



**GW6090 TECHNICAL FEATURES** All versions

Electronic control	3 microprocessors +1 (optional communication card)
Standard programs stored	20 pre-set and 10 modifiable (expandable to 50)
Backlight graphic LCD display	128 x 64 pixel
Clock and calendar	yes
Reprogrammable phases	10
Chamber internal temperature	from room temperature to 95°C
Accuracy	0,1°C
Temperature sensors in tank	1 x PT 1000 CLASSE B IEC 60751
Water heating	electrical, 17,7kW max
Water pre-heating via boiler	optional
Steam condenser	optional
Detergent level sensor	optional
Detergent pumps	5 max
Safety lock	yes, with electromagnetic release and automatic opening
Safety devices	safety thermostats, door interlock
Alarm display	yes, acoustic and visual
Troubleshooting menu	yes
Password	4 levels
Display languages	Italian, English, French, German, Russian and other on request
<b>AUXILIARITY FUNCTION</b>	
External sensor duct	optional
Traceability	storage of data for 100 most recently run programs
Waste water separation solenoid valve control	optional
RS232 serial port	yes, for connection to PC or printer
Cycle storage	yes, WD-TRACE/Excel format
Cycle file download	yes, WD-TRACE format
<b>DRYING SYSTEM</b>	
Drying fan	yes, 190 m³/h
Drying heating element	4 kW
Prefilter class C 98%	yes
HEPA filter class S 99,999%	optional
<b>WATER SUPPLY</b>	
Cold water inlet	yes, max 8°F hardness
Demineralised water inlet	yes, <20µS/cm
Demineralised water booster pump	optional
External water softner	optional
Recirculation pump	2 pumps of 400l/min
<b>DIMENSIONS LxPxH mm</b>	
Overall (with built-in top)	2035x801x902(drying system version) and 1835x801x902(version without drying system)
Chamber	670x650x835
Net weight (Kg)	282
<b>STAINLESS STEEL</b>	
Wash chamber	AISI 316L
Exterior covering	AISI 304
<b>ELECTRICAL POWER SUPPLY</b>	
Voltage/power	3/N/PE 400V-50Hz 18.5 kW
<b>NOISE LEVEL</b>	
	max 50 dB



MACHINE OPTIONALS



**WD-PRINT6**

Printer integrated in the panel.  
**WD-PAPER** Thermal paper roll. Diameter 50 mm, width 57 mm.



**P36090B**

Additional peristaltic pump for feeding an additional additive complete with level sensor. The quantity of detergent delivered by the pump is directly controlled by the machine microprocessor.



**WD-LS5090**

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.



**WD-FLUX FLOW METER FOR PERISTALTIC PUMPS**

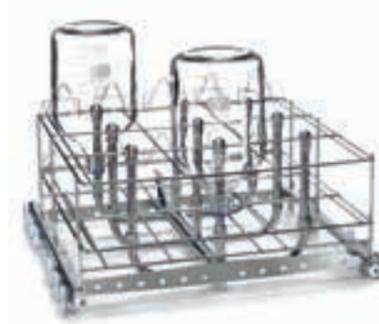
Allows controlling the quantity of additive the peristaltic pumps deliver. Installed directly on the machine on each single detergent feed duct leading into the chamber. It signals any feeding malfunctions or when the products run out by showing a warning on the display.



**IC6000**

Digital indicator to monitor wastewater conductivity. Particularly useful when using demineralised water for final rinsing. If the wastewater has high conductivity values it is advisable to execute further rinsing. Measuring range between 0 and 1000  $\mu\text{s}/\text{cm}$ . Value reading shown on a backlit LCD display. Display of out-of-scale parameters. Built into the front panel of the machine.

BOTTLE WASHING



**C65-I**

Stainless steel trolley for washing large glass items with drying system connection. Suitable for washing 9 bottles with diam. 175 mm H.285mm. Positioning on the upper level.



**C65-S**

Stainless steel trolley for washing large glass items with drying system connection. Suitable for washing 9 bottles with diam. 175 mm H.285mm. Positioned on the lower level.



