



**GW4060 TECHNICAL FEATURES** All versions

Electronic control	microprocessor
Standard programs stored	15 of which 9 pre-set and 6 modifiable
Clock and calendar	yes
Reprogrammable phases	10
Chamber internal temperature	from room temperature to 95°C
Accuracy	0,1°C
Temperature sensors in chamber	1 x PT 1000 CLASS B IEC 60751
Water heating	electrical, 6,3 kW on three-phase version, 2,3 kW on single-phase version
Steam condenser	optional
Display	4 digits with segments and communication led icons
Detergent dosing system	max. 1 powder dispenser and 3 liquid pumps
Detergent level sensor	optional
Liquid acid pump	yes
Safety lock	yes, with electromagnetic release and automatic opening
Safety devices	safety thermostats, door interlock
Alarm display	yes, acoustic and visual
Troubleshooting menu	yes, using PC connection
<b>AUXILIARITY FUNCTION</b>	
Traceability	storage of data for 100 most recently run programs
RS232 serial port	yes, for connection to PC or printer
Cycle storage	yes, TRACELOG/Excel format
Cycle file download	Yes, TRACELOG format
<b>DRYING SYSTEM</b>	
Drying fan	yes
Drying heating element	0,8 kW
Prefilter class C 98%	yes
HEPA filter class S 99,999%	optional
<b>WATER SUPPLY</b>	
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
<b>DIMENSIONS LxPxH mm</b>	
Overall (with built-in top)	600x605x850 (830)
Chamber	520x515x545
Net weight (Kg)	77
<b>STAINLESS STEEL</b>	
Wash chamber	AISI 316L
Exterior covering	AISI 304
<b>ELECTRICAL POWER SUPPLY</b>	
Voltage/power	1/N/PE 230V ~ 50 Hz 2,8 kW 3/N/PE 400V ~ 50 Hz 7,0 kW
<b>NOISE LEVEL</b> max 50 dB	



The machine chambers of the GW0160, GW1160, GW4060, GW4190, GW3060 and GW4090 series must be equipped with trolleys and supports most suited to the specific treatment requirements of the different types of glassware used in the laboratory.  
The various possible machine/trolley configurations described below are meant as a guide to help you choose the most appropriate solution for the type of glassware used.



**TWO SPRAYING LEVELS**

Standard lower basket CS2 and upper rack with spray arm 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 placed on two positions to make better use of the space.



**TWO SPRAYING/INJECTION LEVELS**

Standard lower rack CS2 and upper injection basket. In this configuration there are two washing levels: a lower level with a spray arm 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 245 mm in height.



**ONE INJECTION LEVEL**

LM40 trolley (LM40DS for machines with drying system). It may be considered as a universal injection trolley as it optimises 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 maximises 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 for washing 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 GW2145 model)

Upper rack with sprayer.  
Made for stainless steel and suitable for positioning supports.  
Dimensions: l x d x h = 355x450x80 mm

**CS1-1** (not in photo)

Upper rack with sprayer.  
Made for stainless steel and suitable for positioning supports.  
Dimensions: l x d x h = 481x468x151 mm

**D-CS2** (only on GW2145 model)

Lower rack.  
Made for stainless steel and suitable for positioning supports.  
Dimensions: l x d x h = 375x470x55 mm

**CS2** (not in photo)

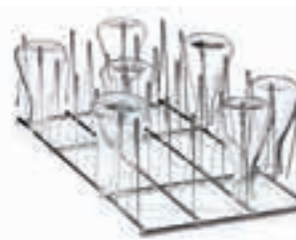
Basic lower rack.  
Made for stainless steel and suitable for positioning supports.  
Dimensions: l x d x h = 507x515x58 mm

**FLASK AND BEAKER SUPPORTS****SB9** (only on GW2145 model)

Stainless steel 9-position support for flasks and beakers with max volume of 100 ml. Occupies 1/2 of the D-CS1/D-CS2 racks.  
Dimensions: l x d x h = 420x145x160 mm

**SB14** (only on GW2145 model)

Stainless steel 14-position support for beakers and flasks with volume of 250 to 1000 ml. Occupies 1/2 of the D-CS1/D-CS2 racks.  
Dimensions: l x d x h = 422x146x184 mm

