GW1245

GLASSWARE-WASHER - 45CM

WITH ACTIVE THERMODYNAMIC DRYING

REVISION INDEX

REV.	DATE	REMARKS
00	07/06/2024	First release

GENERAL CHARACTERISTICS

- Manufacturer: Smeg S.p.A.
- Market launch: 2024
- Intended use: the appliance is designed for washing and disinfection of laboratory glassware
- Main applications: food industry, pharmaceutical industry, general chemistry, organic chemistry and biochemistry, research laboratories, etc.
- Conformity: please refer to CE declaration of conformity

INTRODUCTION

The GW series, the result of more than thirty years of experience in the washing and disinfection sector, combines the most modern technologies and the most reliable design solutions in full compliance with the severe regulations of the sector, conceived and created with the sole objective of guarantee the maximum in terms of reliability, safety and performance.
Thus was born the system consisting of the set of washing device and washing trolleys which allows the treatment of the most disparate types of glassware, optimizing space and reducing costs for the customer.
The machines are front-loading with manual folding door opening, completely made of steel. In particular, exclusively AISI 316L stainless steel is used for the wash tank and the door, while the external panels are made of AISI 304 stainless steel.
Plastic materials are all heat-resistant and able to resist corrosive substances or organic solvents.
The machine is designed for ergonomic use.
Maintenance operations are made easier by front access to the main components of the machine.
The control system of the equipment is characterized by a sophisticated touch-on-glass color display which allows the management of each operating parameter through animated icons and communication on three simultaneous levels of parameters that can also be configured by the user.
This allows an immediate view of the machine status without having to intervene manually.
The system memorizes each event and records the history of the programs executed in the memory archive.
The completely electronic control allows you to have a wide choice of programs, to store the cycles performed in a special memory buffer, to set night cycles using the clock option, to view all the fundamental parameters on the display and last but not least to carry out complete diagnostics of the equipment.
The USB port conveniently positioned on the front allows simple connection to a USB stick or external PC, to download the archive or update the software.
The washing chamber is equipped with a rotating washing arm on the tank bottom, while the trolleys used to house the washing glassware can be equipped with their own sprayers or injectors, which allows the creation of spraying, injection or mixed washing systems, offering the customer the optimal solution to their needs.
The high precision in the dosage of detergents and the control of incoming water using flow meters minimizes waste and significantly reduces the environmental impact.

Electricity consumption has been largely reduced thanks to "intelligent" management of electric water heating and an in-depth study of washing programs.

The standard equipment of the machine includes the communication management SW. This exclusive software, thanks to the USB port, allows you to upload updates to the machine control software (firmware upload) without having to resort to component disassembly/assembly operations by authorized technical personnel, to control remotely and in real time the progress of the thermo-disinfection cycle being executed at that moment and all the significant operating parameters of the machine, to set and/or modify new washing cycles from the PC and then memorize them, to download and archive the cleaning cycles on the PC thermo-disinfection performed and to verify in real time the value of the A0 parameter obtained by drawing a time/temperature graph of any thermo-disinfection cycle performed.

Available model: GW1245-S0-100

VERSION	POWDER DISPENSER	NEUTRALIZER PUMP	DETERGENT PUMP	PUMP FOR ADDITIVES	STEAM CONDENSER
GW1260-S0-100	-	●	●	-	-

The dedicated optional and the additional RS232 port for printer are available for LAN network communication.

TECHNICAL FEATURES

The heart of the new generation of Smeg glassware washers is the innovative microprocessor management system capable of controlling every activity carried out and monitoring the entire flow of information processed by the equipment through redundant systems. The Smeg GW1245 glassware washer offers the possibility of programming all washing and disinfection parameters directly from the keyboard or from a PC.

In this way it is possible to set all the significant parameters such as: execution times, working temperatures, quantity of additives, number of phases and more.
Access to management operations is protected by a four-level password system.

ELECTRONIC CONTROL SYSTEM

Control:	Touch on glass
Total programs:	40
Default programs:	20
Custom programs:	20
Display:	LCD, providing 3 simultaneous levels of information on machine programmes and parameters; provided with a set of icons - some of them animated - that provide information, also through a colour coding system, to accompany the current cycle; progress bar in the middle of the display
Displayed functions:	chamber temperature, target drying temperature, dose of chemical used, total and residual time, A0, current programme step, selected programme, ECO programme function, progress, clock and calendar, malfunction code, maintenance
Reprogrammable phases:	10
Phase parameters:	water type (cold, demineralized), detergent dosing, target temperature, time extension in minutes, temperature and time for drying
Displayed temperature range for washing chamber:	from environmental temperature up to 95°C
Accuracy:	0.1 °C
Temperature check in washing chamber:	n. 1 PT1000 probe – IEC 60751, B class