**LM6-10U**

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

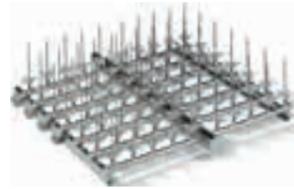
CILINDER WASHING



**L685CIL**

Stainless steel trolley for cylinders with drying system with 12 spigots. Suitable for washing 12 cylinders from 500 ml to 2000ml. Other possible configurations depending on the volume of the cylinders. Positioned on the lower level.

**NARROW-NECKED  
GLASSWARE INJECTION**



**L685**  
Injection system for large, medium and small glassware with 76 spigots of differing heights: 90/110/140/160/180/240 mm. The differing spigot heights make it possible to optimise loading of different sized glassware. This spigot configuration allows the system to be used on levels 1 and 2.



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



**L690**  
Injection system for small glassware with 86 spigots at the same height of 110 mm. This spigot configuration makes it suitable for use on the 3rd level.

**BOTTLE SUPPORT**



**PB6000**  
Support for wide-mouthed bottles. Capacity 25 flasks from 1000 ml to 5000 ml and/or 1000 ml wide-mouthed bottles (screw cap GL45 ISO4796 or ground cap DIN 12038 or non-standard cap). Made of stainless steel.

**PIPETTE WASHING**



**LP6**  
Accessory suitable for washing pipettes together with L680. It easily hooks into the hydraulic grip positioned on L680. It allows to load and unload the pipettes outside the washing chamber.

The strong point of the GW6090 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 optimised according to washing requirements. Glassware of various sizes with heights up to 790 mm and volumes up to 25 litres can be washed.



**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 arm  
2. Telescopic support with top.

**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 SPRAY ARMS**

Level 1: C61 basic trolley with L685 direct injection system.  
Maximum useful height 325 mm 76 spigots.  
Level 2: C62 upper trolley with rotating sprayer.  
Maximum useful height 150 mm, useful washing surface 625x625 mm.  
Level 3: C63 telescopic support with L690 direct injection system.  
Maximum useful height 170 mm 76 spigots.



**ROTATING SPRAY ARMS**

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

**TWO WASHING LEVELS**



**DIRECT INJECTION**

Level 1: C61 basic trolley with L680 direct injection system.  
Maximum useful height 260 mm, 76 spigots.  
Level 2: C63 telescopic support with L685 direct injection system.  
Maximum useful height 440 mm, 76 spigots.



**DIRECT INJECTION AND ROTATING SPRAY ARMS**

Level 1: C61 basic trolley. Maximum useful height 330 mm.  
Level 2: C63 telescopic support with L685 direct injection system.  
Maximum useful height 450 mm, 76 spigots.



**DIRECT INJECTION AND ROTATING SPRAY ARMS**

Level 1: C61 basic trolley with L680 direct injection system.  
Maximum useful height 300 mm 76 spigots.  
Level 2: C62 upper trolley with rotating sprayer.  
Maximum useful height 380 mm.

	DIRECT INJECTION SYSTEMS	MAXIMUM HEIGHT OF GLASSWARE (mm)			ROTATING SPRAYER SYSTEM	MAXIMUM HEIGHT OF GLASSWARE (mm)			
<b>3° LEVEL</b>	<b>C63 L690</b> Telescopic base injection system	130	390	130	720	<b>C62</b> Telescopic base with rotating sprayer	95	360	95
<b>2° LEVEL</b>	<b>C63 L680</b> Telescopic base injection system	180				<b>C62</b> Telescopic base with rotating sprayer	170		
<b>1° LEVEL</b>	<b>C61 L685</b> Telescopic base with rotating sprayer	220	220	510		<b>C61</b> Telescopic base using the rotating sprayer at the bottom of the wash tank	390	340	790

**TWO WASHING LEVELS**



**ROTATING SPRAY ARMS**

Level 1: C61 basic trolley. Maximum useful height 365 mm.  
 Level 2: C62 telescopic base with rotating arm.  
 Maximum useful height 385 mm.  
 Washing surface 625x625 (0.78m<sup>2</sup> total).