**SB15**

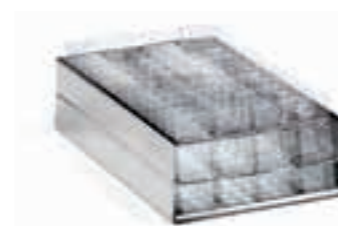
16-position spring support for flasks, beakers, etc. For use in combination with standard CS1-1/CS2 racks and LM20 support. It has a capacity of 16 items and is made of stainless steel. Recommended for flasks with a capacity of up to 1000 ml.  
**SB28** (not in photo): 28-position spring support for flasks, beakers, etc. For use in combination with standard CS1-1/CS2 racks and LM20 support. It has a capacity of 28 items and is made of stainless steel. Recommended for flasks with a capacity up to 1000 ml.

**SB30**

30-position support to hold beakers of any size and to be used with the standard racks CS1-1 and CS2 and the trolley LM20. It has a capacity of 30 items and 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****PV105**

Microscope slide support made of stainless steel. Suitable for positioning 105 standard microscope slides.  
Dimensions l x d x h = 220x143x60 mm.

**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.

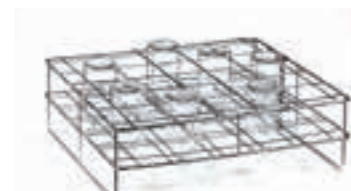
**SL18**

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

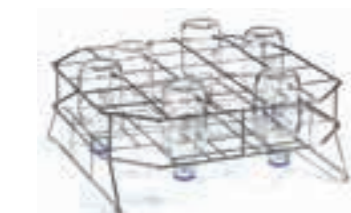
**BOTTLE SUPPORTS**



**PB50**  
Support for 56 wide-necked bottles of 50 ml (screw cap GL32 ISO4796 or ground cap DIN 12038 or non-standard cap). Max bottle dimensions: diam. 46 mm - H 87 mm.  
**PB100** for 32 wide-necked bottles of 100 ml. (screw cap GL45 ISO4796 or ground cap DIN 12038 or non-standard cap). Max bottle dimensions: diam. 56 mm - H 100 mm.



**PB250**  
Support for 25 wide-necked bottles of 250 ml. (screw cap GL45 ISO4796 or ground cap DIN 12038 or non-standard cap). Max bottle dimensions: diam. 70 mm - H 138 mm.



**PB500**  
Support for 21 wide-necked bottles of 500 ml. (screw cap GL45 ISO4796 or ground cap DIN 12038 or non-standard cap). Max bottle dimensions: diam. 86 mm - H 176 mm.



**PB1000**  
Support for 16 wide-necked bottles of 1000 ml. (screw cap GL45 ISO4796 or ground cap DIN 12038 or non-standard cap). Max bottle dimensions: diam. 101 mm - H 225 mm.

**TEST TUBE SUPPORTS**



Additional accessory for the standard baskets CS1-1 and CS2 and the support 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 1/4 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, 50-70 mm positioned on the upper level CS1-1.  
**PD100S** - 38 items, 70-120 mm positioned on the upper level CS1-1.  
**PD70I** - 40 items, 50-70 mm positioned on the lower level CS2.  
**PD100I** - 38 items, 70-120 mm positioned on the lower level CS2.

**RACKS FOR SMALL GLASSWARE, BASKETS AND HOLDING NETS**



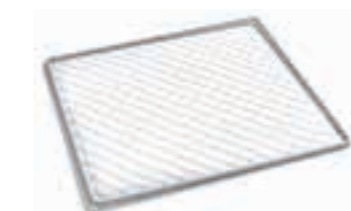
**PF1/2**  
Additional accessory for CS1-1 and CS2 racks made from flat AISI 304 stainless steel mesh with small mesh openings as a rack to hold small glass items or as rigid rack as an alternative to the Nylon holding nets. Available in 3 versions: PF1 (not shown in the photo) bottom support with hole 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 support for positioning on the upper level.

