We care about life

Cart washers

FOR TROLLEYS, CONTAINERS, BEDS AND CAGES

Healthcare

Life Science

Cisa Group

Cisa Group is a global supplier of infection control systems with production plants in Italy and Brazil.

Founded in 1947, Cisa Group, together with Cisa America and Cisa Brasile, forms an international group that is one of the world's leading manufacturers of washing, disinfection and sterilization technology for infection control for the healthcare and life sciences industries.

HEALTHCARE INDUSTRY

LIFE SCIENCES INDUSTRY

Creating safer environments in hospitals, healthcare facilities and laboratory applications is a fundamental priority for the well-being of humans worldwide.
This is the commitment that drives Cisa to its claim:

We care about life

COMPLIANCE
CEE 93/42
CE 2007/47/EC
PED 2014/68/UE
EN 13445
2006/42/EC
2014/30/UE
014/35/UE

PRODUCT STANDARDS
CEI EN 61010
CEI EN 60204-1:2016
EN 61326-1:2013
UNI EN 285:2016
UNI EN ISO 15883

QUALITY SYSTEM
UNI EN ISO 9001:2015
UNI CEI ENISO 13485:2016

Cisa Group is part of Faper Group, leading Italian supplier of world-class, innovative engineering solutions.
The Group is inspired by its founder, Fabio Perini, and has based its success on the ability to combine invention and simplicity.
Faper Group was established in 2001 as a holding company dedicated to innovation in the fields of tissue paper converting, healthcare and real estate management.

FAPER GROUP

MORE INFO ON THE FAPER GROUP WEBSITE

Technology

Healthcare

Cisa Group develops advanced infection control technologies for the safeguard of healthcare workers and the health of patients.

- Complete central sterilizing service departments for hospitals (CSSD)
- Sterilization for healthcare applications and clinics of all sizes
- Disinfection and washing technologies for different operational requirements

Life Science

Cisa Group is the technology partner for scientists, researchers and engineers who develop life-enhancing products every day.

- Washing and sterilization technologies for laboratories and research centres
- Sterilization for pharmaceutical production

Waste

Cisa Group, with 15 years of experience in the treatment of infectious waste, provides ground breaking solutions safe, economical and carbon friendly. Cisa Group is leading the field with the invention of its Waste Sterilization Department (WSD®).

- WSD. Complete waste treatment department
- WSM. Plug and Play Sterili-Station

Software

Over the years it has developed unique proprietary IT and energy saving systems.

- Tracecare® .Traceability of the sterilization process for the reconditioning of surgical kits in CSSDs
- TraceWaste. Traceability of the sterilization process for the treatment of infectious waste using Cisa WSD Waste sterilization departments

Cart Washer

The equipment has been designed and built for washing, rinsing, thermal disinfection and drying of hospital carrier trolleys, surgical items, containers, beds and, laboratory version, for washing animal cages.

Cisa cart washers for trolleys, containers and beds are installed, following CSSD regulations, inside the dirty area (as shown in the caption), as a separate washing department for large items. Cisa's cage washers are only present and used in laboratory applications.

