



Washing

## GP Cage and Rack Washers

- Reduced operational footprint with 5 minute cycle
- Constant and powerful water coverage
- Separate wash and rinse circuits for greatly reduced consumption
- Gas-tight chamber for use as a decontamination lock



*"Cages have been found to be cleaner and life expectancy has increased. Large volumes can be cleaned in a short space of time easily matching that of a tunnel washer."*



**mw**  
a **TECNIPLAST** company



# Washing

## GP Cage and Rack Washer - 900 Series

### 1/Maximum Cleaning Efficiency

Nearly 700 lt of water (185 gallons) per minute is pumped right into the heart of the load at 3 bar (45 PSI) pressure. Unlike less innovative systems, the adoption of our 90° oscillating spray patterns ensure that all this energy is released at load level from every possible angle thereby maximising cleaning efficiency. The 112 wash and 64 rinse nozzles (separate circuits), guarantee complete, continuous coverage of the load. As a result of this unique combination of water quantity, pressure and coverage, you can expect an outstanding cleaning performance, up to 10 cycles per hour, making this machine ideal for medium to large scale operations normally served in the past by tunnel washers only.

### 2/Safety is a Priority

Always high on our priority list, safety features include panic-proof self-deflating door gaskets, large observation windows, safety switches on doors and self-cleaning filter, warning lights and acoustic alarms, chamber overpressure air vent, certified IP55 rating of the electrical box (TUV certified) and a Siemens microprocessor with a password protected touch-screen for operator interface. Safety means clearly marked external emergency stop buttons at both load and unload sides as well as easy-to-grasp, wide red emergency bars on the inside. The IWT GP washer is the only Cage and Rack washer on the market featuring an Hazardous Operating Procedures document (HAZOP) and a Risk Assessment procedure performed by an independent safety agency.

### 3/Focus on the Environment Leads to Minimum Running Costs

Our machines are designed with energy saving and reduced environmental impact in mind, including limited heat loss and noise emission which is well below 70 dBA. By partially recirculating wash water in combination with a totally separate rinse circuit, we ensure a remarkable reduction in energy usage, steam peak demand and consumption and, of course, the use of chemicals and waste discharge. Furthermore, our highly efficient mechanical wash, makes for very low detergent concentrations, typically 0.15%, offering further financial savings and remarkable protection. Please consult with our local representative for break-even running cost analysis and return on investment.

### 4/Quality Construction

Finely rounded smooth cabinet work and self-draining orbital welded pipes mean no cavities, no dirt traps and no water stagnation. Full sound-proof insulation, double glazed windows, vibration-free adjustable feet and top class components all confirm our constant commitment to product quality. Piping and valves in the service area featuring pharma standard tri-clamp connections and made entirely of electro-polished stainless steel. No copper, mild steel or rubber is ever used.

### 5/Validation

For GMP/GLP requirements or any other quality standard and accreditation, our rack washers offer the possibility of a highly comprehensive program of machine and process qualification ranging from the very basic FAT protocols to the full validation including SAT/IQ/OQ tests and Performance Qualification with soil and/or microbiological tests.

## Maximum Cleaning Efficiency

# 1



## Safety is a Priority

# 2



Focus on the Environment Leads to Min. Running Costs

3



Quality Construction

4



Validation

5



## 6/IVC Rack Washing and Autowatering Flush

Purposely developed and validated cycle (test report available on request) to flush water through the air plenums of the ventilated racks. During this special cycle all arms stop at the top of the oscillating angle, stand still and direct over 700 lt (185 gallons) of water at the roof. This powerful waterfall flushes through the vertical plenums of the IVC racks, washing dust and similar residues. For all facilities on auto-watering systems, we also make available the option of hooking up water manifolds to the machine via a purpose recoil hose and, on demand, flushing hot filtered and constantly fresh water through the auto-watering manifolds and valves. Truly back flush self-cleaning filter for the re-circulating wash water, activated every cycle during the dripping phase, with easily removable fine mesh cartridge. No more daily maintenance on filters!

## 7/Hydrogen Peroxide Vapour Facility

Under barrier or bio-containment conditions the IWT rack washer offers another unique feature: our air-tight wash chamber can be used periodically as an H<sub>2</sub>O<sub>2</sub> pass-through chamber to decontaminate heat-sensitive equipment (computers, laminar flow benches, ventilation units, lab instruments, etc...) or vacuum packed consumables. This can be achieved by connecting the rack washer to any H<sub>2</sub>O<sub>2</sub> generator and providing an effective circulation of the vapour into the chamber via the four injection points. This option includes cables and software upgrade for communication protocol between the two machines as well as inspection ports for monitoring residual concentration prior to door opening. Technical information and microbiological validation reports are available on request. Front hatch with cam-lock connections for supply and return hoses coming from the mobile H<sub>2</sub>O<sub>2</sub> generator. This option includes wire cables to execute communication protocol throughout the cycle, inspection ports for residual concentration monitoring and standard cycle development.