**D-PF1** (only for GW2145)

Full bottom support for upper rack, made from stainless steel 10x10 mesh with central hole, for positioning on the upper carriage D-CS1. Dimensions: l x d x h = 305x425x11 mm

**D-PF2** (only for GW2145)

Full bottom support for upper rack, made from stainless steel 10x10 mesh with central hole, for positioning on the lower carriage D-CS1. Dimensions: l x d x h = 305x425x11 mm



**RC1 - RC1/2 - RC1/4**

Holding nets with plastic-coated metal frame and 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 rack, RC1/2 occupies in half the rack, RC1/4 occupies in a quarter of the rack.



**BASKETS**



**CSK2**

Baskets with stainless steel handles, suitable for medium-sized instruments.  
Mesh openings of 5x5 mm.  
Dimensions l x d x h = 450x225x50 mm.



**CSK1**

Baskets with stainless steel handles, suitable for medium-sized accessories and items.  
Mesh openings of 5x5 mm.  
Dimensions l x d x h = 450x450x55 mm.

**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. 220 mm in height.



**CPB2**

Stainless steel lower trolley for wine-tasting glasses. Suitable for washing 14 wine-tasting glasses of max. 240 mm 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, 260 mm.

**NARROW-NECKED GLASSWARE INJECTION**



**LPM24** (only for GW2145 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 U3110, 12 x LB40. Maximum glassware height of 490 mm and positioning on the D-CS2 rack lower level.



**LM24** (only for GW2145 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 U3110. Positioning on the D-CS2 rack lower level.



**LM22S** (only for GW2145 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 U3110, 5 x U390, positioning on the D-CS1 rack 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 1/2 basket accessory. Positioned 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. Positioned 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. Positioned on the upper level.

**LM40S** (not shown in the photo): version without drying system connection.



**LM80DS**

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

**LM80** (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 four 5-litre Schott-type bottles.

Fitted with 8 special spigots.

Positioned 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-litre bottles

(diam. 180 x h.500mm, max neck diameter 80 mm). Fitted with 5 special spigots.

Positioned 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.

Positioned 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 250-1000 ml, max. diam. 101 mm, H.245 mm. Fitted with 32 U6170 spigots.

Positioned 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 and suitable for washing one 10 litre Shott-type bottles with drying system connection. Positioned on lower level.

**REACTOR WASHING**



**LR4DS**

Stainless steel trolley with drying system connection. Suitable for inside washing and drying of 3/5-way reactors of maximum 3 litres or up to 12 narrow-necked glass items. Fitted with 20 U6260 spigots. Positioned 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. Positioned on the lower level.  
**LT20** (not shown in the photo): version without drying system connection.

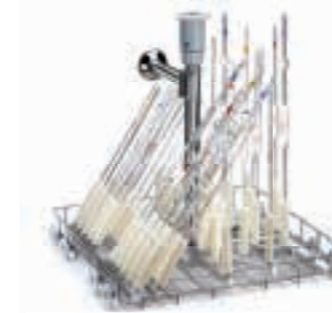
**BUTYROMETER WASHING**



**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. Positioned on the upper level.  
**LB40** (not shown in the photo): version without drying system connection.

**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 45-49 cm 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 20 ml and a height up to 450 mm. The pipette washing disc is fitted in a trolley to allow fast loading and 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. Positioned 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 55 cm + 20 narrow-necked glass items + ¼ 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 U3110, 4 x U390, 1 x UC6, 10 x ULB40 for pipettes with a maximum height of 55 cm. Positioned on the lower level.

**LMP2010** (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 550 mm in height and 20 positions for narrow-necked glassware with a maximum height of 49 cm. Fitted with 38 spigots. Positioned on the lower level.

**LPM20/20** (not shown in the photo): version without drying system connection.

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.

