



Why choose our glassware washer?

Vast range of washing accessories:

MRC offers a vast range of specific trolleys and accessories for washing glassware in chemical, pharmaceutical and petrochemical laboratories. They are made of AISI 316L or 304 steel and of chemical refractory and heat-resistant materials. The combination and choice of the various accessories depend on the type and quantity of glassware to be washed. Particular attention has been paid to shapes and sizes in order to ensure that the accessories are easily interchangeable. The water intakes are automatically coupled to the internal drying air ducts when the door is closed.

All the accessories are dimensionally compatible with the various models.

Automatic washing:

The automatic washing process of the MRC glassware washers guarantees extremely high performance quality ensuring excellent controllable results, verifiable and repeatable over time.

Automatic washing allows achieving impeccable results and the margin of error is reduced to a minimum.

The efficiency and thoroughness of automatic washing guarantee an impeccable result and effective disinfection even for the most complex and delicate materials. The risks of damaging the material are eliminated resulting in a longer life and guaranteeing perfect drying.

Wastewater separation:

The MRC models can be equipped with a wastewater separation system. This allows separating the washing wastewater full of potentially polluting substances from the rinsing water containing a negligible concentration of pollutants and can therefore be drained into the normal sewerage.

Disinfection:

The MRC disinfection machines guarantee impeccable washing and effective disinfection of also complex and delicate instruments.

The WG-2045, WG-1060, WG-4060, WG-3060 and WG-4090 models are equipped with automatically regenerated washing water softeners and use freshly drawn water in every phase.

Controlled detergent dispensing system:

Washing effectiveness is first and foremost based on proper execution of the detergent and neutralizing phases of the material treated.

The models WG-2045, WG-1060 and WG-4060 are equipped with a dispenser for alkaline powder and a peristaltic pump for the acid neutralizer. While the WG-3060 and WG-4090 models have two peristaltic pumps, respectively dedicated to feeding alkaline detergent in the washing phase and acid-based neutralizer in the neutralization phase. Each pump is equipped with a level sensor to be positioned directly in the can of the products used.

The machines are designed to dispense up to 4 different additives. Liquid alkaline detergents, new enzyme-based detergents or acid-based neutralizers, caustic soda, disinfectants and/or defoaming additives can be used.

Programmable washing cycles:

The heart of the new-generation MRC disinfection machines is the ultra modern control system with microprocessors that control every activity carried out and monitor (by means of redundant system) the entire flow of information processed by the machine.

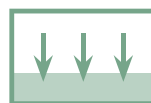
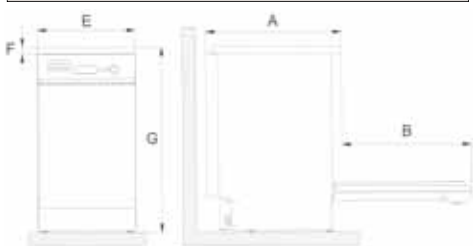
The entire WG Series offers the possibility of programming all the washing parameters by means of a multifunction membrane keyboard or directly from the PC thanks to the RS232 and the software.

All the most significant parameters can be set, for example: execution times, operating temperature, additive quantity, number of phases. Access to the control operations is protected by a system of four user passwords.

**WG-2045, Basic Washer**

WG-2045 is a glassware washer with reduced dimensions projected to work at 1 or 2 washing levels and to treat substances of different nature. Washing chamber 380x480x580 mm. Possibility of washing and disinfecting.

	WG-2045 (mm)
A	620
B	600
E	450
F	30
G	850



Optional



Optional



Optional

Model	WG-2045
Electronic control	Microprocessor
Standard programs stored	6
Customisable programs	2
Display with segments & warning light	Yes
Clock and calendar	Yes
Reprogrammable phases	8
Phase parameters	Type of water, detergent quantity, target temperature, extension time in minutes, temperature
Tank internal temperature	From room temperature to 95°C
Accuracy	0.1°C
Temperature sensors in tank	PT 1000 CLASS B IEC 60751
Display	2 digits
Detergent dosing system	Max. 1 powder dispenser & 2 liquid pumps
Detergent level sensor	Optional
Safety lock	Yes, with electromagnetic release
Safety devices	safety thermostats, door interlock
Alarm display	30
Troubleshooting menu	yes, using PC connection
Programme editing	yes, using 2 spare programmes
AUXILIARY FUNCTIONS	
Traceability	storage of data for 100 most recently run programmes
RS232 serial port for PC connection+Printer	Yes
Cycle storage	Yes, Excel format
Cycle file download	Yes
WATER SUPPLY (PRESSURE 1.5-5 BAR)	
Cold water inlet	Yes, max 42°F hardness
Demineralised water inlet	Yes, <20µS/cm
Demineralised water booster pump	Optional
Water softener incorporated	Yes
Recirculation pump	200L/min
WATER HEATING	
Electrical	3.0 kW max
STEAM CONDENSER	Optional
DIMENSIONS LxDxH mm	
Outside (with built-in top)	450x620x850 (830)
Inside	380x480x590
Net weight (Kg)	61
STAINLESS STEEL	
Wash tank	AISI316L
Exterior covering	AISI304
ELECTRICAL POWER SUPPLY	
Max. voltage/power	1/N/PE 230V – 50Hz 3.3 kW
NOISE LEVEL	Max. 50 dB



WG-1060

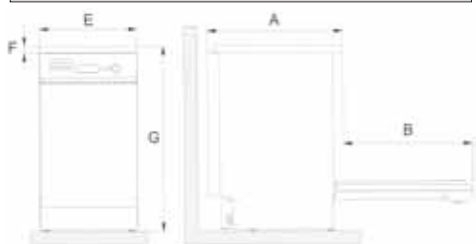
WG-1060, Basic Washer

WG-1060 is designed to operate with 1 or 2 levels for treating various types of substances. Washing chamber 520x515x545mm. Possibility of washing & disinfecting.

	WG-1060 (mm)
A	670
B	600
E	600
F	30
G	850



Optional



Optional



Optional

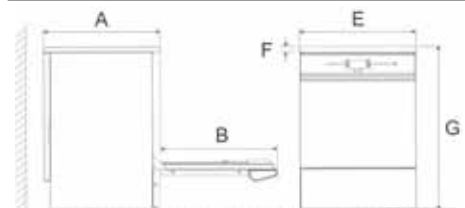


Optional

Model	WG-1060
Electronic control	Microprocessor
Standard programs stored	6
Customisable programs	2
Display with segments & warning light	Yes
Clock and calendar	Yes
Reprogrammable phases	8
Phase parameters	Type of water, detergent quantity, target temperature, extension time
Tank internal temperature	From room temperature to 95°C
Accuracy	0.1°C
Temperature sensors in tank	PT 1000 CLASS B IEC 60751
Display	2 digits
Detergent dosing system	Max. 1 powder dispenser & 2 liquid pumps
Detergent level sensor	Optional
Alkaline powder detergent dispenser	Yes
Pump to dispense acid neutralized liquid	Yes
Pump to dispense alkaline liquid detergent	Optional
Safety lock	Yes, with electromagnetic release and automatic opening
Safety devices	safety thermostats, door interlock
Alarm display	30
Troubleshooting menu	yes, using PC connection
Programme editing	yes, using 2 spare programmes
AUXILIARY FUNCTIONS	
Traceability	storage of data for 100 most recently run programmes
RS232 serial port for PC connection+Printer	Yes
Cycle storage	Yes, Excel format
Cycle file download	Yes
WATER SUPPLY (PRESSURE 1.5-5 BAR)	
Cold water inlet	Yes, max 42°F hardness
Demineralised water inlet	Yes, <20µS/cm
Demineralised water booster pump	Optional
Water softener incorporated	Yes
Recirculation pump	400L/min
WATER HEATING	
Electrical	6.3 kW on tri-phase version, 2.3 kW on mono-phase version
STEAM CONDENSER	Optional
DIMENSIONS LxDxH mm	
Outside (with built-in top)	600x650x850 (830)
Inside	520x515x545
Net weight (Kg)	77
STAINLESS STEEL	
Wash tank	AISI316L
Exterior covering	AISI304
ELECTRICAL POWER SUPPLY	
Max. voltage/power	1/N/PE 230V - 50Hz 2.8 kW 3/N/PE 400V - 50 Hz 7.0 kW
NOISE LEVEL	Max. 50 dB



WG-4060

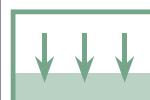
**WG-4060, Basic Washer**

WG-4060 is designed to operate with 1 or 2 levels for treating various types of substances. Washing chamber 520x515x545mm. Possibility of washing, disinfecting and drying with "Drying system".

