "HYDRAULIC PIPING" STAINLESS STEEL

The hydraulic pipework and components are manufactured from sanitary AISI 316L stainless steel.

All supplies and the main drain are connected by flexible stainless steel or sanitary rubber tubing.

#### "HYDRAULIC SUPPLY CONNECTIONS" SHORT CYCLE

The washer is designed to be connected to cold, hot, and treated water as processing fluids to minimise the cycle length, and at the same time removing residuals and hardened soil deposits without harming the load by overly reducing the supply of the wash materials. This washer features a safety device for checking the water level in the wash chamber, which also controls the automatic feed of water, in order to optimise the quantity of water needed for the proper function of the rotating wash arms. Solenoid or pneumatic valves control all the hot, cold, and treated water inlets. Each water inlet and the main drain are protected by stainless steel water filters. Hot, cold, and treated water are fed separately by a specialised device that avoids any crossing back into the main supply line, thereby avoiding any risk of contamination. All the hydraulic circuitry has drainage points for optimum, safe, and reliable operation.





#### **"LOADING"** BY TRANSPORT TROLLEY

Loading the washer/disinfector can be done from the front using an external transport trolley which has been specially developed for this purpose.

The internal racks have special connectors for easy and smooth internal locking when inside the chamber.

#### **"DRYING MODULE"** NO CONDENSATE

The final drying phase permits to remove the condensate and vapours from the washing chamber, drying perfectly the load inside.

The drying module is composed of pre-filter, absolute filter with 0.2 micron efficacy, motor fan and air heater to execute the injection of sterile hot air, completed with overheat protection. It reaches perfect drying in a very short time.

#### **"MAINTENANCE"** EASY ACCESS

The external cabinet enables access for maintenance thanks to the careful layout of the components, which makes maintenance very easy. All of the main components, can be serviced from the front.







# **"DOSAGE PUMPS & CHEMICALS"**

Dosing pumps are used for addition of chemicals during the cycle. The dosing pumps can be pre-configured for different chemicals within an open system that use any validated chemical. In the P- 155 KF model there are four dosing pumps, while for P-M 104 model there are three. The addition of extra dosing pump is also possible. The chemical containers can be stored inside the washer, or can be also connected from a central storage system. Each container is provided with a sensor for detection of the remaining chemical which activates an alarm when the container is empty or there is not enough chimica left to run the selected cycle.

THE WIDE RANGE OF WASHING DISINFECTING MACHINES OFFERS DIFFERENT PREPROGRAMMED CYCLES FOR WASHING AND THERMAL OR THERMOCHEMICAL DISINFECTION, PROGRAMMABLE CYCLES AND A USER FRIENDLY INTERACTIVE TOUCH-SCREEN DISPLAY

#### "CONTROL PANEL" LOADING SIDE

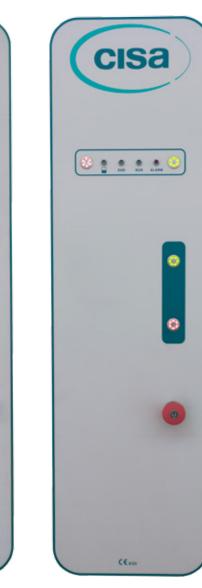
The Control Panel is consisted of:

- Touch-Screen •
- Thermal printer •
- Buttons for opening and closing door(s)
  - Emergency button
    - Emergency stop •
    - ON/OFF button •

#### "CONTROL PANEL" UNLOADING SIDE (2P VERSION)

The control panel on the clean side is consisted of:

- Buttons for opening and closing doors
  - Emergency button
    - Emergency stop •
- Indicators of process status and alarms •



**UNLOADING SIDE** 



cisa

LOADING SIDE



#### "CONTROL PANEL" CLEAR IMAGE

The human interface is based on a modern industrial grade component designed with a smooth surface for hygiene and easy cleaning. The control panel is provided with standard 7" HMI touch screen upgradable to 10", built-in dot matrix printer, emergency button, door control buttons, and is mounted at ergonomic level position to enable good view and easy control. The external part of the panel is protected by IP54.

#### CONTROL SYSTEM

The unit is entirely controlled by an electronic programmable logic device (PLC) that covers cycle performances, control of parameters, and verification of process safety. The control includes an input device, microprocessor and data memory, memory card with EEPROM memory (with the ability to connect to an external memory), external interaction (optional serial port RS232C/RS485), input control card for digital input, and output control cards for digital output.

The battery life is 10 years. Temperature regulation complies with European standards. There are Audio/Visual Alarms with different alarm levels. The control system incorporates high levels of safety features for both operator and the machine.

#### **TOUCH SCREEN**

On the Touch Screen control and display there are different pages for different purposes:

- Main menu
- Cycle library
- Cycle parameter display
- Data relating to the operation of the machine (operator code, batch, etc.)
- General preparation and information of the machine to start a cycle
- Process control
- Programmed preventive maintenance
- Instructions for maintenance and troubleshooting
- Alarm indication and alarms history.
- Check for date and time.
- Display of physical values (temperature and A0)
- Machine information (condition of door(s), temperature, etc.)
- Operator access level control with configurable level of accessibility
- Pages for set point cycle follow up
- Calibration and technical pages (password protected)
- Programming new cycles or modifying standard cycle (password protected)
- Type of heating selection
- Manual advanced steps

The touch screen language can be pre selected to meet different clients satisfaction.