## 8/Thermal Disinfection

Temperature attainment is becoming an increasingly important criterion for regulatory bodies and thanks to our unique air-tight inflating door gasket and fully heat-insulated chamber, our GP series washer is the first and only rack washer to provide the option of a true thermal disinfection cycle according to the British Standard 2745 (HTM 2030). The result, consistent temperature across the load and continuously during the holding time, is achieved by means of clean (or filtered) steam injection into the chamber. This option is ideal to remarkably enhance the dryness of the surfaces of the various loads and the chamber itself.

## 9/Chemical Fogging

Our machine not only washes but can also double as a chemical fogging chamber when fitted with a circuit of four atomisers nebulising fine particles of surface disinfectant and compressed air within the chamber. A 5-litre (1,3-gallon) dispensing reservoir is accessible from the front panel on the dirty side for periodically dispensing disinfectant. This option is ideal for consumables such as feed and bedding by means of wet (not suitable for electronics) surface disinfection of the bags. Technical information and microbiological validation reports are available on request. Optional atomiser (one of the four included in the kit) for the chemical fogging facility. These come together with the distribution pipe, compressed air line, mixing tank and delivery funnel.

## 10/Inflatable Gasket

Integral multiple rib inflatable gasket, safely encased within door frame, for active and true sealing of the chamber in the SPF barrier application as well as during H<sub>2</sub>O<sub>2</sub> vapour gassing or chemical fogging. No more exhaust hoods over the doors!

## 11/User Friendly Touch Screen

Operator multi-language touch-screen interface with password protected access for cycle management and machine manual operation. Attractive coloured graphics for user friendly operation and diagnosis with over 100 different parameters being constantly monitored.

## IVC Rack Washing and Autowatering Flush

6



## Hydrogen Peroxide Vapour Facility

7



Thermal Disinfection

8



Inflatable Gasket

10



Chemical Fogging

9



User Friendly Touch Screen

11



## 12/GP Cage and Rack Washer - 900XL Series

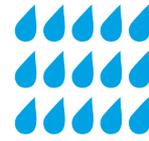
IWT is proud to introduce the first and unique Washer purposely designed to wash and disinfect racks and cages for large animals. The 900-XL exceeds by far the standards of the laboratory animal industry in terms of chamber size, wash power, spray pattern and load coverage!

## 13/Coverage and Water Pressure

The 900-XL combines our traditional horizontal oscillating arm concept, ideal for rodent cages and IVC racks, with the unique battery of vertical arms, located on one side and oscillating by 90°. This thorough spray pattern, combined with a water flow rate in excess of 1 ton of water (290 gallons) at 5 bar pressure (72 PSI), is capable of reaching any hidden surface and remote back/lower panel, providing outstanding wash results in a remarkably short cycle time. The simultaneous presence of horizontal and vertical arms means that it is possible to develop, test and implement different washing cycles for different applications and degree/nature of soiling, as is nowadays required in a multi-species facility.

## 14/Performance and Flexibility Excel

The machine is equipped as standard with two wash tanks resulting in great flexibility in cycle development which may include a de-scaling pre-wash followed by a regular wash or a sequence of alkaline and acid wash phases. The rinse circuit, as for the standard 900 series, is totally separated from the wash line leading to a dramatic reduction in water and energy consumption. As in the 900 series, the 900-XL washer features an inflatable door gasket and hardware-software integration with H<sub>2</sub>O<sub>2</sub> vapour generators. IWT doubles up...not only a powerful washer but also a decontamination chamber within the same foot-print, when required! Even more than before, flexibility and performance eXcel in the 900-XL cage and rack washer!



Washing

GP Cage and Rack Washer - 900XL Series

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Coverage and Water Pressure

13



Performance and Flexibility Excel

14



### TECHNICAL SHEET

#### Specifications and Dimensions

Cage and Rack Washer*				
Code	Doors	Useable Dimensions (L x W x H) mm / inch	Exterior Dimensions (L x W x H) mm / inch	Pit Depth
9LAVSC900**	1 or 2	2200 x 950 x 2100 86.5 x 37.5 x 82.5	2542 x 2210 x 2500 100 x 87 x 98.5	150 6
9LAVSC900XL	1 or 2	2248 x 1169 x 2356 88.5 x 46 x 92.5	3100 x 2750 x 2672 122 x 108 x 105	200 7.9

\* Shipped as standard dismantled for ease of introduction and installation.

