Application Scope

Applicable to cleaning, disinfection and drying of various utensils in laboratories and production departments of pharmaceutical companies, disease control centers, scientific research institutes, food manufacturers, chemical companies, electronic companies, etc.

Standardized Cleaning

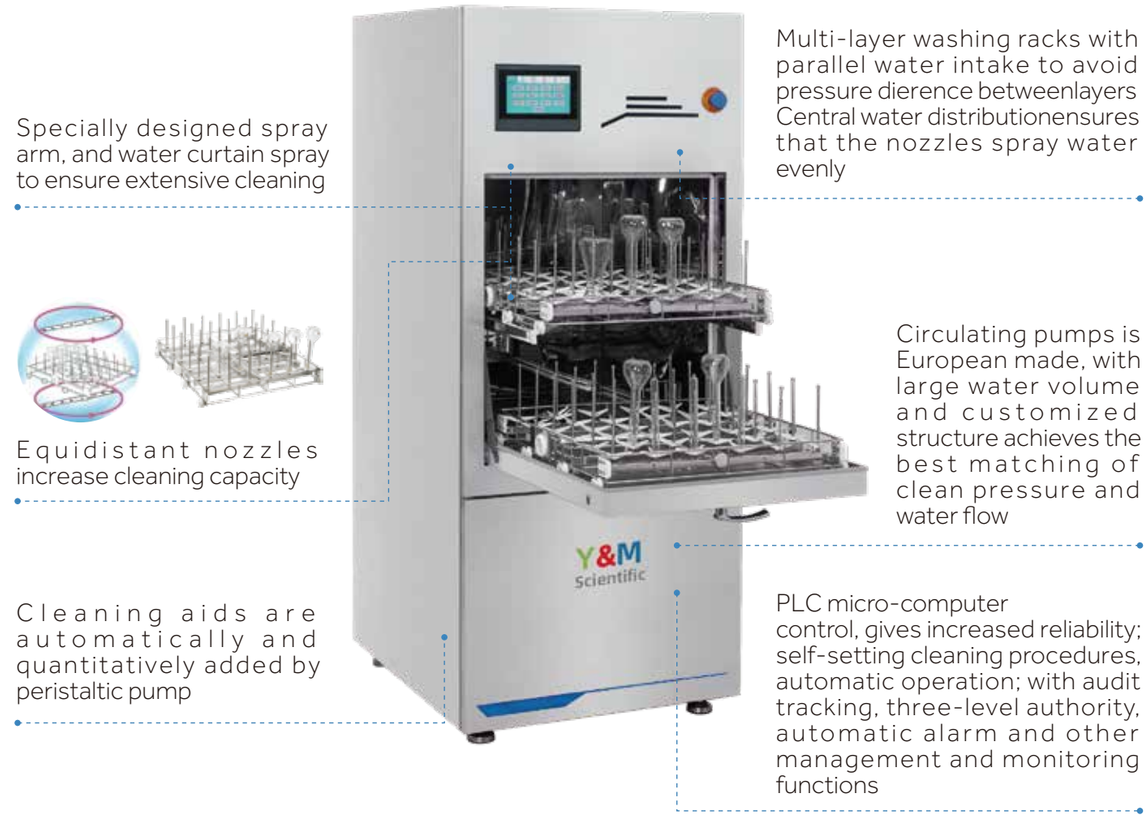
- By controlling the cleaning process and monitoring key cleaning parameters through automatic program flow control, the automation and standardization of vessel cleaning can be achieved
- The cleaning effect of different batches and each cleaning point in the same batch is consistent
- Can achieve traceability of cleaning data

We can provide

Standard cleaning verification solutions



Cleaning



- Sprays 360 ° inside and outside the container, covering all surfaces
- Two water inlets controlled by electromagnetic valve, users can choose between tap water and pure water for wash and rinse phases
- Pure water inlet adopts built-in booster pump, which can directly intake pure water without external pump
- With overow protection, detection of excess water in the cleaning chamber, will halt the program with an alarm, and the water will be automatically drained integrated drainage pump, with drainage pipeline seal prevents the backflow of discharge water

Cleaning

- Automatically deteuts cleaning agent volume & alerts the user when low
- Achieved through electrical safety, electromagnetic compatibility, salt spray test (corrosion resistance) and other comprehensive performance tests

Filter System

- Two stainless steel filters protect recirculation and drain pumps from debris
- Filters easily removable for cleaning
- Filters on all inlets water
- Filters on air intakes