#### OPERATORS ACCESS LEVEL CONTROL

CISA system allows every operator to have its own identity code by using the pre defined password and access level to which it belongs. The levels can be customized for each operator with access to multiple functions. Operator name will be printed and kept in the system for external storage, or transferred to external supervision/traceability system software.

1	2	3	
4	5	6	4
7	8	9	
CLR	0	OK	

#### ALARMS

Audio and visual alarms are defined for operator warning; the alarms list includes multilevel alarms with clear message notification; alarm levels are configured based on the level of importance to stop the machine or the cycle as well as only warning notification without affecting the running cycle. The alarm lists are complete for safe and perfect operation for the operators and the machines. The alarms history can display all the alarms that occurred in last 90 days.

Alarms are also indicated on unloading side in case of double doors execution. The end of cycle alert is included for alerting the user for the finished cycle and unloading process.

	AI	LARMS HISTORY		
15:47:52	19/03/15	MAX. DISCHARGE TEMPER.	(	3
				4
			-	0
15-11-00	10/03/16	PRORE CHAMPER FAIL IN 1		1
15:48:11	19/03/14	-	EXIT	

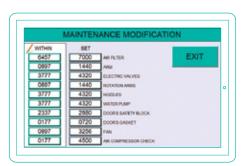
#### MULTI LANGUAGE TOUCH SCREEN

Most world languages are pre-installed in the machine. Users can easily choose them from the touch screen, including English, Italian, French, Spanish, Arabic, Russian, Portuguese, German, Turkish, Polish, Chinese, Greek, Romanian, Korean, Bulgarian and others.



#### SERVICE & MAINTENANCE PROGRAM

The touch screen is equipped with software pages for periodic preventive maintenance, enabling a safe functioning of the machine, and auto maintenance program with user acceptance. There are also technical pages for calibration and parameter control. Easy and friendly troubleshooting pages are added for easy maintenance and service. The maintenance and technical pages are protected with password where only authorized technicians have access to it.



#### **"REMOTE MAINTENANCE"** EASY CONNECTION

The machine, through the Touch Screen, is equipped with a remote access system that allows the client to be connected to CISA customer service by a simple Ethernet connection. This represent the fastest way for a CISA technician to do a check up of the problem and reduce the down time.

#### **"HEATING"** THE BEST METHODS

The water using the washer/disinfector can be heated using one of the following methods:

(E): Built-in electric heating

(V): External steam supply from Hospital steam Network (domestic Vapour)

(EV): Combination of (E) and (V) which enables the user to select the type of heating from the touch screen, choosing either internal (E) or external (V) without the need to interact with a hardware interface.

#### **"ELECTRICAL PANEL"** FULL PROTECTION

The electrical panel has IP55 degree protection and is installed inside the body of the washer. Mounted on telescopic rails, it is easily accessible. And thus it is possible to carry out maintenance on this panel from the front of the machine.

# **"WASHING & DISINFECTION CYCLE"** FAST WASHING & DISINFECTION

Pre programmed cycles for:





	Washing-Thermal disinfection cycle for instruments at 93°C for 10 minutes (BGa)
	Washing-Thermal disinfection cycle for instruments at 93°C for 10 minutes (n.V.)
	Washing-Thermal disinfection cycle for instruments at 93°C for 10 minutes (S.V.)
	Washing-Thermal disinfection cycle for micro-instruments at 93°C for 10 minutes
	Washing Chemical-Thermal disinfection cycle for anaesthesia equipment at 65°C
	Washing Chemical-Thermal disinfection for footwear at 65°C
	Washing-Thermal disinfection cycle for containers at 93°C for 10 minutes (BGa)
Washing-The	ermic disinfection cycle for containers at 93°C for 10 minutes (n.V.) 15 customer programmable cycles (open)
	Internal washing disinfection cycle for internal pipe and self cleaning operation

#### **"PRINTER"** EVERYTHING IS REGISTERED

On the panel there is a built-in printer for cycle documentation which includes: print out of date and time with hospital name, lot number, operator name, selected cycle, parameters values in different cycle phases that can be programmed as per customer requirements, phase by phase display, total cycle time and cycle results (valid or invalid) as well as printing alarms during cycle execution.

#### "MILK BOTTLES WASHER DISINFECTORS" WASHING BOTTLES

Both the M and KF models can be used for reprocessing bottles. Using the appropriate milk bottle rack that can carry different bottles sizes and tops, with different capacities depending on which model has been selected.

The CISA Washer/disinfector where used for milk bottles will enable safety for newborns and children. This machine can be installed in a clean utility room or a milk preparation room.