	WG-4060 (mm)
A	600
B	600
E	600
F	30
G	850



Optional



Optional



Optional

Optional

Model	WG-4060
Electronic control	Microprocessor
Standard programs stored	15
Customisable programs	6
Display with segments & communication led icons	Yes
Clock and calendar	Yes
Reprogrammable phases	8
Phase parameters	Type of water, detergent quantity, target temperature, extension time in minutes, drying temperature & time
Tank internal temperature	From room temperature to 95°C
Accuracy	0.1°C
Temperature sensors in tank	PT 1000 CLASS B IEC 60751
Display	4 digits
Detergent dosing system	Max. 1 powder dispenser & 3 liquid pumps
Detergent level sensor	Optional
Alkaline powder detergent dispenser	Yes
Pump to dispense acid neutralized liquid	Yes
Pump to dispense alkaline liquid detergent	Optional
Safety lock	Yes, with electromagnetic release automatic opening
Safety devices	safety thermostats, door interlock
Alarm display	30
Troubleshooting menu	yes, using PC connection
Programme editing	yes, using 6 spare programmes
AUXILIARY FUNCTIONS	
Traceability	storage of data for 100 most recently run programmes
RS232 serial port for PC connection+Printer	Yes
Cycle storage	Yes, Excel format
Cycle file download	Yes
DRYING SYSTEM	
Drying fan	Yes
Drying heating element	0,8 kW
Prefilter class C 98%	Yes
HEPA filter Class S 99.999%	Optional
WATER SUPPLY (PRESSURE 1.5-5 BAR)	
Cold water inlet	Yes
Demineralised water inlet	Yes, <20µS/cm
Demineralised water booster pump	Optional
Water softener incorporated	Yes
Recirculation pump	400L/min
WATER HEATING	
Electrical	6.3 kW on tri-phase version, 2.3 kW on mono-phase version
STEAM CONDENSER	Optional
DIMENSIONS LxDxH mm	
Outside (with built-in top)	600x650x850 (830)
Inside	520x515x545
Net weight (Kg)	77
STAINLESS STEEL	
Wash tank	AISI316L
Exterior covering	AISI304
ELECTRICAL POWER SUPPLY	
Max. voltage/power	1/N/PE 230V - 50Hz 2.8 kW 3/N/PE 400V - 50 Hz 7.0 kW
NOISE LEVEL	Max. 50 dB

Model	WG-2045	WG-1060	WG-4060
Internal dimensions (LxDxH mm)	380x480x590	520x515x545	520x515x545
External dimensions (LxDxH mm)	450x620x850 (830 with built-in top)	600x650x850 (830 with built-in top)	600x605x850 (830 with built-in top)
Standard programmes stored	6		9
Modifiable programs	2		6
Detergent dosing system	Powder dispenser or peristaltic pump (as optional)		
Neutralizing dosing pump type	Peristaltic pump		
Max nr. of dosing pumps	2	3	
Possibility of volume detergent control	Optional		
Detergent cabinet	n.a.	Optional	
Display	With segments and warning light		With segments and communication led icons
Control panel	Control buttons and program selector knob on the panel		Membrane keyboard
Steam Condenser	Optional		
Drying system	Thermodynamic		Forced hot air through "drying system"
Pre-filter class C	n.a.		Yes
HEPA filter class S 99,999%	n.a.		Optional
Cold water supply	Yes		
Hot water supply	No		
Demineralized water supply	Yes		
Integrated water softener	Yes		
Washing pump	200L/min	400L/min	
Conductivity control	n.a.		
Trolleys Included	yes, upper and lower standard rack	No	
Printer	Optional		
Door interlock	Yes		
Net weight (kg)	61	77	70
Conformity	2006/95/CEE, 93/68/CEE, 2004/108/CEE		
Supply/Max Power	1/N/PE/230V- 50Hz-3.3kW	1/N/PE/230V- 50Hz-2.8kW As an alternative: 3/N/PE/400V- 50Hz-7.0kW	
Possibility of 60Hz supply	Yes		
Equipped with plug	Yes	No	



WG-3060

WG-3060, Professional Washer

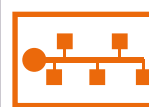
WG-3060 is designed to operate with 1 or 2 levels for treating various types of substances.
Standard washing chamber 520x515x545 mm.
Possibility of washing, disinfecting and drying.



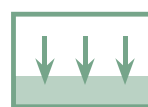
* Height of built-in version.



Optional



Optional



Optional



Optional

Model	WG-3060
Electronic control	3 microprocessors + 1 (optional communication card)
Standard programs stored	20
Customisable programs	10 (expandable to 50)
Backlit graphic LCD display	128 x 64 pixels
Clock and calendar	Yes
Reprogrammable phases	10
Phase parameters	Type of water, detergent quantity, target temperature, extension time
Tank internal temperature	From room temperature to 95°C
Accuracy	0.1°C
Temperature sensors in tank	PT 1000 CLASS B IEC 60751
Detergent level sensor	Optional
Detergent pumps	4 max.
Powder detergent dispenser	Optional
Safety lock	Yes, with electromagnetic release and automatic opening
Safety devices	safety thermostats, door interlock
Alarm display	80
Troubleshooting menu	yes
Programme editing	yes (via password)
Password	4 levels
Display languages	Italian, English, French, German, Russian and others on request
AUXILIARY FUNCTIONS	
External sensor duct	Optional
Traceability	Storage of data for 100 most recently run programmes
Waste water separation solenoid valve control	Optional
RS232 serial port for PC connection+Printer	Yes
Cycle storage	Yes, Excel format
Cycle file download	Yes
WATER SUPPLY (PRESSURE 1.5-5 BAR)	
Cold/Hot water inlet	Yes, 42°F hardness
Demineralised water inlet	Yes, <20µS/cm
Demineralised water booster pump	Optional
Water softener incorporated	Yes
Recirculation pump	400L/min
WATER HEATING	
Electrical	6.3 kW max.
Water pre-heating via boiler	Optional
STEAM CONDENSER	Optional
DIMENSIONS LxDxH mm	
Outside (with built-in top)	600x640x850 (830)
Inside	520x515x545
Net weight (Kg)	76
STAINLESS STEEL	
Wash tank	AISI316L
Exterior covering	AISI304
ELECTRICAL POWER SUPPLY	
Max. voltage/power	1/N/PE 230V - 50Hz 2.8 kW 3/N/PE 400V - 50 Hz 7.0 kW
NOISE LEVEL	Max. 50 dB



WG-4090

WG-4090, Professional Washer

WG-4090 is designed to operate with 1 or 2 levels for treating various types of substances.
Standard washing chamber 520x515x545 mm.
Possibility of washing, disinfecting & drying with Drying System.



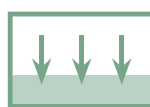
* Height of built-in version.



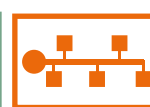
Optional



Optional



Optional

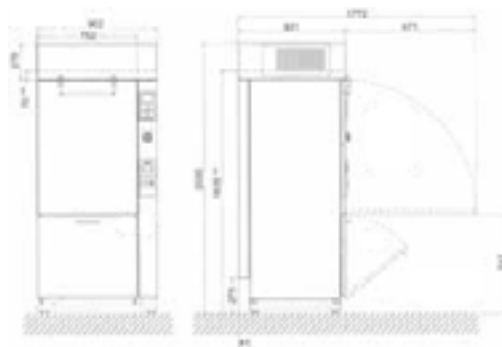


Optional

Model	WG-4090
Electronic control	3 microprocessors + 1 (optional communication card)
Standard programs stored	20
Customisable programs	10 (expandable to 50)
Backlit graphic LCD display	128 x 64 pixels
Clock and calendar	Yes
Reprogrammable phases	10
Phase parameters	Type of water, detergent quantity, target temperature, extension time in minutes, drying temperature & time
Tank internal temperature	From room temperature to 95°C
Accuracy	0.1°C
Temperature sensors in tank	PT 1000 CLASS B IEC 60751
Detergent level sensor	Optional
Detergent pumps	4 max.
Safety lock	Yes, with electromagnetic release automatic opening
Safety devices	safety thermostats, door interlock
Alarm display	80
Troubleshooting menu	yes
Programme editing	yes (via password)
Password	4 levels
Display languages	Italian, English, French, German, Russian and others on request
AUXILIARY FUNCTIONS	
External sensor duct	Optional
Traceability	Storage of data for 100 most recently run programmes
Waste water separation solenoid valve control	Optional
RS232 serial port for PC connection+Printer	Yes
Cycle storage	Yes, Excel format
Cycle file download	Yes
DRYING SYSTEM	
Drying fan	Yes
Drying heating element	2 kW
Prefilter class C 98%	Yes
HEPA filter Class S 99.999%	Optional
WATER SUPPLY (PRESSURE 1.5-5 BAR)	
Cold/Hot water inlet	Yes, max 42°F hardness
Demineralised water inlet	Yes, <20µS/cm
Demineralised water booster pump	Optional
Water softener incorporated	Yes
Recirculation pump	400L/min
WATER HEATING	
Electrical	6.3 kW max.
Water pre-heating via boiler	Optional
STEAM CONDENSER	Optional
DIMENSIONS LxDxH mm	
Outside (with built-in top)	900x640x850 (830)
Inside	520x515x545
Net weight (Kg)	83
STAINLESS STEEL	
Wash tank	AISI316L
Exterior covering	AISI304
ELECTRICAL POWER SUPPLY	
Max. voltage/power	1/N/PE 230V - 50Hz 2.8 kW 3/N/PE 400V - 50 Hz 7.0 kW
NOISE LEVEL	Max. 50 dB