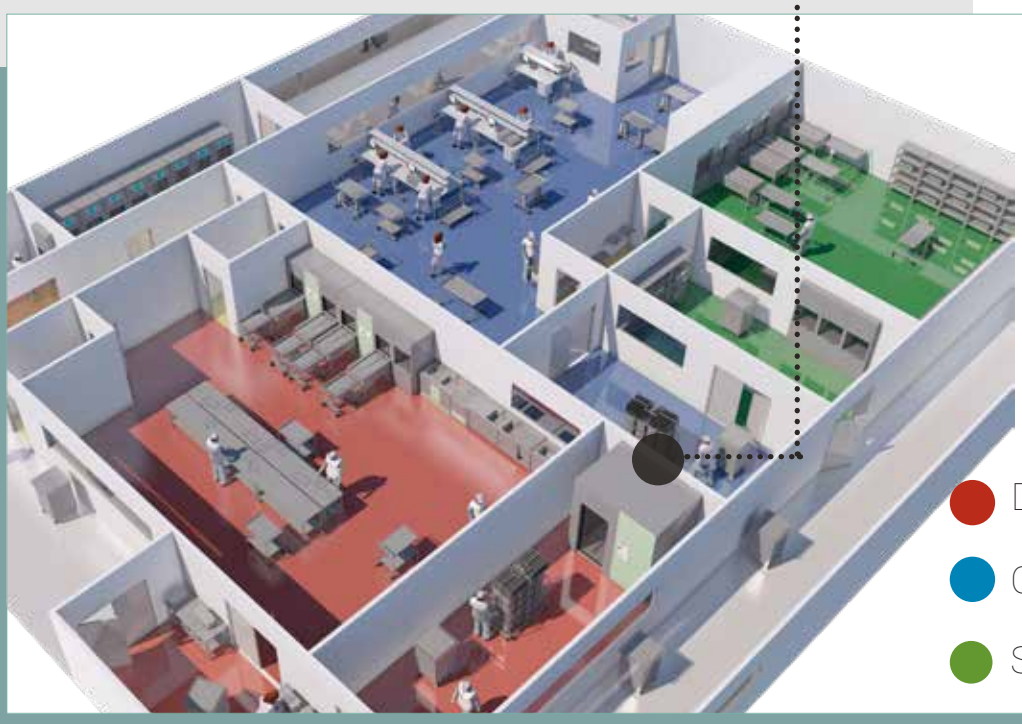
Range of cart washers

Based on their applications, Cisa cart washer are classified in series.

P-WCO: 1500
ONE CHAMBER
1550 MM DEPTH

P-WCO: 3100
TWO CHAMBERS
1500 MM EACH

P-WB: 2500
ONE CHAMBER
2500 MM DEPTH



DIRTY AREA

CLEAN AREA

STERILE AREA

Why use Cisa Cart Washers

There is a wide range of applications for Cisa washer/disinfectors using thermochemical disinfection with an aim of reducing infection risks. It can be used, for example, to:
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 microorganisms present on devices
- Remove blood, saliva, and tissue
- Reduce the microbiological load

Construction Features

Stainless steel

Stainless steel of the highest quality is used for assembling the machine. The internal chamber and jacket are manufactured in AISI 316L.
The machine frame and front panels are manufactured using stainless steel 304l. The hydraulic plant and pipes are manufactured using
stainless steel 316l. All steam pipes are insulated using high efficiency insulation material that reduces heat loss and stabilizes the temperature inside the whole washing cycle.

Door construction sliding and sealing

The washers are provided with doors made in heat-resistant tempered glass framed in stainless steel which allows to view the washing process. The doors are automatic horizontal sliding (SO) controlled from a touch screen and operated by an electrical motor.

The double door configuration is equipped with a safety lock so that both doors cannot open at the same time, and also to prevent cross contamination. The doors are fitted with gaskets for a perfect closure during the cycle.

Technical compartment two way access

The washing lines (pumps, exchanges, tanks etc.), are located in a technical compartment, adjacent to one side of the chamber.
The compartment can be accessed through two flush doors with front and rear stainless steel panels.

Washing chamber highest quality

The equipment consists of a washing chamber made in AISI 316L stainless steel. One or more lamps installed on the top of the machine illuminate the internal trolley inside the chamber to check the washing performance.

The inclined surface of the chamber bottom ensures perfect drainage and included a collection tank with a grid. The loading platform is divided into removable modules to facilitate internal inspection.
The internal surfaces of the chamber are mirror polished. The washing ramps in the chamber are vertically designed to be completely drained by gravity at the end of each washing phase.

Easy access for maintenance

Despite the large overall dimensions of the machine and its interior, thanks to the perfect designed position of the components the machine is easily serviced. Furthermore, it requires minimal installation space, as well as all components can be serviced from the front.

Water Tanks

The two water collection tanks are both placed inside the technical compartment.
The tank n.1, made of stainless steel, is loaded in a fast way demineralized water for the disinfection phase inside the chamber The water is keeped at high temperature by four steam resistors placed inside; it also includes one or more level control.
The second tank, n°2, also made of stainless steel as tank n°1, is used for loading hot and cold water for the pre-wash and washing phase inside the chamber level control to check the right quantity.

Side washing ramps

The external washing of the components consists of two collectors to the right and the left of the platform supplying a series of vertical ramps equipped with washing nozzles.
During the cycle, the ramps are mechanically activated by a automatic actuation and rotate alternately, fully orienting the spray direction of the nozzles in order to reach the entire surface of the components to be washed. The machine is provided with a device to tilt the washing platform in order to allow the water to drain, especially when using the closed trolleys.

Washing trolley for tools

The second washing line is realized by one main connection from the top to the washing trolleys for containers/clogs/trays. This water connection line supplies the rotating arms installed under each level of the trolls. The washing arms are as made with Tri-Clamp connections for easy removal.
For different applications many specific trays are available.