**DIRECT INJECTION**

Level 1: C61 basic trolley with L685 direct injection system.  
 Maximum useful height 545 mm 76 spigots.  
 Level 3: C63 telescopic support with L690 direct injection system.  
 Maximum useful height 170 mm, 87 spigots.



**DIRECT INJECTION/ ROTATING SPRAY ARMS**

Level 1: C61 basic trolley. Maximum useful height 605 mm.  
 Level 3: C63 telescopic support with L690 direct injection system.  
 Maximum useful height 170 mm, 87 spigots.

**ONE WASHING LEVEL**



**INJECTION WASHING**

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



**ROTATING SPRAY ARMS**

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



**DIRECT INJECTION**

This special C64 trolley can be used to wash drums with heights up to 530 mm and diameters up to 30 cm using spigots.  
 Trolleys can be developed for special applications on request.  
 Level 1: C64 basic trolley.  
 Maximum useful height 835 mm.

MACHINE OPTIONS



**ICRP**

Supplementary ceiling sprayer made of stainless steel AISI 316L. Its operation improves the washing performance of glassware with complex shapes.



**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-PRINTE**

External printer.

**WD-PAPER** Thermal paper roll. Diameter 50 mm, width 57 mm.



**WD-LAN**

All models of Smeg's glassware-washers may be provided with an optional data communication card including a LAN port to connect the thermal disinfection washer to the local network.

The connection provides remote communication with the device due to the provided software, which then displays all the information given by thermal disinfection washer on your PC. All the operating parameters can also be changed without having to do so directly on the machine.



**PAD**

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



**PAD 2**

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



**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 suction tube
- Suitable for tanks of 2l, 5l, 10l



**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 1/2 inch valves with Viton membrane and valve opening is controlled by the machine microprocessor.

STAINLESS STEEL BASES AND FRAMES



**B9040L**

Base for 90 cm wide models only. The base brings 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 = 900x530x400 mm  
**B6040L** (not shown in the photo): for 60 cm wide models only. Dimensions l x d x h = 600x530x400 mm



**B9040QWC**

Base with integrated demineralised water boiler. For 90 cm wide models only. A boiler is housed in the base to preheat the demineralised water to reduce cycle times. Dimensions: l x d x h = 900x530x400 mm



**T9040**

Frame for 90 cm wide models only. The frame brings 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 = 900x530x400 mm  
**T6040** (not shown in the photo): frame for 60cm models only. Dimensions l x p x h = 600x530x400 cm



## WATER TREATMENT

To obtain high quality washing standards, it is fundamentally important to use correctly treated water. In the prewash, washing and neutralisation phases, softened water should always be used. Underbench models range have an efficient built-in water softener 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.

Smeg 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 demineralised water in order to eliminate any contaminants remaining in the washing chamber. For this purpose, Smeg has the compact and efficient WP3000 mixed resin bed demineraliser.



### WP3000

#### RESIN COLUMN WATER PURIFIER

The WP3000 water purifier is used to produce deionised water at 0.8-1 µS/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: 15 litres.  
Dimensions: l x d x h = 300x600x850 mm.

### MI700WP

Anion/cation mixed bed resins kit for the WP3000 water purifier. Total exchange capacity 42700 litres/°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 litres/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 optimise water and salt consumption.

	WS9E	WS11E	WS14E	WS17E
MAXIMUM FLOW RATE	1600 l/h (16.7 l/min)	1800 l/h (43 l/min)	2000 l/h (43 l/min)	2200 l/h (43 l/min)
NOMINAL FLOW RATE	1000 l/h (16.7 l/min)	1500 l/h (43 l/min)	1600 l/h (43 l/min)	1800 l/h (43 l/min)
RESIN CAPACITY IN LITRES	9	11	14	17
EXCHANGE CAPACITY (m³/°F)	54	66	84	102
CYCLE CAPACITY AT 40°F	1350	1650	2250	2700
PROGRAMMABLE RESIDUAL HARDNESS	0-10° F	0-10° F	0-10° F	0-10° F
REGENERATING AGENT TYPE	NaCl SALT	NaCl SALT	NaCl SALT	NaCl SALT
REGENERATING AGENT CONSUMPTION	0.9 kg/cycle	1.0 kg/cycle	1.2 kg/cycle	1.8 kg/cycle
DIMENSIONS ØxH (mm)	300 x 470 x 540	300 x 470 x 660	300 x 470 x 815	300 x 470 x 1070
SALT TANK DIMENSIONS L x P x H (mm)	INTEGRATED	INTEGRATED	INTEGRATED	INTEGRATED
CAPACITY LITRES (SALT)	about 15	about 20	about 30	about 40
CONNECTIONS	1"	1"	1"	1"