- Graphic colour display for continuous real-time viewing of all the main operation parameters:
  - Ongoing program ID;
  - Program progress status, with progress bar, with indication of the expected residual time;
  - Ongoing sub-phase;
  - Washing chamber temperature;
  - A0-value achieved;
  - Alarm with maintenance messages;

- Touch on glass keyboard for programme selection - depending on the type of articles to be washed, level of soiling and A0 value - and for easy set-up operations;

- **There are 20 standard programmes and 20 further programmes that can be customised to suit customer requirements** (please refer to the programs table for further details);
- Each program **can be customized with up to n. 10 sub-phases for rinse/washing + n. 1 phase for drying.**
  - It is possible to configure and save for a single phase the following parameters: water intake type (cold water, demineralized water), degree of hardness of the water to be treated, detergent amount or chemical additive to use, spraying duration without heating, temperature and duration for hot phase, when adding the additives;
  - The drying phase can be customized by defining both duration and temperature;
  - Automatically set to the last cycle carried out;
  - Cycle repeat can also be set.
- **Detergent dosing check by means of flow meters, level sensors and timer**;
- Electronic check of the maximum allowed temperature;
- Audible and visual alarm for end of cycle;
- Immediate display of the detected error message;
- Automatic counter for cycles performed;
- USB port for connecting the glassware to the PC or printer);
- Optional serial interface for direct connection to an external printer or other optional modules;
- Optional LAN interface for network connection;
- Electronic clock and calendar coupled with battery backup in case of power failure;
- Checking of the correct washing pump functioning by means of high pressure switch;
- Soft-start for preventing thermal shock;
- Electronic control on the built-in ECO-SLIM steam condenser (only for GW1260-0C/-SC) to ensure the elimination of condensate;
- Temperature probes calibration through dedicated software;
- Range for water temperature set-point: from environmental temperature up to 95°C;
- Automatic storing of all data related to performed cycles on the internal archive;
- Possibility to download the cycles archive on PC;
- Possibility to install a printer for reporting the data cycle and validating in real-time the disinfection performed;
- Demineralised water can be deactivated for each program independently
- Possibility to select the automatic door opening parameter at the end of the cycle

SAFETY SYSTEMS AND ALARM INDICATIONS

- Electrical door block with automatic closure safety lock and microprocessor-controlled active release;
- Mechanical emergency door release in the event of machine failure;
- Mechanical emergency door release in the event of a power failure;
- Overheating safety system via safety thermostats;
- Error/alert messages shown on the display:
  - n.° 14 warning messages;
  - n.° 42 alarm indications;
  - Visual and acoustic alerts when a detergent top-up is required;
  - Visual alerts when a softener salt top-up is required;
  - Visual alerts when drying filter replacement is required (where present);
  - Visual alerts when routine maintenance is required;
- Checking by flow meters for a correct water intake;
- Water levels check;
- Pump malfunction check;
- Chamber over-heating control by means of a PT1000 probe;
- Operator safety system with chamber temperature reduction at the end of the cycle;
- Water Stop system for preventing damages due to water leakages - optional.
- Trouble-shooting menu by PC connection;
- Wash stop when the door is opened.

WASHING SYSTEM

The Smeg glassware-washer GW1260 is based on a closed loop washing system with water intake completely renewed in each phase.
The mixing of additives with water occurs by means of peristaltic pumps inside the washing chamber and in a specific phase of the program. The additives concentration can be set for each program.
During the working phase the washing pump makes the water and additives low into the sprayer systems, with the possibility of adjusting the washing pressure of the upper sprinkler, for delicate washes. (see the pressure regulator picture).
The high rate flow/pressure, in conjunction with temperature and time, allow the removal and dilution of contaminants in the water.
The electrical heating system rapidly increases the temperature of water filled in the washing chamber without stopping the circulation and washing processes)
In order to ensure a constant pressure on sprayers and consequently a good
quality for cleansing, the machine steadily monitors if the washing pump works
in the best way.

- Washing pump flow: more than 200 l/min
- Drain pump flow: 18 l/min

FILTERS

- **4-stage filter inside the washing chamber:**
  - Well macrofilter made of micro-perforated steel mesh
  - Well microfilter made of steel mesh
  - Immediately visible coarse filter in the chamber
  - Midline microfilter made of steel mesh
- Microfilter for cold water inlet tube
- Microfilter for demineralized water inlet tube

DOSING SYSTEM

All Smeg GW1245 models are equipped as standard with two peristaltic pumps dedicated respectively to the dosing of the alkaline detergent during the cleansing phase and the acid-based neutralizer in the neutralization phase.

- 1 peristaltic pump with a flow rate of 46 ml/min (P1) for dosing the alkaline liquid detergent, activated in the cleansing phase
- 1 peristaltic pump (P2) for dosing the neutralizer at acid pH in the neutralization phase
- All peristaltic pumps can be equipped with a level sensor to be inserted directly into the tanks of the products used, to signal missing product on the display (optional).

Furthermore, pumps P1 and P2 can be connected to a dosing control sensor – flow switch (optional).