Dual Peristaltic Pumps (Detergent & Neutraliser)

Disinfection effectiveness mainly depends on the correct performance of the washing phases and the neutralization of the treated material. Washers have two peristaltic pumps dedicated to dispensing the alkaline detergent during the cleaning phase, and the acid neutralizer during the neutralization phase

Automatic Detergent Dispenser

- Peristaltic pumps are equipped with sensors which automatically draws a programmed amount of detergent during wash cycles
- 360 rotary sprayed upper and lower wash arms with controllable speed distributes water and detergent more effciently

Drying

- The patented TWINS system channels hot air for drying into the cleaning pipes, allowing extensive coverage within the chamber
- To prevent synchronous drying of avoids the pipeline long-term moisture and breeding of bacteria

When drying, hot air quickly blows the inner and outer surfaces of the utensils through the nozzles of the spray arm on the top and bottom of the cleaning chamber and along the nozzles of the cleaning column

HEPA highefficiency air filters ensure the cleanliness of dry air

After drying, the utility model can quickly cool the apparatus, ensuring that the users can safely retrieve them

Independent air heater with highpressure fan, improves drying efficiency



Humanized Operating System

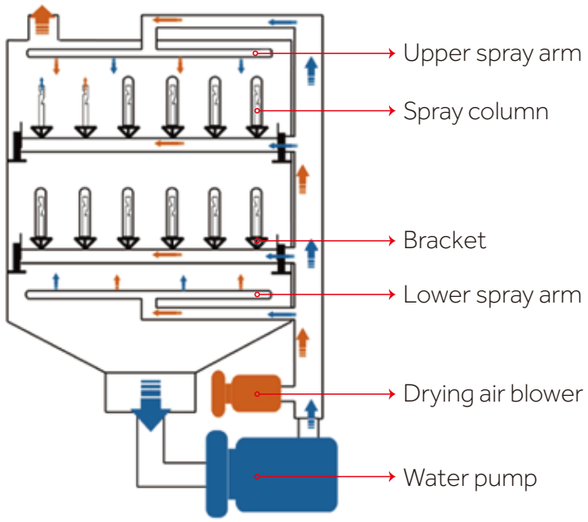
- Man-Machine Interface is a 7-inch color LCD touch screen, with convenient operation, is suitable for complex operating environment
- PLC programmable micro-computer operating system, stable and reliable performance, antimagnetic

Drying

- Cleaning temperature, time, cleaning agent added, water type, water intake, and other parameters can be set
- LCD screen displays the current operating procedures and working parameters
- If power is cut off unexpectedly during program execution, the equipment can continue when it left off

Washing & Drying Cycle

- Water flow
- Drying air flow



Drying System

The forced-air "Drying System" is a high-performance rapid drying system. The system, comprising an excellent hot air generator and a powerful fan, is directly managed by the programmer . The microprocessor PLC system assures intelligent management of the drying circuit by automatically adjusting fan speed (thereby reducing power consumption) according to the temperature measured in the washing chamber.
The air temperature can be adjusted to 120 which enhanced washing, rinsing and sanitize glassware, and faster drying.



Drying

Microprocessor Control System

7" color LCD touch screen display, microprocessor with PLC system which is various of programmable washer cycles, detergent volume etc. User programmable with 99 storable programs and denable
All signicant parameters can be set.These include: execution times, operating temperatures, quantity of additives, water source, inuent water volume, etc. The LCD screen displays the current running steps and working parameters in real time. Access to the control operations is protected by a system of 3 levels password. It also with power-o memory function

Microprocessor Control System

CTLW 120-320: 12 pre-set programs, which covers cleaning of common contaminants
Also with 99 PLC free programming. Users can dene dierent washing steps such as PreWash, Wash, Running Water, Acid Rinse, Neutralized Washing, Hot Water Washing, Drying etc. in one washing cycle. It can also adjust water temperature, washing time, volume of detergent, drying temperature and drying time in related washing step



Drying

System Wash Levels

- 1 to 3 levels according to model
- Rack actuated via automatic manifold connections when door is closed
- Rack accessories independent and easily removable for use on all levels
- Cleaning racks universal across all levels, and the cleaning racks of CTLW-120, 200, 220, and 320 can be used in common with each other
- Users may choose use only the lower cleaning rack, and the upper or middle racks can be removed to facilitate cleaning of utensils with different heights

Monitoring System

- Audible and visual alarms provide quality control via sensors
- Two independent sensors control chamber water level and prevent over growth