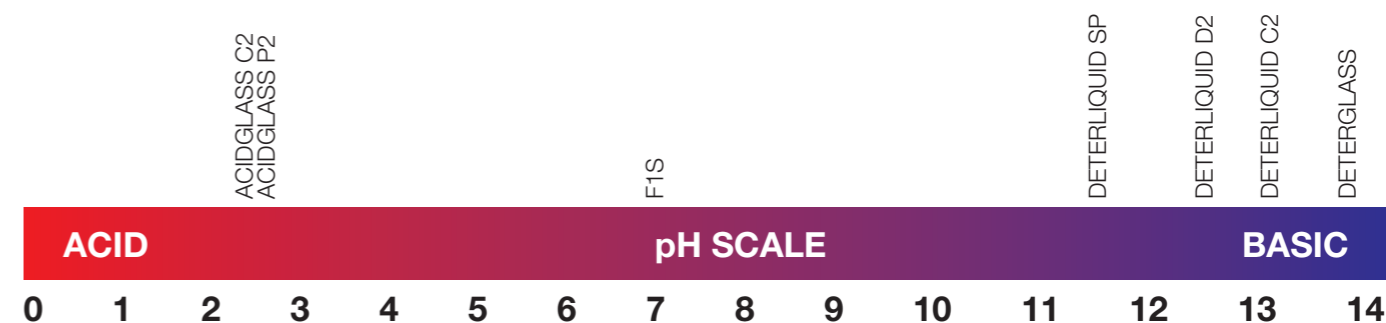
Application field: universal, environmental analysis  
5 liter container, 1-2 ml/liter.

### SPECIAL ADDITIVES

ph 7

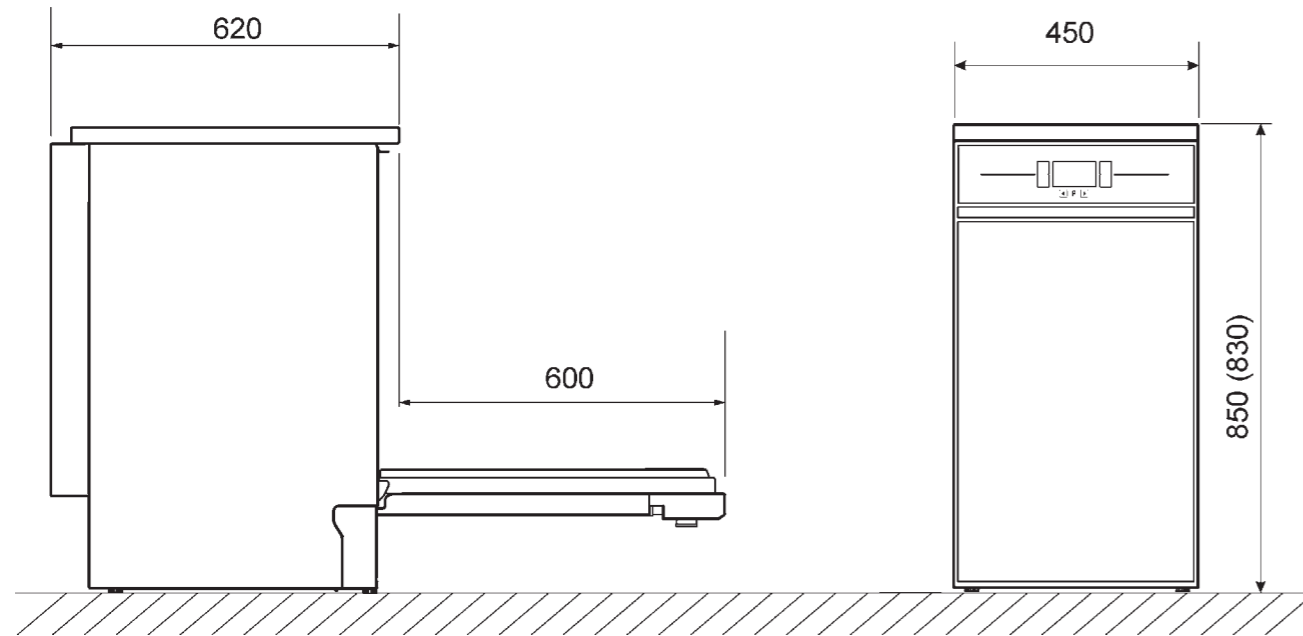
**F1S:** antifoam additive. Surfactant products for washing ( soap and shampoo) and additives for petrochemical washing cycles .