Hydraulic piping in stainless steel

The hydraulic pipework and components are manufactured in sanitary AISI 316L stainless steel.
All supplies and the main drain are connected by flexible. The system can be easily removed and inspected thanks to its Tri-Clamp connections and stainless steel butterfly valves.

A closed-loop system

The washing water in the outer tank is conveyed to the chamber, and then recirculated by one or more high flow pumps and maintained at set temperature by on inline heat exchanger. During the recirculation washing phase, chemical additives for the washing, neutralization and thermal disinfection aredirectly dosed in the chamber.
For models P-W 3100 the washing line described above is doubled for necessities of chamber capacity.

Drying system

The final drying phase enables to fully dry

any water or vapour drops, and remove any residual of humidity from the washing chamber. A compact and industrial Air Handling Unit (AHU) equipped with a fan, G4 filter (95% efficiency) and heating batteries supplies filtered hot air (up to 120°C) to the chamber through a collection built-in directly in the chamber lateral well. The considerable air flow of the fan (around 1500 m^3/h), reduces the drying time while the steam heating battery heats the air up to a set temperature. The air is extracted from the technical compartment, filtered and then passed through the heating battery where it is finally conveyed in the washing chamber. The exhaust air leaving the chamber, which is still hot, pass at the entrance of the drying group in order to preheat the incoming fresh air.

A PT100 probe close to the heating battery checks the air temperature. An H13/H14 Hepa filter is available optional directly at the inlet of AHU.

For models WT/WCO3100 the drying system described above is double due to necessity linked to the capacity of the chamber.

Dosing pumps

Chemical additives to increase the washing and disinfection effects of the materials are added to the water by means of two dosing pumps, which collect the liquid directly from the tanks placed in the technical compartment. The considerably low flow rate of the dosing pumps and the dosing control, carried out by a flow meter connected to the microprocessor, allow the amount of additives added to water to be optimised and the relative consumptions to be reduced. A level control for each tank indicates the presence of additive until it is fully emptied. The additive is dosed directly in the washing chamber, where it is mixed with water. The additives that can be added usually are: detergent, disinfectant, neutraliser and lubricant.

A third dosing device can be added as optional.

Washing pumps

A pump starts the circulation of the washing water alternativelly between the two lines placed on the washing trolley and on the side ramps. The water is filtered by means of a self cleaning filter inline to the circulation pipe and heated by a inline steam exchanger. There is a second filter in the bottom part of the chamber, before the water suction device. Another pump, at the end of each phase of the washing cycle, allows emptying the chamber and provides the client with the possibility of collecting the final rinsing water into tank n°2, with the aim of using it in the pre-washing of the next cycle oraccording to customer's needs.

For models P-W 3100 the washing group described above is doubled for necessities of chamber capacity.

For modelsWT/WCO3100 the washing system described above is double for needs linked to the capacity of the chamber.

Safety systems

The machine is equipped with the following safety devices that make it extremely reliable:

- Door blocking device when running a cycle.
- An anti-overheating device during the disinfection/washing phase.
- A temperature defect device during the disinfection/washing phase.
- A device that prevents the cycle from starting if the door is open or not perfectly closed.

- Safety overflow device.
- Device that prevents the doors from opening simultaneously
- Circuit breakers to protect the motors.
- A fuse and electrical protection on the auxiliary devices of the electrical system.
- Emergency button that stops all the machine functions (which can be restored to stand-by using the key, while the cycle functions are resumed via the start command).
- Differential protection on hot water electric circuit (resistances)
- Safety thermostat for generator resistances.
- Generator safety valve.
- Releasing micro-switches on electric panel
- Double buttons (requiring two hands) to close the door
- Safety device into the chamber to open the door by operator trapped inside

Audio and visual alarms

Audio and visual alarms are defined for operator warnings. The alarms are included in a multi-level alarm list with clear message notifications; alarm levels are configured, according to the level of importance, to stop the machine or the cycle, or to issue a 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 the last 90 days. The end cycle nitifies the user that the cycle is finished and it is necessary to start unloading process.

Multi language touch screen

Most world languages are pre-installed in the machine. Users can easily select 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 operation of the machine, a self maintenance program for steam generator discharge with user acceptance. There are technical pages for calibration and parameter control. Simple and friendly troubleshooting pages are added for easy maintenance and service. The maintenance and technical pages are password protected, and where only authorized technicians can access them.

Remote access system

The machine, through the Touch Screen, is equipped with a remote access system that allows to be connected to Cisa customer service by means of a simple ethernet connection.
This represents the fastest way for a Cisa technician to do verify a problem and reduce downtime.