Water Injection System

Two water inlets controlled by electromagnetic valves. Users can choose between tap water and pure water in wash and rinse phases. Washer trolley can connect the water and gas outlet automatically on each level which reduces the pressure loss and ensures wash and dry efficacy

Dual Powerful Pumps

- One for washing and one for draining. Reduces the potential risk of cross contamination between wash and drain water
- Powerful pump recirculates water at a high rate to dislodge dried contaminants for thorough cleaning
- Drain pump is associated with water seal drainage pipeline design, avoiding polluted water backow

Reliability



- Microprocessor with PLC control system anti-EMI (electrical magnetic interface)
- 7'' colorful touch screen is easy to control and observation, and it displays real time parameters
- Password protection with three levels can meet different management needs which block the authorized entry
- Anti power failure memory loss, allowing the wash cycle to pick up where it left off after unexpected power loss
- Safety protection water temperature and dry air temperature. auto shutoff temperature exceeds.
- Safety lock with electromagnetic release to prevent door opening while it is in wash/dry cycle
- Safety electrical system for circuit overload, short circuit, over current and leakage current
- Safety emergency button function
- The door has an anti-rebound design, and can be stopped at any angle from 0 to 90 degrees after opening
- Alarm system: circulating pump overheat, water heating abnormal, air heating abnormal, cleaning agent shortage, door open alarm, water intake abnormal, overflow alarm, etc
- USB port for exporting all washing and disinfection program data

Optional Accessories

Water Conductivity Monitoring:

Sensor measures the level of dissolved inorganics such as calcium and ferrous ions in the water tank, providing validation of water cleanliness, hardness and rinsing thoroughness. Ensures that detergent, rinse aid and puried water are properly dispensed



Printer

The printer is an optional accessory which can provide a detailed report on the washing & thermal disinfection cycles