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



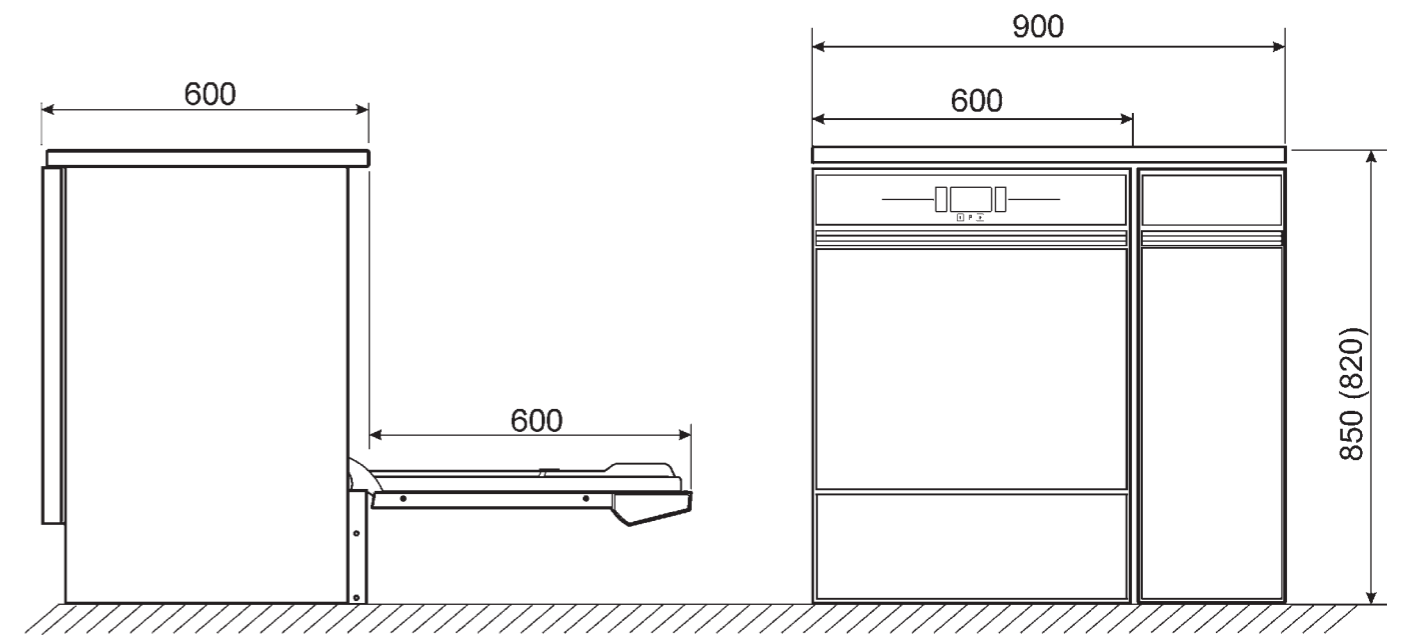
EXTERNAL DIMENSIONS - BASIC LINE

GW2145

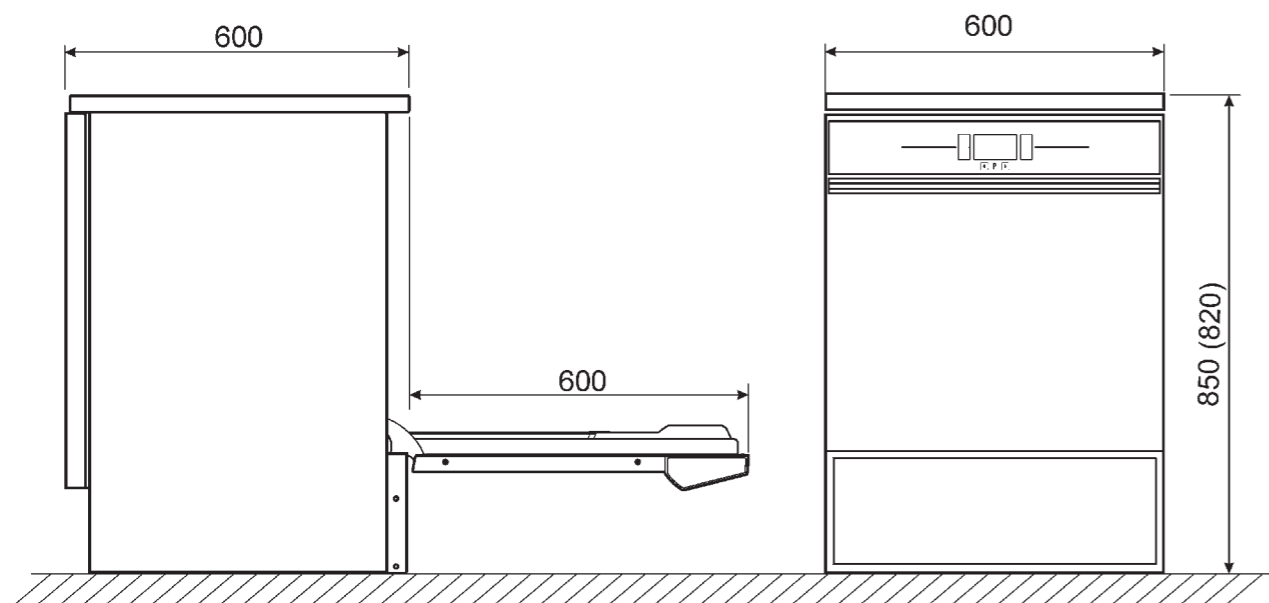


EXTERNAL DIMENSIONS - BASIC LINE

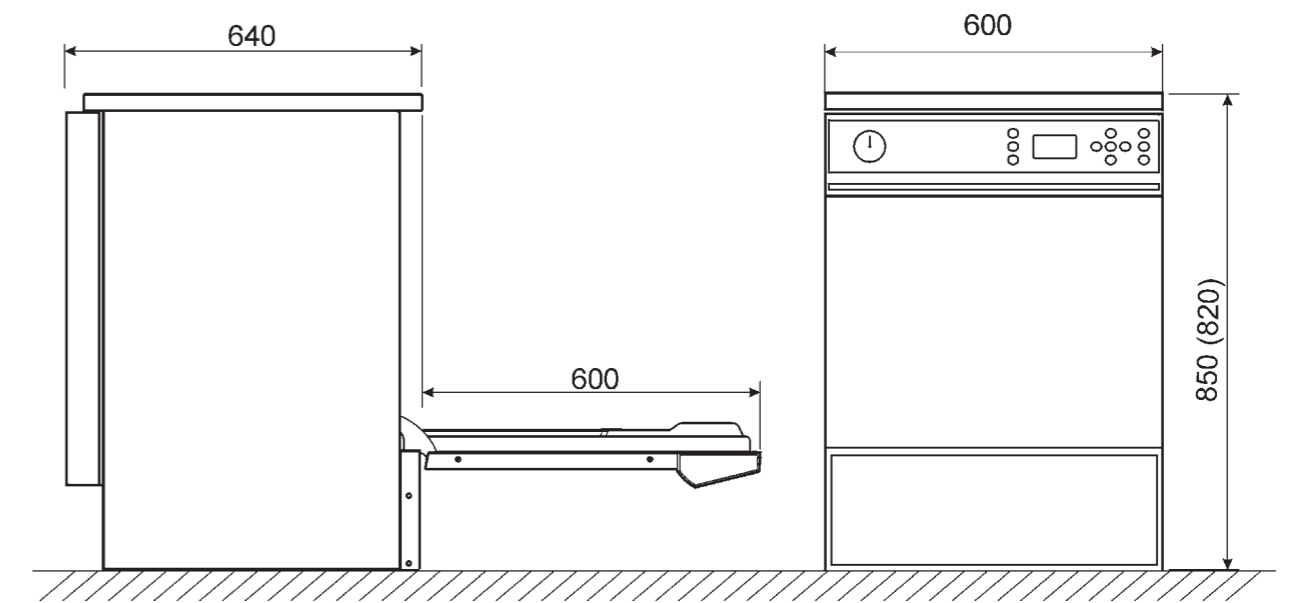
GW4190



GW1160 - GW0160 - GW4060



GW3060



**MACHINE TECHNICAL FEATURES**

	<b>GW0160</b>	<b>GW2145</b>	<b>GW1160</b>	<b>GW4060</b>
<b>Internal dimensions(LxDxH mm)</b>	520x515x545	380x480x590	520x515x545	520x515x545
<b>External dimensions (LxDxH mm)</b>	600x605x850 (830 with built-in top)	450x620x850 (830 with built-in top)	600x605x850 (830 with built-in top)	900x605x850 (830 with built-in top)
<b>Standard programs stored</b>	7	9	9	9
<b>Modifiable programs</b>	no	6	6	6
<b>Detergent dosing system</b>	Powder dispenser or peristaltic pump			
<b>Neutralizing dosing system</b>	Peristaltic pump			
<b>Max nr.of dosing pumps</b>	2	2	3	3
<b>Volume detergent control</b>	optional			
<b>Detergent cabinet</b>	no	no	no	no
<b>Display</b>	With segments and communication led icons			
<b>Control panel</b>	Membrane keyboard			
<b>Steam condasator</b>	no	no	optional	optional
<b>Drying system</b>	Thermodynamic	Thermodynamic	Thermodynamic	Forced hot air through "drying system"
