

GW0160



GW0160 TECHNICAL FEATURES All versions

| | |
|-------------------------------------|---|
| Electronic control | microprocessor |
| Standard programs stored | 7 |
| Clock and calendar | yes |
| Reprogrammable phases | no |
| Chamber internal temperature | from room temperature to 85°C |
| Accuracy | 0,1°C |
| Temperature sensors in chamber | 1 x PT 1000 CLASSE B IEC 60751 |
| Water heating | electrical, 6,3 kW on three-phase version, 2,3 kW on single-phase version |
| Steam condenser | no |
| Display | 4 digits with segments and communication icons |
| Detergent dosing system | 1 powder dispenser or 1 peristaltic pump for liquid detergent according to the versions |
| Detergent level sensor | optional |
| Liquid acid pump | yes |
| Safety lock | yes, with electromagnetic release |
| Safety devices | safety thermostats, door interlock and automatic opening |
| Alarm display | 30, acoustic and visual |
| Troubleshooting menu | no |
| Programme editing | no |
| AUXILIARY FUNCTIONS | |
| Traceability | no |
| RS232 serial port for PC connection | no |
| RS232 serial port for printer | no |
| Cycle storage | no |
| Cycle file download | no |
| WATER SUPPLY | |
| Cold water inlet | yes, max 42° F hardness |
| Demineralised water inlet | yes, <20µS/cm |
| Demineralised water booster pump | optional |
| Water softener incorporad | yes |
| Recirculation pump | 400 l/min |
| DIMENSIONS LxPxH mm | |
| Overall (with built-in top) | 600x605x850 (830) |
| Chamber | 520x515x545 |
| Net weight(kg) | 72 |
| STAINLESS STEEL | |
| Wash chamber | AISI 304 |
| Exterior covering | AISI 304 |
| ELECTRICAL POWER SUPPLY | |
| Voltage/power | 1/N/PE ~ 50Hz 2,8 kW 3/N/PE 400V ~ 50Hz 7,0 kW |
| NOISE LEVEL 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 test tubes and breakers 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.

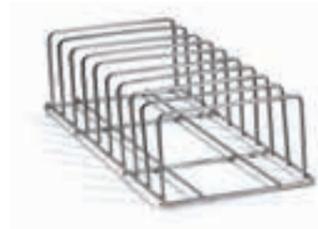
PLATE AND SLIDE SUPPORTS



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 ¼ 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 (m ³ /°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.

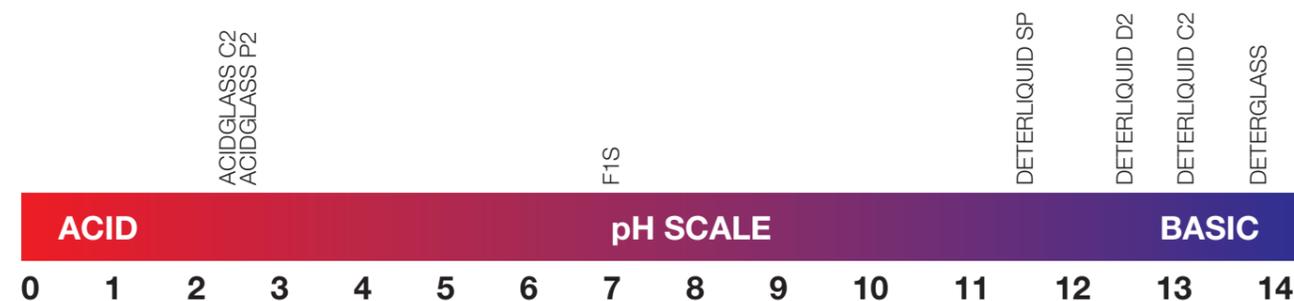
Application field :universal, environmental analysis
5 liter container, 1-2 ml/liter.