## DETERGENTS AND ADDITIVES

To achieve excellent washing results and optimise the thermal disinfection of laboratory instruments, specific detergents should be used. Smeg has a complete range of alkaline detergents (for use during the washing phase) and neutralising acid detergents (for use during the neutralisation phase) especially designed to guarantee efficient cleaning and optimise the efficiency of the final thermal disinfection phase.

### ALKALINE DETERGENTS

ph 13,9

**DETERGLASS:** universal alkaline powder detergent with phosphates without oxidizing surfactants and without chlorine compounds.

Application field: general chemistry, food analysis, organoleptic protein.  
10 kg pack, 2-5 g/liter.

ph 13,1

**DETERLIQUID C2:** liquid alkaline phosphates free detergent without oxidizing surfactants and without chlorine compounds. For the removal of proteins, environment, blood, albumin and serum.

Application field: general chemistry, food analysis, organoleptic, proteins, microbiology, virology, histology and cytology, dyes, organic and inorganic chemistry.  
5 liter container, 2-4 ml/liter.

ph 12,5

**DETERLIQUID D2:** liquid alkaline detergent with active chlorine, phosphate free and without surfactants. For the removal of environments, organic and mineral oil, grease, agar residuals, proteins.

Application field: microbiology, virology histology and cytology, dyes, inorganic and organic chemistry, petrol chemistry.  
5 liter container, 2-4 ml/liter.

ph 11,5

**DETERLIQUID SP:** liquid alkaline detergent without phosphates or chlorine compound. For the removal of reactive inorganic chemistry and organic.

Application field: microbiology, inorganic and organic chemistry, petrol chemistry.  
5 liter container, 2-4 ml/liter.

### LIQUID ACID NEUTRALISERS

ph 2,5

**ACIDGLASS P2:** organic phosphoric acid neutralizer.

Application field: general chemistry, inorganic and petrol chemistry  
5 liter container, 2-3 ml/liter.

ph 2,4

**ACIDGLASS C2:** weak organic acid neutralizer.

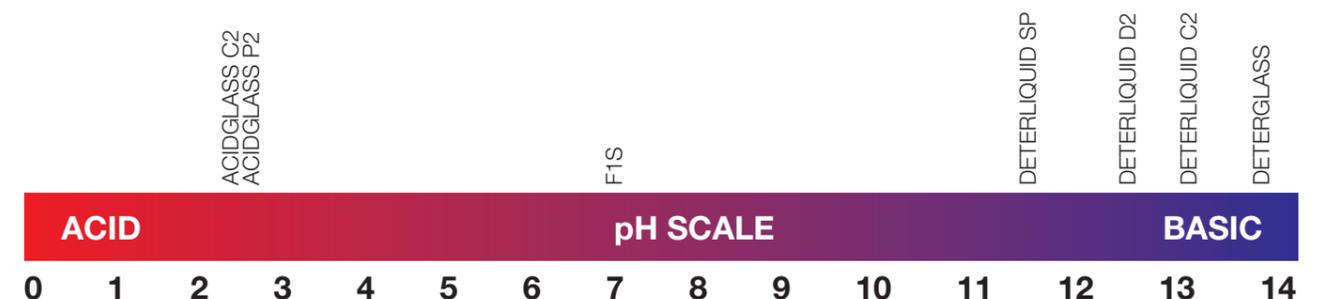
Application field :universal, environmental analysis  
5 liter container, 1-2 ml/liter.