<b>Pre-filter class C</b>	n.a.	n.a.	n.a.	yes
<b>Cold water supply</b>	yes			
<b>Hot water supply</b>	n.a.	n.a.	n.a.	n.a.
<b>Demineralized water supply</b>	yes			
<b>Integrated water softener</b>	yes			
<b>Washing pump</b>	400l/min	200l/min	400l/min	400l/min
<b>Conductivity control</b>	n.a.			
<b>Printer</b>	no	optional	optional	optional
<b>Door interlock</b>	yes			
<b>Net weight (kg)</b>	72	61	74	77
<b>Conformity</b>	2006/95/CEE,93/68/CEE, 2004/108/CEE			
<b>Supply/Max power</b>	1/N/PE/230V-50Hz-2,8 KW As an alternative: 3/N/PE/400V-50Hz-7,0KW	1/N/230V 50Hz-3,3 kW	1/N/PE/230V-50Hz-2,8 KW As an alternative: 3/N/PE/400V-50Hz-7,0KW	1/N/PE/230V-50Hz-2,8 KW As an alternative: 3/N/PE/400V-50Hz-7,0KW
<b>Possibility of 60Hz supply</b>	yes			
<b>Equipped with plug</b>	no	yes	no	no

**MACHINE TECHNICAL FEATURES**

	<b>GW4190</b>	<b>GW3060</b>	<b>GW4090</b>
<b>Internal dimensions(LxDxH mm)</b>	520x515x545	520x515x545	520x515x545
<b>External dimensions (LxDxH mm)</b>	900x605x850 (830 with built-in top)	600x640x850 (830 with built-in top)	900x640x650 (830 with built-in top)
<b>Standard programs stored</b>	9	20	20
<b>Modifiable programs</b>	6	10(expandable to 50)	10(expandable to 50)