SPECIAL ADDITIVES

ph 7

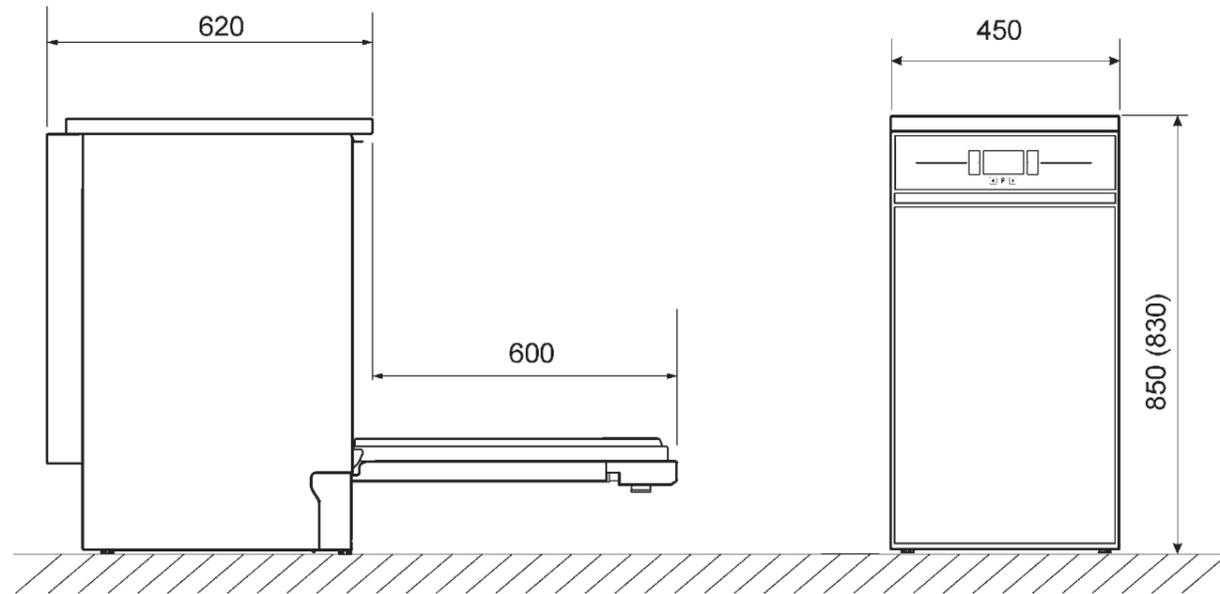
F1S: antifoam additive. Surfactant products for washing (soap and shampoo) and additives for petrochemical washing cycles .