WG-6090, Professional Washer



WG-6090 is a machine with a high loading capacity capable of handling large quantities of material in a short space of time & of washing large-sized

instruments. Washing chamber 670x650x835mm (three times the useful volume of medium-sized machines). Able to load up to three direct injection glassware levels or 3 levels with rotating spray arms.

Model	WG-6090
Electronic control	3 microprocessors + 1 (optional communication card)
Standard programs stored	20
Customisable programs	10 (expandable to 50)
Backlit graphic LCD display	128 x 64 pixels
Clock and calendar	Yes
Reprogrammable phases	10
Phase parameters	type of water, detergent quantity, target temperature, extension time, drying temperature and time
Tank internal temperature	From room temperature to 95°C
Accuracy	0.1°C
Temperature sensors in tank	1 PT 1000 CLASS B IEC 60751
Dosing pumps	5 max.
Detergent level sensor	Optional
Safety lock	yes, with electromagnetic release and automatic opening
Safety devices	safety thermostats, door interlock
Alarm display	80
Troubleshooting menu	yes
Password	4 levels
Display languages	Italian, English, French, German, Russian and others on request
AUXILIARY FUNCTIONS	
Traceability	storage of data for 100 most recently run programs
Optional	Waste water separation solenoid valve control/External sensor duct
RS232 serial port for PC connection	Yes
RS232 serial port for printer	Yes
Water quality check	Optional
Cycle storage	Yes, Excel format
Cycle file download	Yes
DRYING SYSTEM	
Drying fan	Yes
Drying heating element	4 kW
Prefilter class C 98%	Yes
HEPA filter Class S 99.999%	Optional
WATER SUPPLY (PRESSURE 1.5-5 BAR)	
Cold/hot water inlet	yes, max 42° F hardness
Demineralised water inlet	Yes, <20µS/cm
Optional	Demineralised water booster pump/External water softener
Recirculation pump	2 pumps of 400 l/min
WATER HEATING	
Electrical	17.7 kW max, Water pre-heating via boiler
DIMENSIONS LxDxH mm	
Outside	2035x801x902 (drying system versions), 1835x801x902 (version without drying system)
Inside	670x650x835
Net weight (Kg)	282
STAINLESS STEEL	
Wash tank/ Exterior covering	AISI316L/ AISI304
ELECTRICAL POWER SUPPLY	
Max. voltage/power	3/N/PE 400V - 50Hz 18.5 kW
NOISE LEVEL	Max. 50 dB

Model	WG-3060	WG-4090	WG-6090
Internal dimensions (LxDxH mm)	520x515x545		670x650x835
External dimensions (LxDxH mm)	600x640x850 (830 with built-in top)	900x640x850 (830 with built-in top)	902x801x2035 (with drying system) 902x801x1835 (without drying system)
Standard programmes stored	20		
Modifiable programs	10 (expandable to 50)		
Detergent dosing system	Powder dispenser or peristaltic pump	Peristaltic pump	
Neutralizing dosing pump type	Peristaltic pump		
Max nr. of dosing pumps	4		5
Possibility of volume detergent control	Optional		
Detergent cabinet	Optional	Yes	
Display	Backlit graphic LCD display 128x64 pixel		
Control panel	Membrane keyboard		
Steam Condenser	Optional		No
Drying system	Thermodynamic	Forced hot air through "drying system"	(as optional) Forced hot air through "drying system"
Pre-filter class C	n.a.	Yes	
HEPA filter class S 99,999%	n.a.	Optional	
Cold water supply	Yes		
Hot water supply	Yes		
Demineralized water supply	Yes		
Integrated water softener	Yes		optional (externally)
Washing pump	400L/min		2x400L/min
Conductivity control	Optional		
Trolleys Included	No		
Printer	Optional		
Door interlock	Yes		
Net weight (kg)	76	83	282
Conformity	2006/95/CEE, 93/68/CEE, 2004/108/CEE		
Supply/Max Power	1/N/PE/230V- 50Hz-2.8kW As an alternative: 3/N/PE/400V- 50Hz-7.0kW		3/N/PE/400V- 50Hz-18.5kW
Possibility of 60Hz supply	Yes		
Equipped with plug	No		

Machine optionals



PAD

PAD

Booster pump for non-pressurised demineralized water. Allows feeding the machine with demineralized water drawn from a non-pressurised tank positioned at a minimum height of 85cm from the ground.



PAD-2

PAD-2

Booster pump for non-pressurised demineralized water. Allows feeding the machine with demineralized water drawn from a non-pressurised tank positioned on the ground.



ADU

ADU

Universal peristaltic pump for liquid additive

- For the dosing of a liquid additive, for ex: alkaline detergent, caustic soda or antifoam
- With st/steel drawing pipe
- Suitable for tanks of 2L, 5L, 10L.



IC5090

IC5090

On the basis of demineralized water conductivity used during the last rinse phase, it allows to detect any impurities and to activate also further rinse phases for achieving a perfect rinse with low conductivity.



WD-VDS

WD-VDS

Double discharge valve that allows separating and ducting the polluted wastewater from the first washing cycles from the final rinsing water. This wastewater separation device is composed of 1 and 1/2" valves with Viton membrane and valve opening is controlled by the machine microprocessor.



WD-LS3060

WD-LS3060

Detergent level sensor. Allows controlling the level of liquid additives and signals when the detergent has run out. Equipped with an adjustable drawing tube for cans of different heights

Stainless steel bases and frames

**B9040****B9040QWC****T9040****B9040**

Base for 90 cm wide models only.

The frame allows bringing the machine loading level up to an ergonomic height approximately 70 cm from the ground. Entirely made of stainless steel.

A detergent compartment with anti-drip bottom and front door with push-pull opening is integrated in the base.

Dimensions l x d x h = 900x530x400mm.

B6040 (not shown in the photo): for 60 cm wide models only. Dimensions l x d x h = 600x530x400mm.

B9040QWC

Base with integrate demineralized water boiler. For 90 cm wide models only. A boiler is housed in the base to preheat the demineralized water to get fastest cycles

Dimensions: l x d x h = 900x530x400mm.

T9040

Frame for 90 cm wide models only.

The frame allows bringing the machine loading level up to an ergonomic height approximately 70 cm from the ground. The frame also facilitates cleaning the machine underneath. Entirely made of stainless steel.

Dimensions l x d x h = 900x530x400mm

T6040 (not shown in the photo): frame for 60cm models only. Dimensions l x p x h = 600x530x400cm.

Traceability options

WD-PRINT

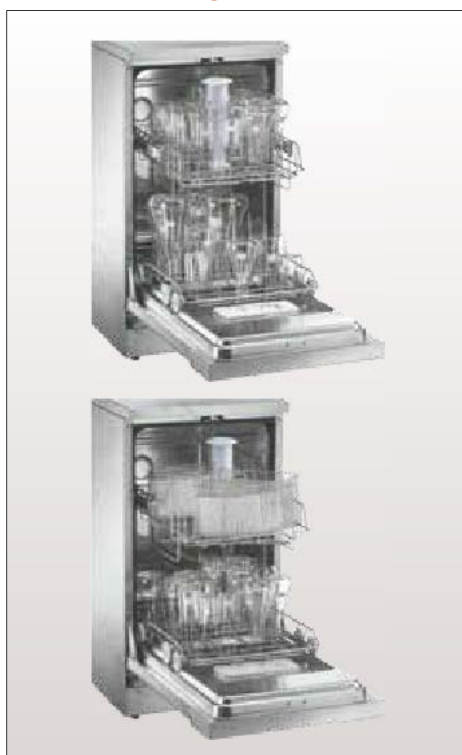
External 24-character impact matrix printer with real-time clock function.