Heating

The washer disinfector water can be heated using one of the following methods:
(E): Built-in electric heating, using a steam generator in a separate technical compartment
(V): External steam supply from Hospital steam Network (domestic steam)
(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

Control panel loading side

The loading side control panel consists of:
- A 7” colour touch-screen programmable

terminal that controls interaction with the operator.
- Emergency button
- An on/off equipment selector
- A graphic alphanumeric printer
- Door opening/closing buttons
- Air pressure gauge
- Network steam pressure gauge

Control panel Unloading side

The unloading side control panel consists:
- Door opening/closing buttons
- Emergency button
- Control light showing cycle phase and alarms
- An on/off equipment selector.
- Network steam pressure gauge

Touch-screen

The control display unit, with a colour 7" touch screen monitor.

Printer

The printer is prints out the parameters and regular execution of the cycles. The data showed in the printout are the basic process parameters and each alteration of stage, further date, time, the result of cycle, operator code, lot, A0 etc are also reported.
Besides, cycle numbers are also reported, in progressive order, on the printout.

Washing cycles programmed sequence

These are obtained via the system that controls the trolley/container washer.

The sequence of the different cycle phases depends on the intended conditions and set parameters being achieved.

The programmed cycles are as follows:

- P1 Trolleys 85°C 5'
- P2 Trolleys 70°C 1'
- P5 Container 91°C 1'
- P6 Surgical Instruments 91°C 5'
- P9 Clogs 80°C 10'
- P13 Drying cycle 100° 20'

Optional

According to on installation requirements and to facilitate the ordinary and extraordinary maintenance operations, the equipment can be configured a standard or inverted module.
In the first case, the chamber is placed on the left (looking from the loading side) and the technical module to the right, and in the second case the chamber is placed on the right side and the technical module is placed on the left. This optionals can change according to the client's requests.

Floor level installations

P-W is usually installed inside a pit-hole.The equipment requires only 120mm depth, one of the smallest value in its category.
The machine can be installed at floor level and loaded without the aid of external trolleys adatting a inclined ramp.

Side panels

The machine can be equipped with side closure panels on one or both sides to meet with installation requirements.

Double touch-screen

An additional touch-screen can be installed on the unloading side of a double door equipment upon request. This type of requirement may arise in some situations, such as hospital or laboratories, where the loading side is the laboratory itself and the unloading side is exposes to a decontaminated area.
Equipment control settings can be also customised and the operator can set one of the two sides control as main one, allways in accordance with standard requirements.

UPS backup control system

the backup UPS system is connected to the PLC and the touch screen and does not allow the cycle to be disrupted in case of sudden changes in voltage or power cuts, as long as the cycle conditions are still valid.

Cage washers

Cisa Cage cart washer is a system for laboratory that, by means of a thermal and chemical washing, washes and disinfect all types of animal cages, preventing contamination in the field of animal care.
A special trolley can be designed according the types of cages allows the external washing and drying of the cages which are already inserted inside, separating and dividing the plastic base from the cover metal grid of each cage.
Cisa has the ability to customize the trolley according to the requests and needs of customers.

Our product range

All of the sizes and measurements below can be modified according to the different configurations and applications of the machines.
All measures are expressed in mm. (W x H x D)

Quality & Safety

Cisa cart washer are built in accordance with the standards directives.
Cisa P-W are medical devices Class IIB in conformity to ENI UNI ISO 15683-1,2,6.

Series	Chamber dimensions	Dimensions 1P and2P	Chamber Volume Lt	Load capacity
P-WCO 1500	900X2000x1550	2750X2700x1950 3350X2700x1950 (E)-1308	2790	N.1 Trolley Max Dim 850X1800x1400 N.1 Trolley 16 Iso Container N.1 Trolley For Cage Dim 850X1800x1400
P-WCO 3100	900X2000x3100	2750X2700x3500 3350X2700x3500 (E)	6000	N.2 Trolley Max Dim 85N.2 Trolley 16 Iso Container (Tot. 32) N.2 Trolley For Cage Dim 850X1500x1800
P-WB 2500	1050X2000x2500	2900x2700x2900 3500X2700x2900 (E)	5250	N.1 Bed Max Dim 1000x1800x2350 N.1 Table Max Dim 1000X1800x2350 N.2 Trolley Max Dim 850X1800x1100 N.1 Trolley 20 Iso container N.1 Trolley for cage dim 1000X1800x2300 N.2 Trolley For Cage Dim 1000X1800x1100

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