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



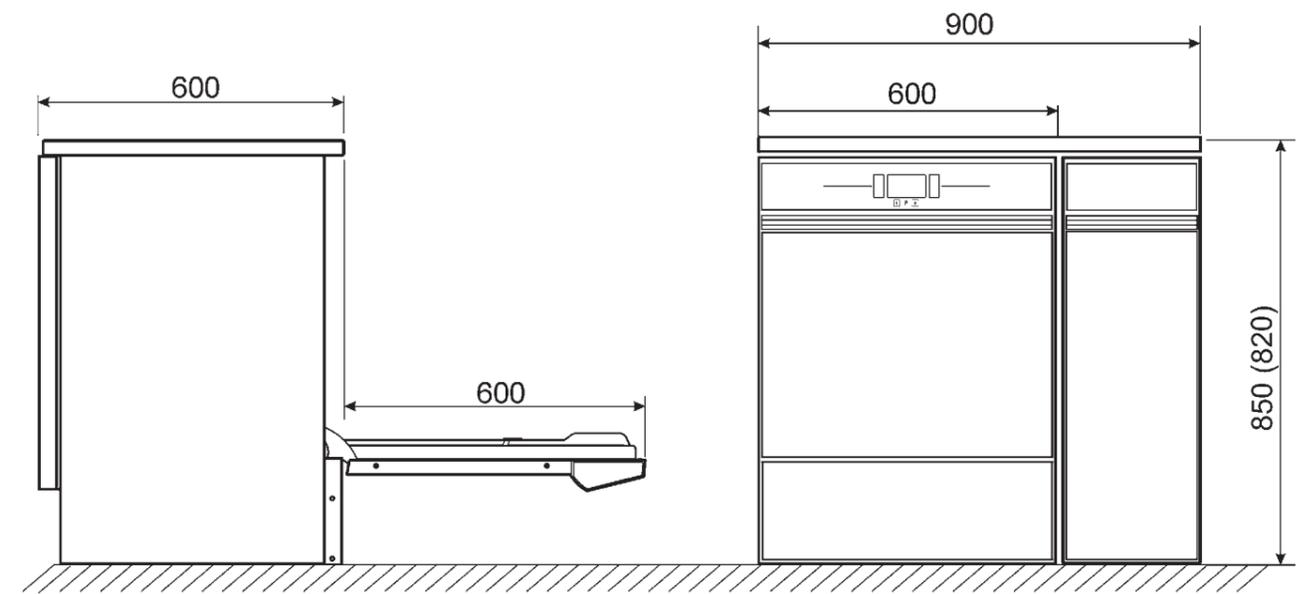
EXTERNAL DIMENSIONS - BASIC LINE

GW2145

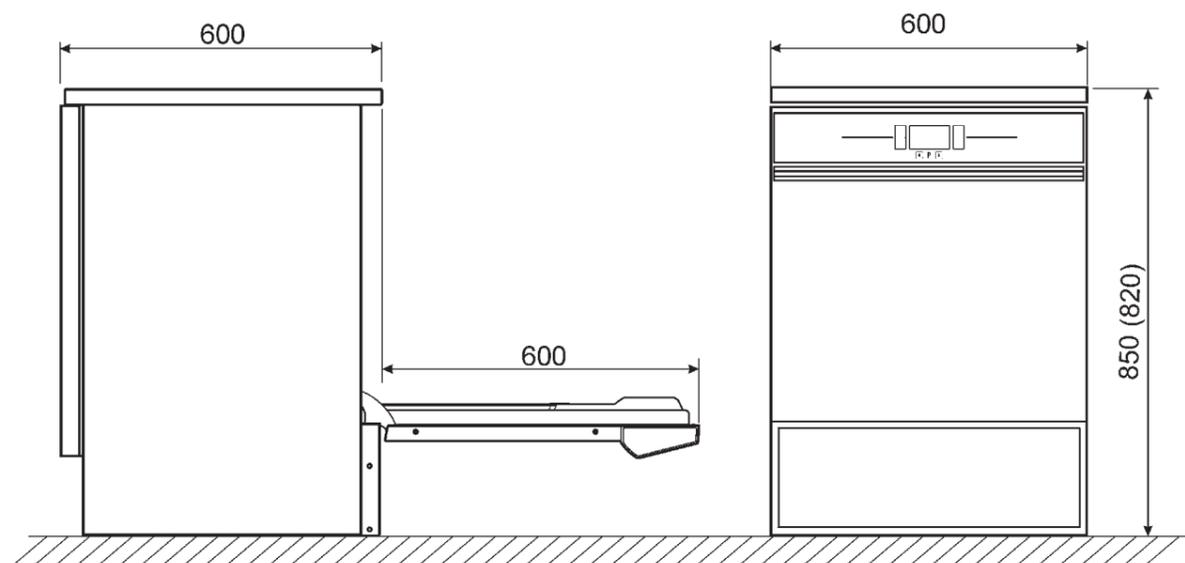


EXTERNAL DIMENSIONS - BASIC LINE

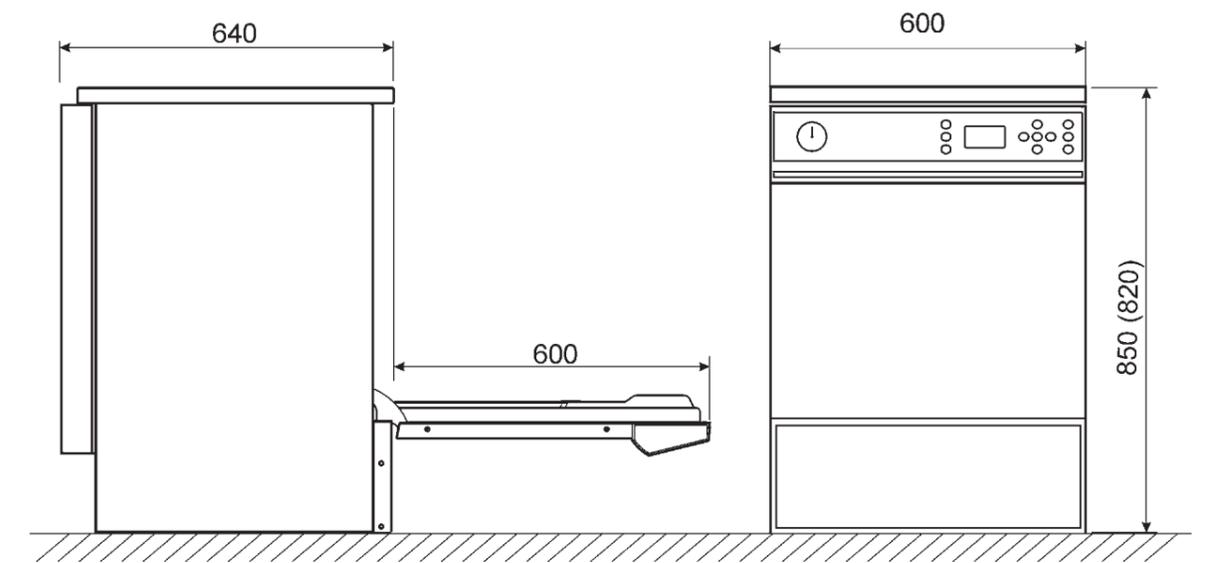
GW4190



GW1160 - GW0160 - GW4060



GW3060



MACHINE TECHNICAL FEATURES

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

MACHINE TECHNICAL FEATURES

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