Complete with thermal paper roll.

**WD-PAPER**

Thermal paper roll. Diameter 50 mm, width 57mm.

WG-2045 Configurations

**Two spraying levels**

This configuration has two washing levels with rotary sprays where supports for all types of glassware can be located (beakers, test tubes, flasks, plates & various other materials).

Photo:

D-CS1 upper rack: SB9 straight tine support for beakers & flasks to the left, SB14 spring tine support to the right. Each support occupies 0.5 the rack for machines with width of 45cm.

D-CS2 lower rack: SB28 universal spring support for beakers & flasks, standard on 50-cm models, occupying all of the lower base but cannot be positioned on the upper rack.

Two spraying levels

This configuration has two washing levels with rotary sprays where supports for all types of glassware can be located (beakers, test tubes, flasks, plates & various other materials).

Photo:

D-CS1 upper rack: the carriage is fitted with 2 racks equipped with compartments (CP192 and CP222) to wash test tubes.

D-CS2 lower rack: SB9 straight tine support for beakers & flasks to the left, SB14 spring tine support to the right. Each support occupies 0.5 the rack for machines with width of 45cm to optimize the load on the rack.



One injection level

The LM24 is secured to the lower D-CS2 base using 2 special fastenings. This solution is suitable for washing narrow-necked glassware of different sizes. It has a capacity of 24 items and can wash both large items and small flasks or bottles. ULB 40 adaptor nozzles for pipettes can also be fitted. The maximum height of glassware is 500mm.

Photo:

LM24 support.



Two spraying/injection levels

In this configuration there are two washing levels: lower level with rotary sprayers to hold various supports (beakers, test tubes, flasks).

The D-CS1 upper base is fitted with the 24-position LM22S injection base. This configuration allows simultaneous washing of narrow-necked and other types of glassware.

Photo:

D-CS2 lower rack: SB9 straight tine support for beakers and flasks to the left, SB14 spring tine support to the right. Each support occupies 0.5 the rack for machines with width of 45cm to optimize the load on the rack.



One mixed injection level

This configuration allows simultaneous washing of narrow-necked glassware (flasks, and beakers) and 12 pipettes with a maximum height of 510mm.

This is an ideal solution for washing various types of glassware simultaneously without having to use dedicated separate carriages with a greater capacity.

Photo:

LPM24 carriage.



Two spraying/injection levels

In this configuration there are two washing levels: the upper level is fitted with the KP60 seventy-item base for centrifuge vials and test tubes. The lower level is spare.

Photo:

D-CS1 upper rack: KP60 base.

D-CS2 lower rack: SB9 straight tine support for beakers and flasks to the left, SB14 spring tine support to the right.



Two injection levels

LM46 carriage consisting of two injection levels for a capacity of 46 items. This version maximizes the injection washing capacity. The maximum height of glassware is 225 mm.

Recommended for flasks (ISO1042) with volume of 5 to 200 ml, bottles (ISO 4796) up to 1000 ml and flasks up to 1000 ml.

Photo:

LM46 carriage composed by 22-position upper rack and 24-position lower rack.



Two spraying levels

Standard lower basket CS2 and upper basket with sprayer CS1-1. In this configuration there are two washing levels with rotary sprayers where all the supports for the various glass items can be positioned (it can be used for washing beakers, test tubes, flasks, plates and various other materials). The upper basket CS1-1 can be positioned on two levels to make better use of the space.



Two spraying/injection levels

Standard lower basket CS2 and upper injection basket. In this configuration there are two washing levels: a lower level with rotary sprayers to hold various supports (beakers, test tubes, flasks) and an upper level with a 40-position injection trolley LM40S (LM40SDS for machines with drying system).

This configuration allows simultaneous washing of narrow-necked and other types of glassware.



One spraying/injection level

LM20 trolley (LM20DS for machines with drying system) one half with a multi-spigots injection system and the other half to hold supports. In this case, narrow-necked glassware up to 500 mm in height can be washed at the same time as test tubes. Compared to the configuration with two spraying/injection levels, this one has the advantage that you can wash glassware more than 245mm in height.



One injection level

LM40 trolley (LM40DS for machines with drying system). It may be considered as a universal injection trolley as it optimizes washing of narrow-necked glassware of different sizes. It has a capacity of 40 items and can wash both large items and small flasks or bottles.



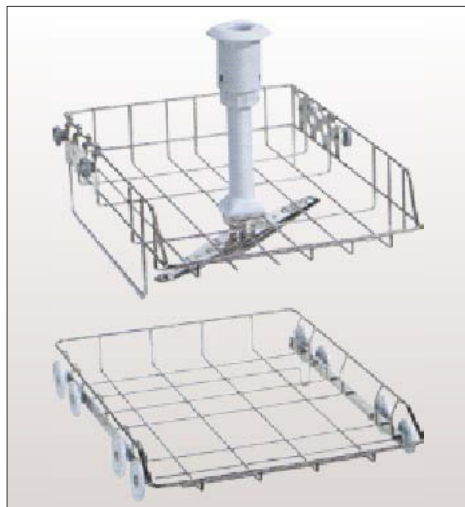
Two injection levels

LM80 trolley (LM80DS for machines with drying system) with two injection levels for a capacity of 68 items. This version maximizes the injection washing capacity.



One mixed injection level

LPM20/20 trolley (LPM2020DS for machines with drying system): this system allows simultaneously washing narrow-necked glassware (flasks, beakers, round-bottom flasks) and 20 pipettes. It is a valid solution when needing to wash many different types of glassware at the same time without having to resort to a specific larger capacity trolley.

Basic trolleys**D-CS1** (only on WG-2045 model)

Upper carriage with sprayer. Made for stainless steel and suitable for positioning racks and supports.

CS1-1 (not in photo)

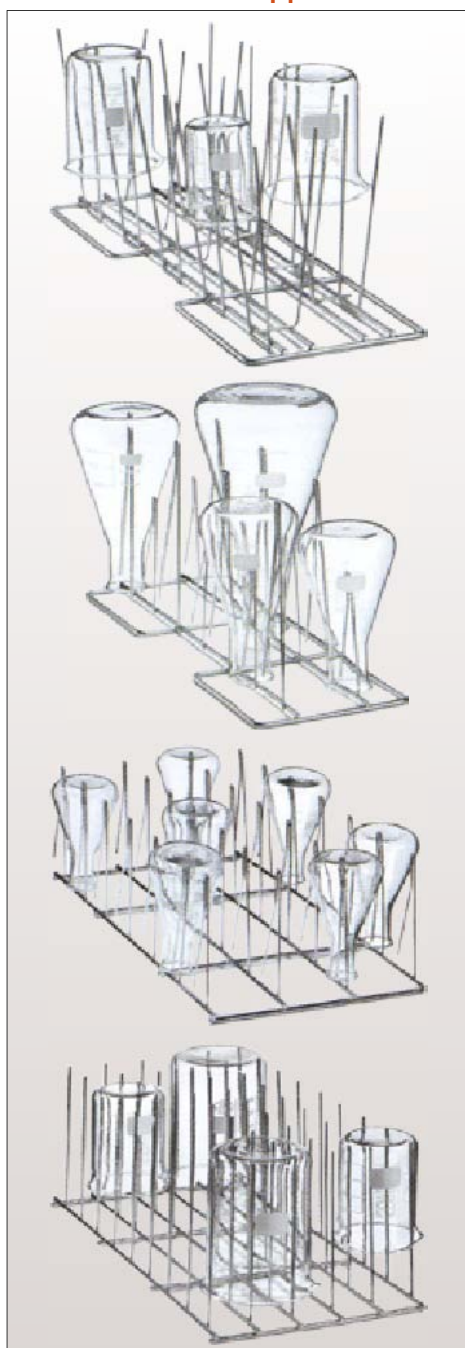
Upper carriage with sprayer. Made for stainless steel and suitable for positioning racks and supports.

D-CS2 (only on WG-2045 model)

Lower carriage with sprayer. Made for stainless steel and suitable for positioning racks and supports.

CS2 (not in photo)

Basic lower carriage. Made for stainless steel and suitable for positioning racks and supports.