#### "QUALITY & SAFETY" OUR CERTIFICATES

The washing machines and disinfection CISA comply with the Medical Devices Directive 93/42 / EEC, after 2007/47 / EC. Also follow the ISO 15883 standard: 2006, validated in compliance with the ISO 15883-2: 2006. These machines also comply with the directives 2004/108 / EC (EMC) and 2006/95 / EC (LVD) and the electrical norms IEC 61010-1: 2013, IEC 61010-2040: 2005, IEC 60204-1 : 2010 and 61326-1: 2013.

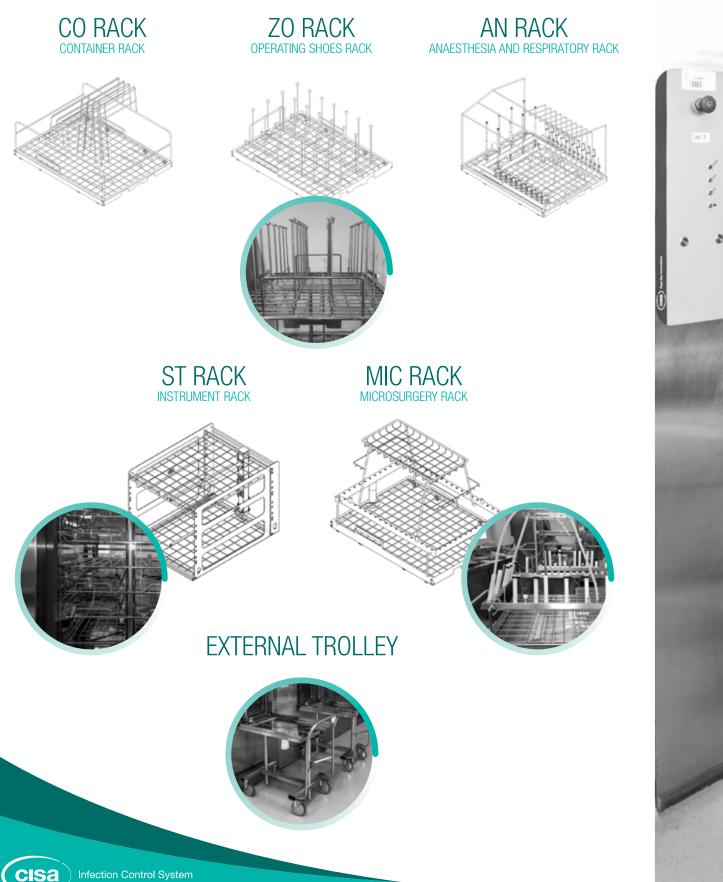






#### "ACCESSORIES" M & K SERIES LOADING AND UNLOADING DEVICES

Both series have the possibility to wash and disinfect different types of material according the needs and request of the hospital. That is why CISA has many possibilities and has projected and manufactured many racks for these purposes.







#### "OPTIONALS FOR M & KF CSSD WASHER DISINFECTORS AUTOMATION" SOMETHING FOR EVERYONE

CISA Washer disinfectors are available with automatic loading and unloading systems to reduce the inactivity time of the machine. Dividing loading and unloading material phases makes it safer for the personnel by reducing possible operator contact with contaminated materials.

#### **"WATER TREATMENT UNITS"** QUALITY TREATED WATER

Water treatment units can be added for supplying the unit with treated water for its washing, disinfecting, and rinsing purposes. Therefore the final rinse is recommended to be with de-mineralized water. The selection of water treatment type needs to be related to installation site water quality, with the possibility to add as well as water softeners, reverse osmosis system, deionizer etc.

# **"PRE-HEATING OF THE WATER"** EFFICIENT BOILER WATER

In order to reduce the processing time, before introducing the water into the washing chamber, the water is preheated in a water boiler, manufactured in AISI 316L stainless steel.





Compressed air is needed for the pneumatic valves and sometimes for door movement. An air compressor can be provided as an optional using electric silent air compressors.

#### "EXTERNAL STEAM CONNECTIONS" EXCELLENT STEAM QUALITY

External steam connection sets are available as an extra optional, and customizable to site steam quality, pressure and requirements of the machines to be connected to domestic steam supply (V) and (EV) .

#### "CENTRALIZED DOSAGE SYSTEM" STORAGE TANKS

To avoid multiple containers for chimical storage as an optional can be provided a system for centralized supply. The system is made up of special outer storage tanks connected to the pumps and the piping system.

#### "CONDENSER" COOLING DEVICE

During the draining phase a condenser can be installed to dehumidify the air after the exhaust from the chamber.

A close circulation cooling device condenses the vapour from the washing chamber allowing discharge of the condensate directly into the main drain from the washer.

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#### **"MODELS"** OUR PRODUCT RANGE

All of the sizes and measurements below can be changed according to the different configurations and applications of the machines.

	CHAMBER DIM	DIMENSIONS 1P-2P	LT	DETAIL	
P-155 KF	630x680x840	1200x2000x1062	360	15 DIN TRAYS	
	630x680x1680	1200x2000x1910	720	30 DIN TRAYS	P-305 KF
P-M 104 SV	550x660x620	780x2000x842	225	10 DIN TRAYS	
	546x620x690	650x720x1945	280	8-12 DIN TRAYS	P-M 104RB
CISa Infection Control	System				





Infection Control System

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