Drying



CTLW-60



CTLW-200A



CTLW-220



CTLW-320



CTLW-120



CTLW-200



CTLW-420



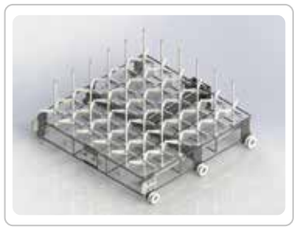
CTMW-220

Technical Parameter

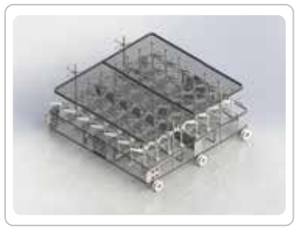
	Model	CTLW-60	CTLW-200	CTLW-120	CTLW-200	CTLW-220	CTLW-320	CTLW-420
Cleaning	Capacity (L)	80	200	120	200	220	320	420
	Washer Load Levels	1	2	1	2	2	3	2
	Water Wash Power (kW)	0.25	0.4	0.4	0.75	0.75	1.5	1.5
	Water Heater Power (kW)	3	3	5	5	5 / 15	5 / 15	5 / 15
	MAX.Power (kW)	3.5	4	6	6	6 / 16	7 / 17	7 / 17
	Water Space Consumption/Cycle (L)	8	15	17	18	20	22	25
	Tank Internal Temperature (°C)	0~99	0~99	0~99	0~99	0~99	0~99	0~99
	Water Supply Pressure (Mpa)	0.3~1.0						
	Peristaltic Pump for Cleaning Agent	2 independent pumps control detergent agent and neutralizing agent						
	Cleaning Agent Level Sensor	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Washing Pump	Sweden 150L/min	Sweden 400L/min	Sweden 400L/min	Sweden 800L/min	Sweden 800L/min	Sweden 1000L/min	Sweden 1000L/min
Drying	Drying Function	No	No	Yes	Yes	Yes	Yes	Yes
	Steam Condenser	No	No	Yes	Yes	Yes	Yes	No
	Drying Power (kW)	No	No	3	3	3.6	3.6	3
Control System and Traceability	Control System	4.3" color LCD touch screen display. microprocessor	7" color LCD touch screen display. microprocessor	7" color LCD touch screen display. microprocessor	7" color LCD touch screen display. microprocessor	7" color LCD touch screen display. microprocessor	7" color LCD touch screen display. microprocessor	7" color LCD touch screen display. microprocessor
	Cleaning Program	3 pre-set programs (editable)	12 pre-set programs (editable) +99 PLC free programming	12 pre-set programs (editable) +99 PLC free programming	12 pre-set programs (editable) +99 PLC free programming	12 pre-set programs (editable) +99 PLC free programming	12 pre-set programs (editable) +99 PLC free programming	12 pre-set programs (editable) +99 PLC free programming
	Password Protection	3 levels password	3 levels password	3 levels password	3 levels password	3 levels password	3 levels password	3 levels password
	Safety Emergency Button	No	No	Yes	Yes	Yes	Yes	Yes
	USB port	Yes	Yes	Yes	Yes	Yes	Yes	Optional
	Integrated printer	No	No	Optional	Optional	Optional	Optional	Optional
	Online Monitoring	No	No	Optional	Optional	Optional	Optional	No
Dimensions & Weight	Chamber Dimensions (W*D*H)(mm)	470*462*422	526*542*645	600*629*539	600*629*679	600*629*754	600*629*915	688*700*703
	Exterior Dimensions (W*D*H)(mm)	529*648*650	607*824*1050	980*740*870	990*740*1145	693*790*1825	693*790*1985	1110*900*2165
	Package Dimensions (W*D*H)(mm)	650*780*850	720*980*1230	1110*940*1075	1110*940*1345	810*990*2015	810*990*2185	1230*1070*2290
	Net Weight (Host only)(kg)	65	125	169	193	220	237	370
	Gross Weight (Host with rack)(kg)	104	165	200	260	300	320	460
Others	Door	Foam SS door	Foam SS door	Double-layered Glass Door	Double-layered Glass Door	Double-layered Glass Door	Double-layered Glass Door	Double-layered Glass Door 2 Doors,Electric
	Safety Door Lock	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Built-in RO Water Pump	Yes	Yes	Yes	Yes	Yes	Yes	No
	Noise (dBa)	<50	<50	<50	<50	<55	<55	<60
	Voltage (V/Hz)	220V~240V/ 50~60Hz	220V~240V/ 50~60Hz	220V~240V/ 50~60Hz	220V~240V/ 50~60Hz	220V~240V/ 50~60Hz / 380V/ 50~60Hz	220V~240V/ 50~60Hz / 380V/ 50~60Hz	220V~240V/ 50~60Hz / 380V/ 50~60Hz
	Certificate	CE+IS09001	CE+IS09001	CE+IS09001	CE+IS09001	CE+IS09001	CE+IS09001	CE+IS09001

Clean Shelves and Accessories

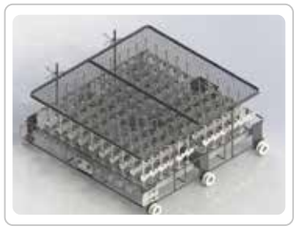
Accessories Suit for CTLW-60



CWIR36B
36 injectors, distance between injectors space 6cm, only one layer can be installed



CWIR52B
52 injectors, distance between injectors space 4.8cm, only one layer can be installed



CWIR126B
126 injectors, wash test tubes, liquid bottles, small volumetric asks, etc, only one layer can be placed



CWIR6018B
Hybrid rack, 60 test tubes, liquid flasks + space 18 nos. of beakers, volumetric flasks



CWBR02B
Double-layer integrated, 4 cleaning baskets, for washing medical and forensic surgical instruments, knives and scissors



CWBR04B
Single layer with 4 1/4 round cleaning baskets for cleaning test tubes



CWPDR9024B
Double-layer integrated, wash 12 culture dishes per layer, total 24 culture dishes

Clean Shelves and Accessories

Accessories suit for CTLW-200A



CWBR01A
No injectors,
directly placed on
the cleaning basket



CWIR20A
20 injectors,
distance between
injectors 105mm



CWIR36A
36 injectors,
distance between
injectors 75mm



CWIR210A
210 injectors
for autosamper vials



CWIR8018A
80 injectors for
autosamper vials,
+ 18 injectors for
erlenmeyer flask



CWPR56A
56 pipettes, only one
layer can be placed



CWPDR9044LA
Can wash 44 pieces
at a time for culture
dishes with a diameter
of 90mm

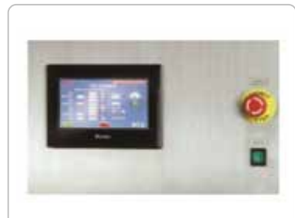


CWPDR9044UA
Can wash 44 pieces
at a time for culture
dishe with a diameter
of 90mm

Accessories suit for CTLW-120, 200, 220, 320, 420



Printer,
can print cleaning
process parameters



Online monitor
performance of
wash monitors by
testing conductivity
of water



CWIR80
80 beaker
rack distance between
injectors 56mm, can
wash small beakers,
centrifuge tubes,
volumetric flasks, etc.