Flask and beaker supports**SB9** (only on WG-2045 model)

Stainless steel 9-position support for tunnels and breakers with max volume of 100ml. Occupies 1/2 of the D-CS1/D-CS2 carriages.

Dimensions: l x d x h = 420x145x160mm.

SB14 (only on WG-2045 model)

Stainless steel 14-position support for beakers and flasks with volume of 250 to 1000ml. Occupies 1/2 of the D-CS1/D-CS2 carriages.

Dimensions: l x d x h = 422x146x184mm.

SB15

16-position spring support for flasks, beakers, etc. For use in combination with standard CS1-1/CS2 racks and LM20 carriage.

It has a capacity of 16 items and is made of stainless steel. Recommended for flasks with a capacity of up to 1000ml.

SB28 (not in photo): 28-position spring support for flasks, beakers, etc. For use in combination with standard CS1-1/CS2 racks and LM20 carriage.

It has a capacity of 28 items and is made of stainless steel. Recommended for flasks with a capacity up to 1000ml.

SB30

30-position support to hold beakers of any size & to be used with the standard baskets CS1-1 & CS2 & the trolley LM20. It has a capacity of 30 items & is made of stainless steel. Recommended for beakers with a capacity smaller than 500 ml.

SB25 (not shown in the photo): 28-position spring support to hold flasks and beakers and to be used with the standard baskets CS1-1 and CS2.

It has a capacity of 28 items and is made of stainless steel. Recommended for flasks with a capacity smaller than 500 ml.

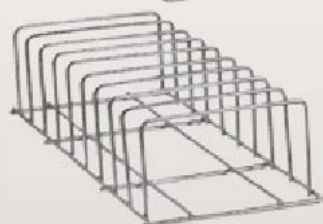
Plate and slide supports/ Test tube supports

**PV105**

Microscope slide basket made of stainless steel.
Suitable for positioning 105 standard microscope slides.
Dimensions l x d x h = 220x143x60mm.

**SL6**

Olympus-type plate support for optical recognition of the blood unit.
Suitable for positioning 6 plates.
Hinged lid included.
Dimensions l x d x h = 485x145x80 mm.

**SL9**

Universal support for chromatographic plates made of stainless steel.
Capacity of 9 items. Suitable for positioning flat materials.
It takes up 1/2 the space of a standard basket.

**SL18**

Support for standard 20x20 chromatographic plates.
Capacity of 18 items.
The guides are shewed in such a way that the support points are outside the working surface.

**PB50**

Support for 56 wide-necked bottles of 50ml (screw cap GL32 IS04796 or ground cap DIN 12038 or non-standard cap). Max bottle dimensions: dia. 46mm - H 87mm.

**PB100**

for 32 wide-necked bottles of 100 ml. (screw cap GL45 IS04796 or ground cap DIN 12038 or non-standard cap). Max bottle dimensions: dia. 56mm - H 100mm

**PB250**

Support for 25 wide-necked bottles of 250 ml. (screw cap GL45 IS04796 or ground cap DIN 12038 or non-standard cap).
Max bottle dimensions: dia. 70mm - H 138mm.

**PB500**

Support for 21 wide-necked bottles of 500 ml. (screw cap GL45 IS04796 or ground cap DIN 12038 or non-standard cap).
Max bottle dimensions: dia. 86mm - H 176mm.

PB1000

Support for 16 wide-necked bottles of 1000 ml. (screw cap GL45 IS04796 or ground cap DIN 12038 or non-standard cap).
Max bottle dimensions: dia. 101mm - H 225mm.

Test tube supports



Additional accessory for the standard baskets CS 1 – 1 and CS2 and the trolley LM20 for washing analysis test tubes. It has a capacity of approximately 160 standard test tubes with 3 removable compartments and lid. It takes up a % of the space of a standard basket and is available in four standard sizes:

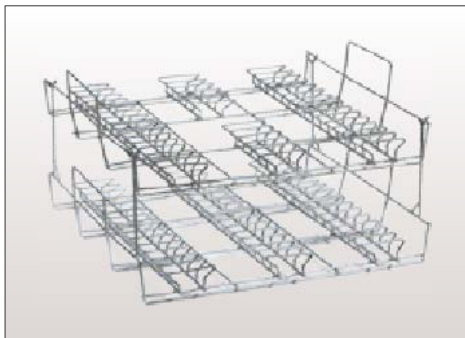
CP105: test tubes up to 75 mm in height

CP132: test tubes up to 105 mm in height

CP192: test tubes up to 165 mm in height

CP222: test tubes up to 200 mm in height.

Petri dish supports



PD70S: 40 items, 50–70mm positioned on the upper level CS 1-1.

PD100S: 38 items, 70–120mm positioned on the upper level CS 1-1.

PD70I: 40 items, 50–70mm positioned on the upper level CS2.

PD100I: 38 items, 70–120mm positioned on the upper level CS2.

Racks for small glassware, baskets and holding nets



PF1/2: Additional accessory for CS1-1 and CS2 racks made from flat AISI 304 stainless steel mesh with small mesh openings as a rack to hold small glass items or as rigid rack as an alternative to the Nylon holding nets.

Available in 3 versions: PF1 (not shown in the photo) bottom rack with hole for positioning on the top level; PF2 (not shown in the photo) complete bottom rack for positioning on the bottom level only; PF1/2 (shown in the photo) half bottom rack for positioning on the upper level.

D-PF1: (only for WG-2045)

Full bottom rack for upper carriage, made from stainless steel 10x10 mesh with central hole, for positioning on the upper carriage D-CS1. Dimensions: l x d x h = 305x425x11mm

D-PF2: (only for WG-2045)

Full bottom rack for upper carriage, made from stainless steel 10x10 mesh with central hole, for positioning on the lower carriage D-CS1. Dimensions: l x d x h = 305x425x11mm.

RC1:

Holding nets with plastic-coated metal edges & Nylon ties to hold small glass items in place in the standard baskets CS1-1 and CS2; available in three models: RC1 fits in the whole basket, RC1/2 fits in half the basket, RC1/4 fits in a quarter of the basket.

RC1/2 – RC1/4:

Holding nets with plastic-coated metal edges & Nylon ties to hold small glass items in place in the standard baskets CS1-1 and CS2; available in three models: RC1 fits in the whole basket, RC1/2 fits in half the basket, RC1/4 fits in a quarter of the basket.

Baskets



CPF1

Complete bottom level basket with edging and handles. Made of flat stainless steel mesh with mesh openings of 10x10 mm. Dimensions l x d x h = 445x444x68 mm (height with handles 110 mm). Positioning on the lower trolley CS2.

CPF1/2 (not shown in the photo): bottom level basket with edging and handles. Made of flat stainless steel mesh with mesh openings of 10x10 mm.

Dimensions l x d x h = 225x444x68 mm (height with handles 110 mm). It takes up Y2 the space of the lower trolley CS2.

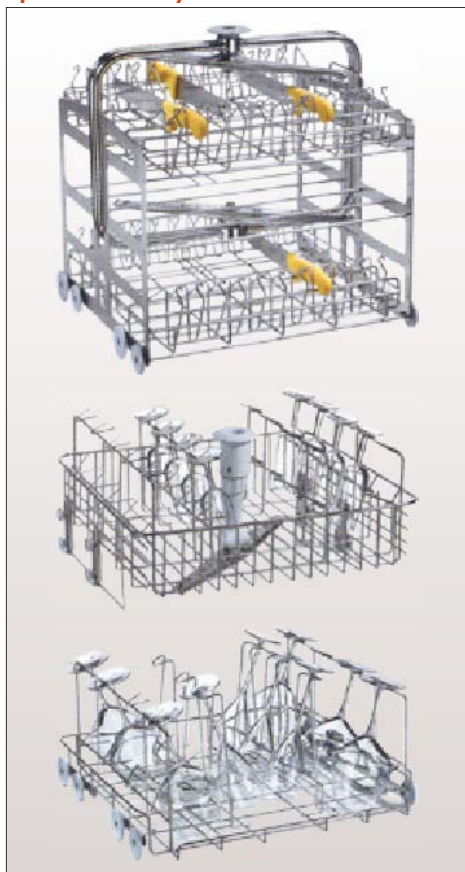
CSK2

Baskets with stainless steel handles, suitable for medium-sized instruments.

Mesh openings of 5x5mm.

Dimensions l x d x h = 450x225x50mm.

Special trolleys



CSK-C

Stainless steel trolley with 3 washing levels for butchery utensils available on request, suitable for positioning three SCL-23 knife and utensil holders. Upper levels with spraying arm incorporated. Lower level with sprayer at the bottom of the machine.