<b>Detergent dosing system</b>	Powder dispenser or peristaltic pump	Powder dispenser or peristaltic pump	Peristaltic pump
<b>Neutralizing dosing system</b>	Peristaltic pump		
<b>Max nr.of dosing pumps</b>	3	4	4
<b>Volume detergent control</b>	optional		
<b>Detergent cabinet</b>	yes	no	yes
<b>Display</b>	With segments and communication led icons	Backlit graphic LCD display 128x64 pixel	Backlit graphic LCD display 128x64 pixel
<b>Control panel</b>	Membrane keyboard		
<b>Steam condensator</b>	optional		
<b>Drying system</b>	Forced hot air through "drying system"	Thermodynamic	Forced hot air through "drying system"
<b>Pre-filter class C</b>	yes	n.a	yes
<b>Cold water supply</b>	yes	yes	yes
<b>Hot water supply</b>	n.a.	yes	yes
<b>Demineralized water supply</b>	yes	yes	yes
<b>Integrated water softener</b>	yes	yes	yes
<b>Washing pump</b>	400l/min	400l/min	400l/min
<b>Conductivity control</b>	n.a	optional	optional
<b>Printer</b>	optional	optional	optional
<b>Door interlock</b>	yes	yes	yes
<b>Net weight (kg)</b>	83	76	83
<b>Conformity</b>	2006/95/CEE,93/68/CEE, 2004/108/CEE		
<b>Supply/Max power</b>	1/N/PE/230V-50Hz-2,8 KW As an alternative: 3/N/PE/400V-50Hz-7,0KW		
<b>Possibility of 60Hz supply</b>	yes		
<b>Equipped with plug</b>	no		