CWBR01
No injectors,
directly placed on
the cleaning basket



CWIR11218
112 injectors,
distance between
injectors 30mm
+space 18 injectors,
distance between
injectors 90*86mm



CWIR10072
100 pipettes + 72
autosamper vials,
upright cleaning



CWPR60
60 pipettes



CWPR6060
60 pipettes + 60
autosamper vials

Clean Shelves and Accessories

Accessories suit for CTLW-120, 200, 220, 320, 420



CWIR16
16 1000ml erlenmeyer flasks, volumetric flasks etc, distance betweens injectors 135*129mm



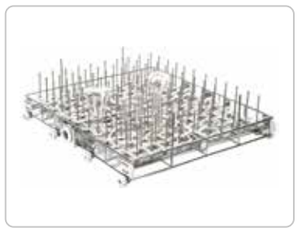
CWIR20
20 500ml erlenmeyer flasks, volumetric flasks etc, distance between injectors126*116mm



CWIR36
36 250ml erlenmeyer flasks, volumetric flasks, beakers, test tube etc, distance betw-een injectors 99*90mm



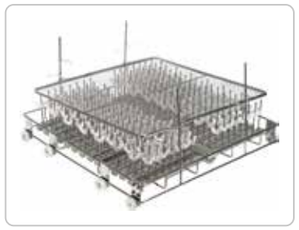
CWIR60
60 erlenmeyer flasks, test tubes, measuring cylinders, beakers, etc, distance between injectors 72 *70mm



CWIR120
120 injectors, can wash centrifuge tubes, test tubes and less than 50ml volumetric flasks, etc, distance between injectors 53*48.5mm



CWIR222
222 injectors, can wash autosamper vials, test tubes (dist-ance between injec-tors 31*23mm)+ 1 set of basic basket (for wash caps of autosamper vial)



CWIR260
260 injectors, can wash autosamper vials, test tubes dista-nce between injectors 38*23mm



CWBR04
No injector, with 4 cleaning baskets. Can wash a large number of penicillin bottles, test tubes, etc.

Accessories suit for CTLW-120, 200, 220, 320, 420



CWPDR9070U
Can wash 70 pieces at a time for culture dishes with a diameter of 90mm



CWPDR9070L
Can wash 70 pieces at a time for culture dishes with a diameter of 90mm



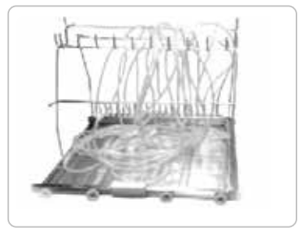
CWPDR90210
Placed it in the washing machine as a whole. Can wash 210 culture dishes at a time, and can be used for CTLW-220



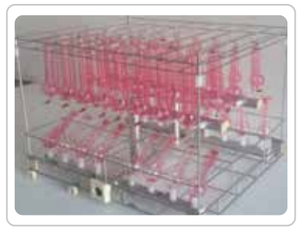
CWPDR90280
placed in the washing machine as a whole, which can wash 280 culture dishes at a time, and it can be used for CTLW-320



CWIR38
38 graduated cylinders



CWRTR20
20 rubber tubes (3-5 m)



CWAB40
40 absorption bottles



Optional for injector
racks, for big bottles, conventional rack with plastic supporter. This stainless steel supporter is for supplementary use

Clean Shelves and Accessories

Cleaning Solution

Product Name	Model	Capacity	Description
Cleaning solution (imported from Belgium RBS)	Detergent 	5L/bottle	Multi-purpose concentrated alkaline acid cleaner, made in Belgium, manufactured by Chemical Products S.A., suitable for automatic space cleaning
		2.5L/bottle	
	Neutraliser 	5L/bottle	Multi-purpose concentrated acid neutralizer, made in Belgium, manufactured by ChemicalProducts S.A., suitable for automatic cleaning
		2.5L/bottle	

Effective Cleaning Height

Model	Layers	Upper Layer (mm)	Middle Layer (mm)	Lower Layer (mm)
CTLW-320	1	/	/	686
	2	228	/	401
	3	228	227	117
CTLW-220	1	/	/	525
	2	242	/	228
CTLW-200	1	/	/	463
	2	177	/	232
CTLW-200A	1	/	/	439
	2	153	/	230
CTLW-120	1	/	/	345
CTLW-60	1	/	/	222