CPB1

Stainless steel upper trolley for wine-tasting glasses. Suitable for washing 14 wine-tasting glasses of max. 220mm in height.

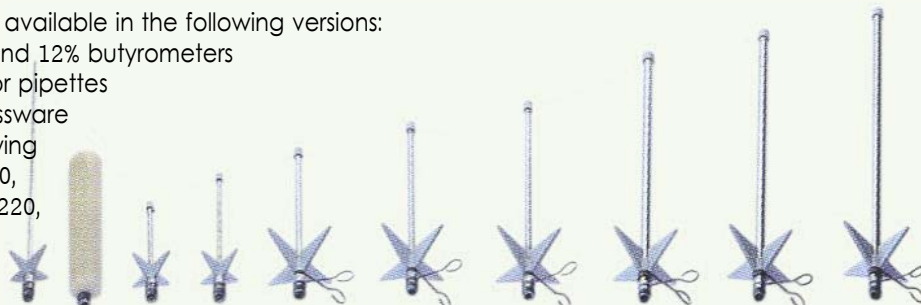
CPB2

Stainless steel lower trolley for wine-tasting glasses. Suitable for washing 14 wine-tasting glasses of max. 240mm in height.

Spigots

Injection spigots available in the following versions:

- spigot for 6% and 12% butyrometers
- Nylon spigot for pipettes
- Spigots for glassware with the following heights: 90, 110, 140, 160, 180, 220, 240, 260mm.



Narrow-necked glassware injection carriages**LMP24** (only for WG-2045 model)

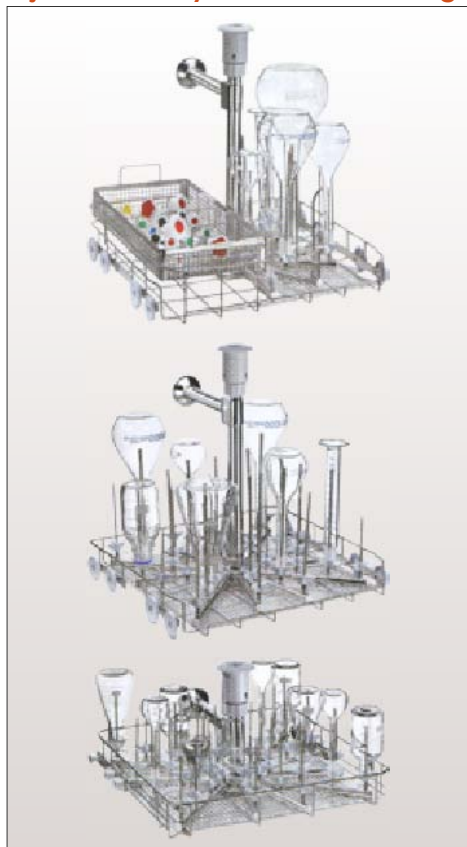
Mixed stainless steel flask/pipette carriage with 12+12 positions, suitable for washing narrow-necked glassware up to 490 mm in height. Fitted with the following nozzles: 4 x U6240, 2 x U6220, 2 x U4160, 2 x U4140, 2 x U311 0, 12 x LB40. Maximum glassware height of 490 mm and positioning on the D-CS2 carriage lower level.

LM24 (only for WG-2045 model)

Universal 24-position stainless steel flask washer, suitable for washing narrow-necked glassware up to 490 mm in height. Fitted with the following nozzles: 6 x U6240, 5 x U6220, 6 x U4160, 5 x U4140, 2 x U311 0. Positioning on the D-CS2 carriage lower level.

LM22S (only for WG-2045 model)

Universal 22-position stainless steel flask washer, suitable for washing narrow-necked glassware up to 225 mm in height. Fitted with the following nozzles: 12 x U4140, 5 x U311 0, 5 x U390, positioning on the D-CS1 carriage upper level.

Injection trolleys narrow-necked glassware**LM20DS**

20-position universal flask washing trolley in stainless steel with 20 spigots and drying system connection. Suitable for washing and drying narrow-necked glassware up to 490 mm in height. Half the trolley space is free for mixed glassware suitable for a Y2 basket accessory. Positioning on the lower level.

LM20 (not shown in the photo):

version without drying system connection.

LM40DS

40-position universal flask washing trolley in stainless steel with 40 spigots and drying system connection. Suitable for washing and drying narrow-necked glassware up to 490 mm in height, flasks, round-bottom flasks and graduated cylinders of various sizes. Positioning on the lower level.

LM40 (not shown in the photo):

version without drying system connection.

LM40SDS

40-position flask washing trolley in stainless steel with forty U4140 spigots and drying system connection. Suitable for washing narrow-necked glassware up to 225 mm in height. Positioning on the upper level.

LM40S (not shown in the photo):

version without drying system connection.

Injection trolleys narrow-necked glassware (continuation)**LM80DS**

Two-level flask washing trolley with 68 U4140 spigots and 1 UC6 spigot & drying system connection. Suitable for internal injection washing of narrow-necked glassware with a maximum height of 225 mm. Positioning on two levels.

LM80 (not shown in the photo):

version without drying system connection.

Reactor washing**LR4DS**

Stainless steel trolley with drying system connection. Suitable for inside washing and drying of 3/5-way reactors of maximum 3 Liters or up to 1.2 narrow-necked glass items. Fitted with 20 U6260 spigots. Positioning on the lower level.

LR4 (not shown in the photo):

version without drying system connection.

Fischer bottle washing**LT20DS**

Stainless steel trolley with drying system connection for washing and drying of 12 Fischer bottles and graduated cylinders with a maximum height of 55 cm. 6 positions for injection washing of narrow-necked glassware. Fitted with 18 spigots. Positioning on the lower level.

LT20 (not shown in the photo):

version without drying system connection.

Butyrometer washing**LB40DS**

Stainless steel trolley for butyrometer washing with drying system connection. Suitable for washing and drying of 40 butyrometers. Specify the type of butyrometer in the order. Positioning on the upper level.

LB40 (not shown in the photo):

version without drying system connection.

Bottle washing

**LB4DS**

Stainless steel trolley for washing large glass items with drying system connection. Suitable for washing two 10-Liter bottles + two 5-Liter Schott-type bottles. Fitted with 8 special spigots. Positioning on the lower level.

LB4 (not shown in the photo):
version without drying system connection.

**LBT5DS**

Stainless steel trolley for bottle washing with drying system connection. Suitable for washing and drying of five 5-Liter bottles (dia. 180 x h.500mm, max neck diameter 80 mm). Fitted with 5 special spigots. Positioning on the lower level.

LBT5 (not shown in the photo):
version without drying system connection: LBT5

**LB8DS**

Stainless steel trolley for washing large glass items with drying system connection. Suitable for washing 8 bottles of maximum 50 cm in height. Fitted with 8 U6260 spigots and 8 special spigots. Positioning on the lower level.

LB8 (not shown in the photo):
version without drying system connection.

**LB32DS**

Two-level stainless steel trolley for injection washing of bottles with drying system connection. Suitable for washing 32 narrow- or wide-necked bottles of 250–1000ml, max. dia. 101 mm, H.245 mm. Fitted with 32 U6170 spigots. Positioning on 2 levels.

LB32 (not shown in the photo):
version without drying system connection.

**LB1-20DS**

Stainless steel trolley for washing universal large glass items with drying system connection. Positioning on lower level.

Pipette washing**LPV40DS**

Stainless steel trolley for washing volumetric pipettes up to 55 cm in length. 20 positions for pipettes of 55 cm in height and 20 positions for pipettes and/or flasks of 45–49cm in height.

LPV40 (not shown in the photo):
version without drying system connection.

LPT100DS

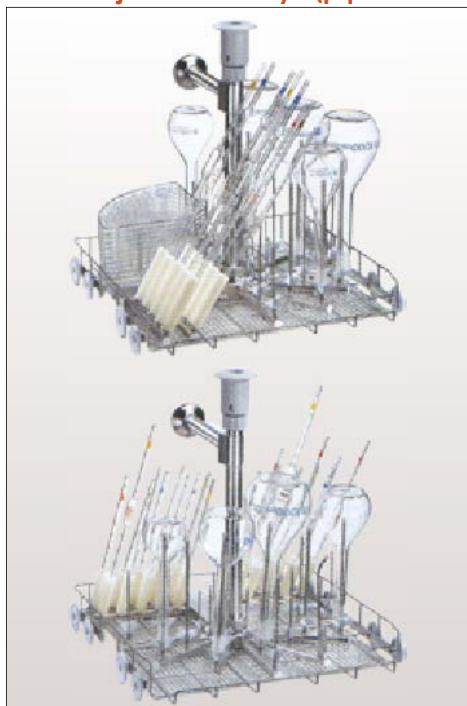
Stainless steel pipette washing trolley with drying system connection for washing and drying of 100 pipettes with a capacity of 1 to 20ml. and a height up to 450mm. The pipette washing disc is fitted in a trolley to allow fast loading & unloading access.