### SPECIAL ADDITIVES

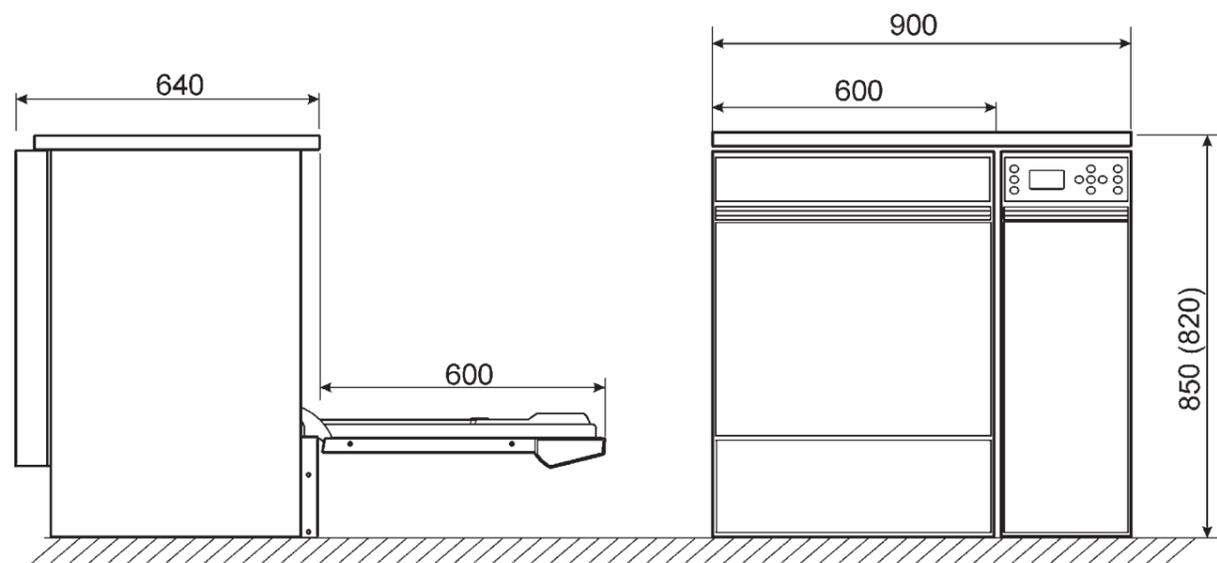
ph 7

**F1S:** antifoam additive. Surfactant products for washing ( soap and shampoo) and additives for petrochemical washing cycles .

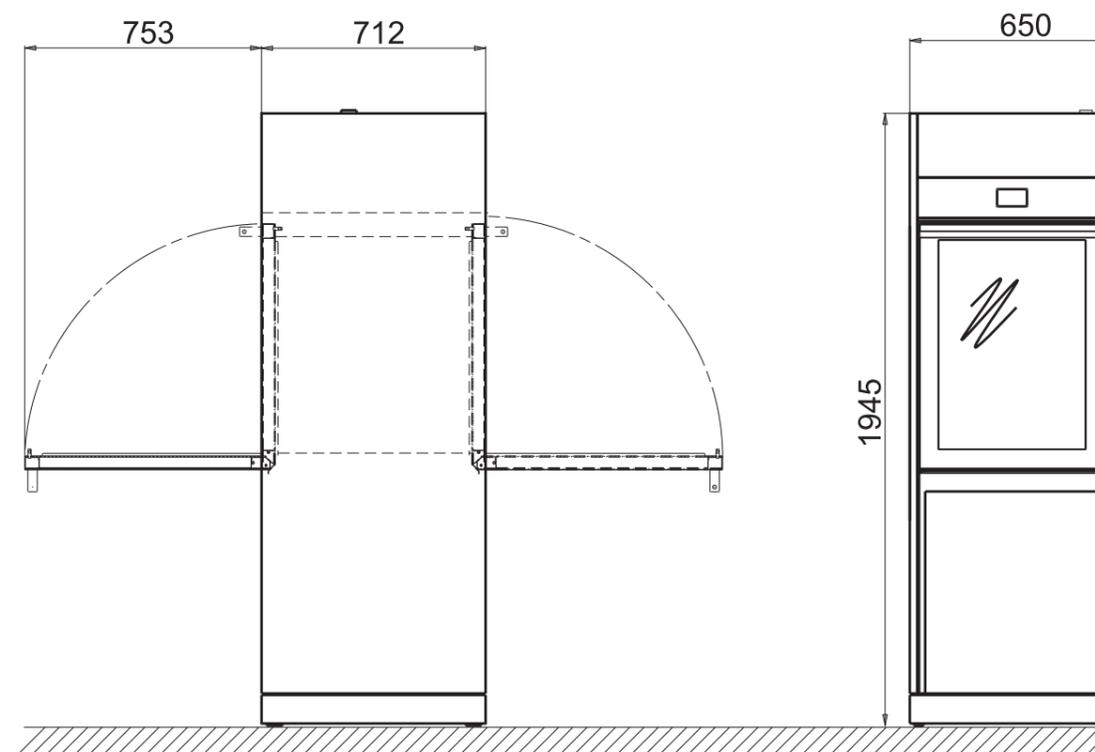
Application fields: cleaning industry, petrochemical washing cycles  
1 liter , 0,2-0,5 ml/liter.