\*\* Electrically heated versions are available when supplied with hot water only.

Note:

- 1) Custom models are also available, please consult the factory for further details.
- 2) IWT will provide mechanical information, detailed service requirements and installation drawings upon request.

Thorough and effective rack-washing requires suitable presentation racks, always matching water jets provided by the machine during operation.

Our racks also feature a high degree of flexibility making them compatible with most of the caging standards present on the market.

### 15/Presentation Rack - Universal

Highly flexible rack-washing system, suitable for any size small rodent plastic cages, filter tops, stainless steel lids and other accessories with no need for rack adjustment. Load capacity ranges from 24 type IV to 96 type I cages. Our unique 20 mm swinging bar system positively secures the load during washing cycle and operation. Entirely made of AISI 304 stainless steel with four pivoting nylon castors. Available in a compact and very manageable configuration for better operations in tight and congested washing rooms.

### 16/Presentation Rack - Large Cages

Versatile rack to accommodate 8 to 12 Noryl cages or trays for Guinea pigs and rabbits. Compatible with any cage brand due to the unique restraining system design. Entirely made of AISI 304 tubular stainless steel with four pivoting nylon castors. Available in a compact and very manageable configuration for easier operations in tight and congested washing rooms.

### 17/Presentation Rack - High Density

To hold up to 120 mice cages (Type I). Ideal for single species facility where hourly throughput is a priority and presentation rack flexibility not required. Entirely made of AISI 304 tubular stainless steel with four pivoting castors.

## Presentation Rack - Universal

# 15



Universal Presentation Rack

"Baby" Presentation Rack (ACCALS02AA)

## Presentation Rack - Large Cages

# 16



Large Cage Presentation Rack



Detail of Rack Loading (ACCALG03)

## Presentation Rack - High Density

# 17



High Density Rack for Mice Cages (ACCALS02HD)

## Options

- Additional chemical dosing pump (up to 3) (9LAVPD).
- 2<sup>nd</sup> wash tank for acid wash together with the alkaline one (included as standard with 900XL) (9LAVSCA01).
- Chamber steam saturation via dedicated pipe to provide thermal disinfection and enhance drying (9LAVSCVS01).
- S/S steam filter made up of 3 cartridges (85, 20 and 1 micron) (9LAVSTFBAT).
- Electrical box mounted printer with individual cycle cut-sheets (9LAST801).
- Real View™ purpose hardware and software set-up to remote cycle data, inclusive of the self-diagnostic package (9VIEWRW).
- Flushing system complete with quick recoil hose to automatically sanitise auto-watering manifolds at the end of the cycle (9LAVSCFLAA02).
- Fogging facility for surface disinfectant misting by means of dedicated atomisers. Inclusive of built in reservoir for single cycle chemical charge (9LAVSCAT01).
- H<sub>2</sub>O<sub>2</sub> vapour facility, via dedicated pipe-work and complete with software and hardware integration and sampling points (9LAVSCVHP).
- Ph control and temperature cooling facility for discharge water (9LAVSCWDCS1).
- SAT - IQ - OQ - PQ - Validation protocol (9LAVSCVAL).

## Accessories

- Universal presentation rack for all plastic cages, SS lids and other accessories (ACCALSO2).
- Presentation rack for rabbit and GP cages, trays and other accessories (ACCALG03).
- "Baby" universal presentation rack (2 x load) (ACCALSO2AA).
- "Baby" presentation rack for rabbit and GP cages (2 x load) (ACCALG03AA).
- High density presentation rack to hold up to 120 mice cages (type I long). Suitable also for type II long, GM500 or similar size (ACCALSO2HD).
- Presentation rack for washing 18 bottle crates. 2 rows on each side, 3 crates per row, totalling 216 bottles per cycle (ACCALLBCB18BB).

*Note: 900XL option codes are the same as 900WP ones, with the suffix -XL at the end of the code. For 900S options please consult us or your local representative.*



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ISO-9001:2000 - Cert. n° 3406/f1

## Related Products

To maximise operational efficiency and learn more about these products contact your local representative.



**BHS:** highly reliable automated system using a combination of proven technologies to ensure totally smooth and simple material disposal and dispensing operations, cutting operator exposure and effort to a minimum.



**Ares:** the most reliable, flexible semi-automated cage-handling system for medium-small laboratory animal facilities housing valuable rodents.



**Logistic trolleys** offer safety and ergonomic features that enable high load-density for moving cages and bottles, crates, pallets and covers.



**Modular integrated bottle wash and fill equipment** supports high throughput processing and staging of bottles and caps across the full range of automation.