LPT100 (not shown in the photo):
version without drying system connection.

Vials and tapered centrifuge test tubes**KP200DS**

Trolley with drying system connection for washing of tapered and cylindrical test tubes by internal injection. It has a maximum capacity of 100 test tubes. Positioning on the upper washing level.

KP200 (not shown in the photo):
version without drying system connection.

Mixed injection trolleys (pipettes + narrow neck)**LPM2010DS**

20-position stainless steel trolley with drying system connection for mixed washing of flasks, pipettes and test tubes. Suitable for washing and drying of 10 pipettes up to 55cm + 20 narrow-necked glass items + 1/4 free space to be filled with a CP Series test tube basket. Fitted with the following spigots: 2 x U6260, 2 x U6240, 2 x U6220, 3 x U4180, 2 x U4160, 2 x U4140, 3 x U311 0,4 x U390, 1 x UC6, 10 x ULB40 for pipettes with a maximum height of 55cm. Positioning on the lower level.

LPM2010 (not shown in the photo):
version without drying system connection.

LPM2020DS

Injection washing trolley with drying system connection for mixed washing of pipettes and flasks with 20 positions for pipettes up to 550mm in height and 20 positions for narrow-necked glassware with a maximum height of 49cm. Fitted with 38 spigots. Positioning on the lower level.

LPM2020 (not shown in the photo):
version without drying system connection.



The strong point of the WG-6090 washing system is that the direct injection systems can be exchanged with the rotating sprayer systems on all three washing levels. By placing the 6 available systems on different levels, many different configurations can be obtained, thus allowing loading capacity to be optimized according to washing requirements. Glassware of various sizes with heights up to 790mm and volumes up to 25 Liters can be washed.

	Direct Injection Systems	Max. Height of Glassware (mm)				Rotating Sprayer System	Max. Height of Glassware (mm)				
3 ^o LEVEL	C63_L690 Telescopic base injection system	130	390	130	720	C62 Telescopic base with rotating sprayer	95	360	95	790	
2 ^o LEVEL	C63_L680 Telescopic base injection system	180		510		C62 Telescopic base with rotating sprayer	170		600		
2 ^o LEVEL	C61_L685 Telescopic base with rotating sprayer	220				220	C61 Telescopic base using the rotating sprayer at the bottom of the wash tank	390			340

Three washing levels



Direct injection

Level 1 : C61 basic trolley with L685 direct injection system.
Maximum useful height 260 mm 76 spigots.
Level 2: C63 trolley with L680 direct injection system.
Maximum useful height 210 mm 76 spigots.
Level 3: C63 trolley with L690 direct injection system.
Maximum useful height 170 mm 87 spigots.

Direct injection/rotating sprayers

Level 1 : C61 basic trolley with L685 direct injection system.
Maximum useful height 325mm 76 spigots.
Level 2: C62 upper trolley with rotating sprayer.
Maximum useful height 150mm, useful washing surface 625x625mm.
Level 3: C63 telescopic support with L690 direct injection system.
Maximum useful height 170mm 76 spigots.

Rotating sprayers

Level 1 : C61 basic trolley. Maximum useful height 325mm.
Level 2: C62 upper trolley with rotating sprayer.
Maximum useful height 195mm.
Level 3: C63 telescopic support with L690 direct injection system.
Maximum useful height 105mm.
Washing surface 625x625 (1.18m² total).

Two washing levels**Direct injection**

Level 1 : C61 basic trolley with L680 direct injection system.
Maximum useful height 260mm, 76 spigots.

Level 2: C63 telescopic support with L685 direct injection system.

Maximum useful height 440mm, 76 spigots.

**Direct injection and rotating sprayers**

Level 1: C61 basic trolley. Maximum useful height 330mm.

Level 2: C63 telescopic support with L685 direct injection system.

Maximum useful height 450mm, 76 spigots.

**Direct injection and rotating sprayers**

Level 1: C61 basic trolley with L680 direct injection system.

Maximum useful height 300mm 76 spigots.

Level 2: C62 upper trolley with rotating sprayer.

Maximum useful height 380mm.

**Rotating sprayers**

Level 1: C61 basic trolley. Maximum useful height 365mm.

Level 2: C62 telescopic base with rotating sprayer.

Maximum useful height 385mm.

Washing surface 625x625 (0.78m² total).

**Direct injection**

Level 1 : C61 basic trolley with L685 direct injection system.
Maximum useful height 545mm 76 spigots.

Level 3: C63 telescopic support with L690 direct injection system.

Maximum useful height 170mm, 87 spigots.

**Direct injection/rotating sprayers**

Level 1 : C61 basic trolley. Maximum useful height 605mm.

Level 3: C63 telescopic support with L690 direct injection system.

Maximum useful height 170mm, 87 spigots.

One washing level**Injection washing**

Level 1 : C61 basic trolley with L685 direct injection system.
Maximum useful height 720mm, 76 spigots.

Rotating sprayers

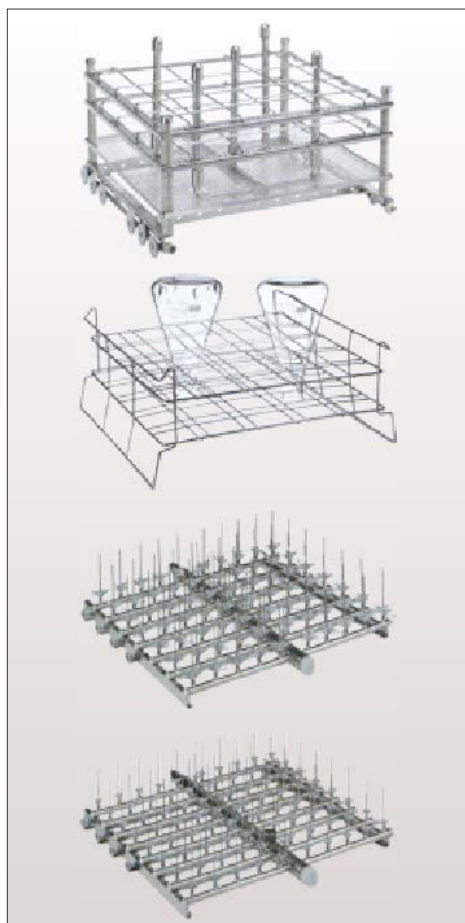
Level 1: C61 basic trolley.
Maximum useful height 835mm.

Direct injection

This special C64 trolley can be used to wash drums with heights up to 530mm and diameters up to 30 mm using spigots.

Trolleys can be developed for special applications on request.

Level 1 : C64 basic trolley.
Maximum useful height 835mm.

Accessories**LM6-10U**

Stainless steel trolley for bottle washing with drying system connection.
Suitable for washing and drying large glasswares of different sizes.

PB6000

Support for wide-mouthed bottles. Capacity 25 flasks from 1000ml to 5000ml and/or 1000ml wide-mouthed bottles (screw cap GL45 ISO4796 or ground cap DIN 12038 or non-standard cap). Made of stainless steel.

L685

Injection system for large, medium and small glassware with 76 spigots of differing heights:
90/110/140/160/180/240mm.

The differing spigot heights make it possible to optimise loading of different sized glassware. This spigot configuration allows the system to be used on washing levels 1 and 2.

L680 Injection system for small and medium glassware with 76 spigots at the same height of 140mm. This spigot configuration makes it suitable for preferential use on 2 work levels.

L690

Injection system for small glassware with 86 spigots at the same height of 110mm. This spigot configuration makes it suitable for use on the 3rd work level.

**C61**

Basic level 1 trolley with grid. It is used on its own and is suitable for positioning various glassware supports. Washing is performed by the internal sprayer at the bottom of the machine.

The C61 basic trolley is also used to position the injection systems (L685/L680/L690) on level 1. The injector trolleys are inserted into the guide rails of the C61.

C63

Telescopic support for injection systems. The support is used to position the injection systems on levels 2 and 3.

The C63 is inserted into guide rails of the machine.

The injector trolleys (L680/685/690) are inserted in turn into the guide rails of the C63. The system allows the injection systems to be completely removed in order to simplify loading the glassware.