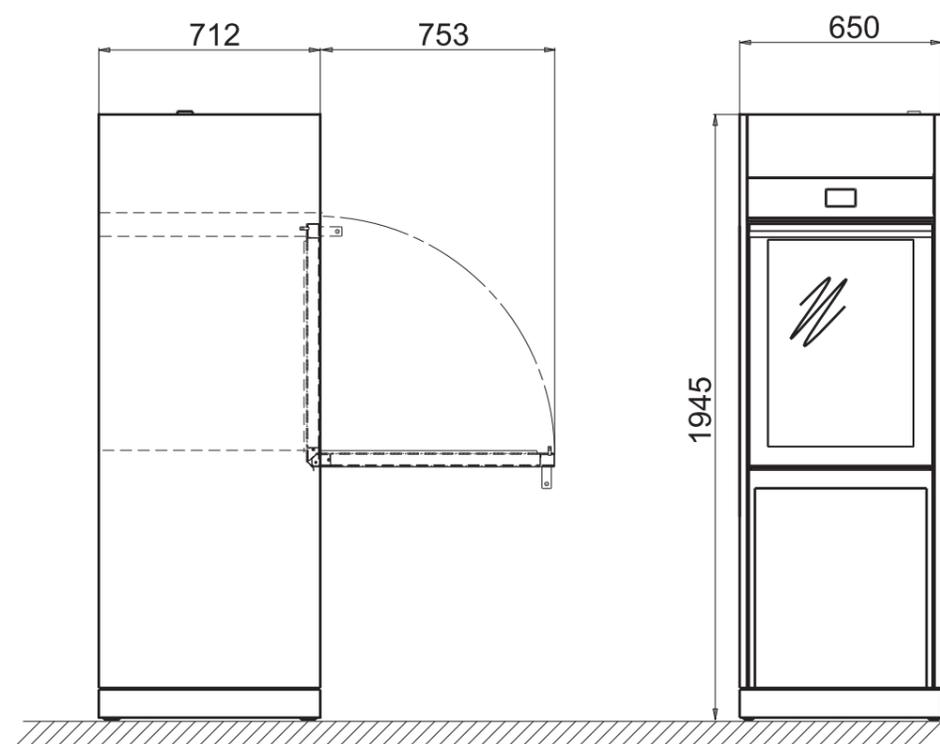
GW4090



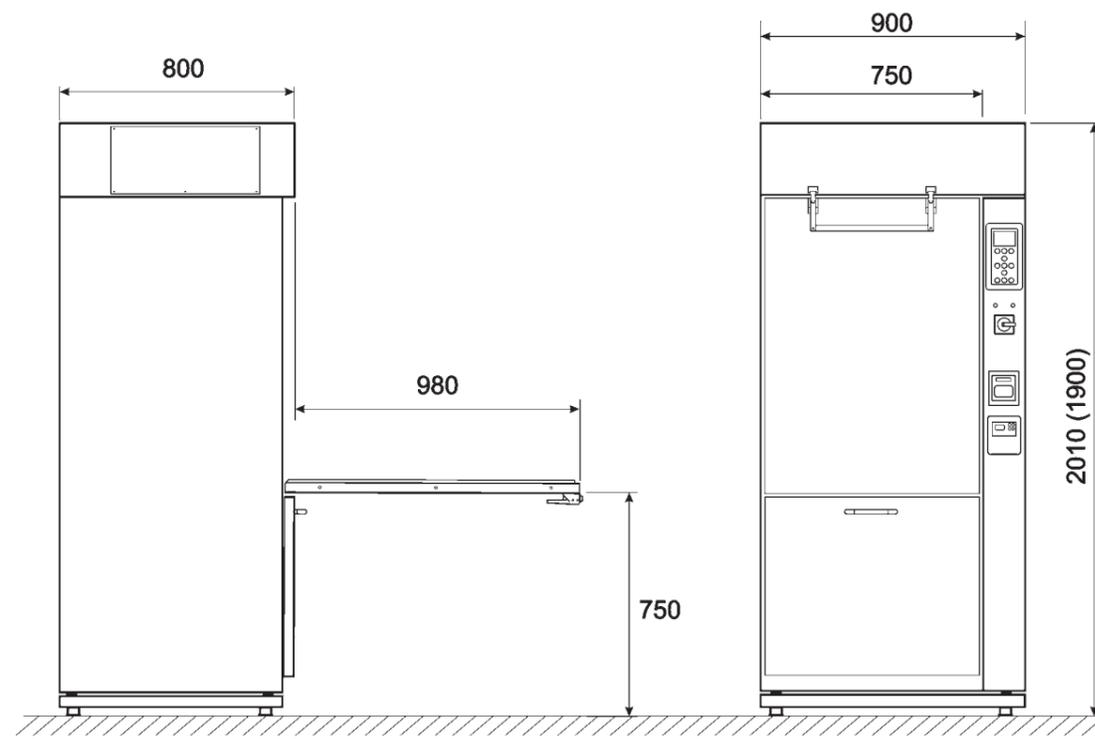
GW6010 - DOUBLE DOOR



GW6010 - SINGLE DOOR



GW6090



## MACHINE TECHNICAL FEATURES

	GW6010	GW6090
<b>Internal dimensions(LxDxH mm)</b>	546x620x690	670x650x835
<b>External dimensions (LxDxH mm)</b>	650x720x1945	2035x801x902
<b>Standard programs stored</b>	20	20
<b>Modifiable programs</b>	20	10
<b>Detergent dosing system</b>	peristaltic pump	
<b>Neutralizing dosing system</b>	peristaltic pump	
<b>Max nr.of dosing pumps</b>	4	5
<b>Volume detergent control</b>	optional	
<b>Detergent cabinet</b>	yes	
<b>Display</b>	4.3" TFT colour graphic display	Backlit graphic LCD display 128x64 pixel
<b>Control panel</b>	Capacitive sensing touch screen	Membrane keyboard
<b>Steam condenser</b>	optional	no
<b>Drying system</b>	Forced hot air through "drying system"	
<b>Pre-filter class C</b>	yes	
<b>Cold water supply</b>	yes	
<b>Hot water supply</b>	yes	
<b>Demineralized water supply</b>	yes	
<b>Integrated water softener</b>	no	
<b>Washing pump</b>	600l/min	2 x 400l/min
<b>Conductivity control</b>	optional	
<b>Printer</b>	optional	
<b>Door interlock</b>	yes	
<b>Net weight (kg)</b>	248	282
<b>Conformity</b>	2006/95/CEE,93/68/CEE, 2004/108/CEE	
<b>Supply/Max power</b>	3/N/PE/400V 50Hz-13KW	3/N/PE/400V 50Hz 18.5 kW
<b>Possibility of 60Hz supply</b>	yes	
<b>Equipped with plug</b>	no	