C62

Basic trolley with rotating sprayer for levels 2 and 3.

It is used on its own and is suitable for positioning glassware supports.

The system is divided into 2 parts:

1. Base with sprayer
2. Telescopic support with top.

Detergents & Additives

To achieve excellent washing results and optimize the thermal disinfection of laboratory instruments, specific detergents should be used. MRC has a complete range of alkaline detergents (for use during the washing phase) and neutralizing acid detergents (for use during the neutralization phase) especially designed to guarantee efficient cleaning and optimize the efficiency of the final thermal disinfection phase. MRC also has numerous disinfectants designed for thermolabile instruments and anaesthesia tools for use in the machine during the thermo chemical cycle, as well as special lubricants and additive that can lengthen the lifetime of the medical devices.

Powder alkaline detergents

**Deterglass**

Universal powdered alkaline detergent. 10kg pack.

**Deterglass SP**

Universal powdered alkaline detergent, phosphate-free. 10kg pack.

Liquid alkaline detergents

**Deterliquid D**

Liquid alkaline detergent. 10 Liter container.

**Deterliquid D2**

Liquid alkaline detergent, phosphate-free. 5 Liter container.

**Deterliquid SP**

Liquid alkaline detergent for water & pharmaceutical analysis, phosphate-free. 5 Liter container.

Liquid acid neutralisers

**Acidglass P**

Liquid acid neutralizer for laboratory glassware. 5 Liter container.

**Acidglass P2**

Liquid acid neutralizer for laboratory glassware. 5 Liter container.

**Acidglass C2**

Neutralizing acid detergent. 5 Liter container, phosphate-free.

Special additives

**Dry clean**

Special additive for promoting drying. after the rinse phases. 5 Liter container.

**F1S**

Silicon defoaming additive for petrol cycles, phosphate-free. 1 Liter container.

Water Treatment

To obtain high quality washing standards, it is fundamentally important to use correctly treated water. In the prewash, washing and neutralization phases, softened water should always be used. Models WG-2045, WG-1060, WG-4060, WG-3060 and WG-4090 range have an efficient built-in decalcifier capable of reducing the hardness of the supply water so as to prevent the classic formation of whitish stains inside the chamber and on the instruments.

MRC also supplies a range of high-performance WS water softeners which are compact and easy to install. Equally important is the rinsing of the instruments with demineralized water in order to eliminate any contaminants remaining in the washing chamber. For this purpose, MRC has the compact and efficient WP3000 mixed resin bed demineralizer.



WP3000

Resin column water purifier

The WP3000 water purifier is used to produce deionised water at 0.8–1µS/cm, suitable for the final rinsing of instrument washers. The system uses mixed bed resins (disposable) which can also retain silica. When the resins run out, they can simply be replaced with the MI700WP kit. The resin cartridge is made out of stainless steel, as is the entire machine.

Net capacity of cartridge: 15Liters.
Dimensions: l x d x h = 300x600x850mm.

MI700WP Anion/cation mixed bed resins kit for the WP3000 water purifier. Total exchange capacity 42700 Liters/°F# end of cycle at 5µS/cm ("Hardness in French degrees). Supplied with used resin disposal bag.



WS9E, WS11E, WS14E, WS17E

Water treatment systems

The WSE Series of appliances are technological water softeners capable of completely eliminating lime from water.

The resins are regenerated using normal sodium chloride. Available in versions with flow rates of up to 2700 Liters/hour. The models are fitted with an electronically controlled head which can be programmed depending on the hardness of the water. They provide backflow regeneration based on the volume of water (bearing in mind the resin saturation rate) and proportional brine in order to optimize water and salt consumption.

Model	WS9E	WS11E	WS14E	WS17E
Maximum flow rate	1600 l/h (16.7 l/h)	1800 l/h (43 l/h)	2000 l/h (43 l/h)	2200 l/h (43 l/h)
Nominal flow rate	1000 l/h (16.7 l/h)	1500 l/h (43 l/h)	1600 l/h (43 l/h)	1800 l/h (43 l/h)
Resin capacity in litres	9	11	14	17
Exchange capacity (m ³ /°f)	54	66	84	102
Cycle capacity at 4°f	1350	1650	2250	2700
Programmable residual hardness	0–10°f			
Regenerating agent type	NaCl Salt			
Regenerating agent consumption	0.9 kg/cycle	1.0 kg/cycle	1.2 kg/cycle	1.8 kg/cycle
Dimensions ØxH (mm)	300x470x540	300x470x660	300x470x815	300x470x1070
Salt tank dimensions L x P x H (mm)	Integrated			
Capacity litres (SALT)	About 15	About 20	About 30	About 40
Connections	1#			



PROGRAMMABLE:

The heart of the new generation of MRC disinfectors is the leading-edge management system controlled by microprocessors which can control at all the activities performed & monitor, using redundant systems, the entire flow of information processed by the equipment. The entire WG Series allows operators to programme all washing parameters as they prefer, using the multi-function membrane keypad or the PC directly via the RS232 or LAN connections & the WD-TRACE software ®. All significant parameters can be set. These include: execution times, operating temp., quantity of additives, number of phases, and so on. Access to the control operations is protected by a system of four user passwords.



DRYING SYSTEM:

The forced-air "Drying System", completely modified in the new WG Series, is a high-performance rapid drying system. The system, comprising an efficient hot air generator & a powerful fan, is directly managed by the programmer which allows both operating time and temperature parameters to be modified. The microprocessor 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 intake passes through a class C filter with a 98% efficiency rating.



PERISTALTIC PUMPS DETERGENT AND NEUTRALIZER:

Disinfection effectiveness mainly depends on the correct performance of the washing phases and the neutralization of the treated material. Models WG-3060 and WG-4090 feature two peristaltic pumps dedicated to dispensing the alkaline detergent during the cleaning phase and the acid neutralizer during the neutralization phase respectively. Each pump is equipped with a level sensor to be positioned directly in the can of the products used. About the models WG-2045, WG-1060 e WG-4060, it is possible to install a specific optional pump to dispensing the alkaline detergent.



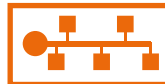
ADDITIONAL PERISTALTIC PUMPS FOR ADDITIVES:

The new WG models can have up to two additional peristaltic pumps dedicated to dispensing additives (caustic soda, defoamers, inhibitors, disinfectants). Each pump is equipped with a level sensor to be positioned directly in the can of the products used. system of four user passwords.



DETERGENT STORE:

Ergonomics, reduced dimensions and practicality are indispensable requirements for all equipment used in busy professional surroundings. With these requirements in mind, MRC has designed a detergent store located inside the reduced dimension of the glassware washer itself. It can contain up to four 2-Liter containers for the WG-4090 Series and four 5-Liter containers for the WG-6090 Series. No product feed pipes project from the volume of the glassware washer.



LAN CONNECTION:

Thanks to the dedicated MRC WD-TRACE software ® it is possible to visualise each piece of equipment as though it were a terminal, thus being able to store all the machine data directly on PC. As information communication is two-way, it is possible to directly dialogue with the disinfectant microprocessors, for example, in order to change the cycle parameters or display a chart of internal temperatures.



PRINTER:

The traceability of the washing and thermal disinfection cycles performed in professional glassware washers is required in order to check the operations have been successfully completed. The printer is an accessory which can provide a detailed report containing all information relative to cycle performance. In both the free-standing and panel versions, the thermal printers used in the WG Series provide complete supporting documentation for operators.



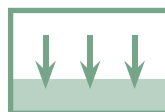
CONNECTION RS232:

A significant feature of the new-generation equipment is that it incorporates the devices required for the complete communication of data relative to completed processes. The range of last-generation WG features two standard RS232 outputs, one for connection with the printer and the other for connection with the PC in order to download all the information relative to completed washing and disinfection programmes.



THE PARAMETER Ao:

Is a numerical value deriving from an equation that directly relates two fundamental parameters: temperature and thermal disinfection time. Basically, the value of Ao defines the level of lethality of the process expressed in seconds. The value appears directly on the display and, if a printer is installed, it is also included in the end-of-cycle report.



STEAM CONDENSER:

The steam condenser rapidly reduces the saturated steam from the washing water, especially during the thermal disinfection phases. This device eliminates the formation of condensation near the glassware washer and prevents humidity and smells from escaping into the air, especially in the versions positioned underneath worktops. In air-conditioned rooms moreover, limiting the dispersion of heat from the glassware washer reduces the work load of the air-conditioning system, considerably decreasing electricity consumption and unwanted temperature changes.