Details on the consumption of the various chemical products are shown in the program table.

POWER SUPPLY

- Single phase version: 230V ~ / 50Hz / 13A /2950W
- Schuko plug 16 A - 250 V included

WATER CONNECTIONS
(PRESSURE 1-6 bar - 3/4“ DN20 connection – REQUIRED FLOW RATE 4-12 L/min)

- **Cold water connection:**
  - Temperature 8-35 °C;
  - Max hardness 42°f
  - Fe2+/Fe3+ content <0.5ppm;
  - pH 7-8;
  - minimum microbiological quality required “Drinking water type” (see Directive 98/83/EC - Italian Legislative Decree 31/2001)
- **Demineralized water connction:**
  - Temperature 8÷50°C;
  - Max hardness 0,5°f – 0 ppm CaCo3
  - conductivity < 30 µS/cm
  - pH 5÷8
  - TDS max 40mg/l
- All water supply hoses are fitted with an water stop device
- Booster pump for non-pressure demineralized water - optional
- Built-in softener based on automatic volumetric regeneration with salt
- Water consumption: 5 L for each single phase in relation to the selected program
- Checking by flow meters for the correct water intake

DRAINAGE CONNECTION

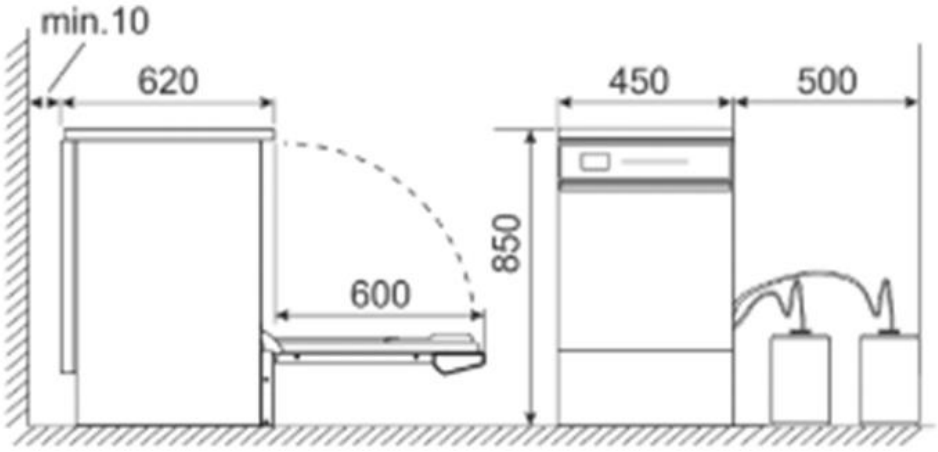
- Drainage pipe connection with Ø 21 mm (1/2”) rubber end piece
- Maximum flow rate 25 L/min.
- Max. outlet water temperature 95 °C, can be adjusted to a minimum of 65 °C using the drain cooling function
- Max. heigh of drain from the floor 800 mm

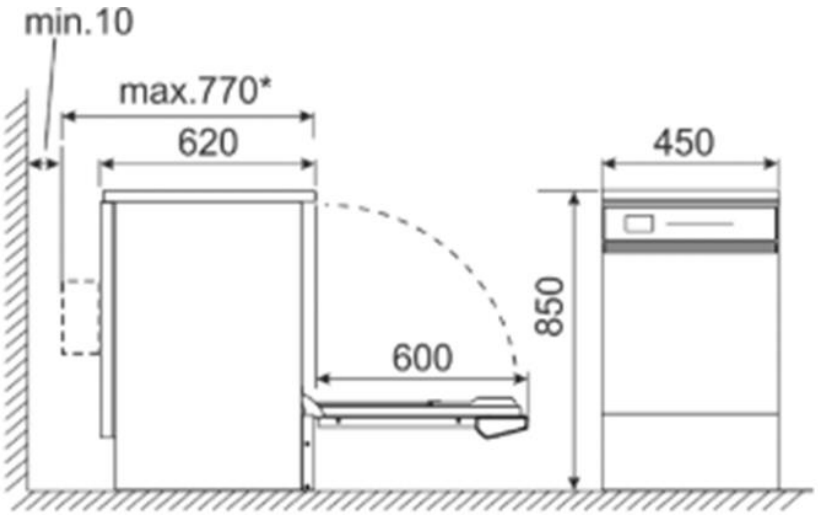
NOISE LEVEL

- Max 60 dB(A)

DIMENSIONS LxPxH AND WEIGHTS

- External dimensions (with top for built-in applications - optional): 450 x 620 x 850 mm (H=830 mm)
- Net internal chamber dimensions: 370 x 480 x 570 mm
- Net internal chamber volume: 101 litri
- Net weight (no load inside): 56 Kg
- Packed weight: 66 kg
- Max weight in operation condition (18 kg max load + 5 liters of water): 79 kg
- Max load on floor: 280 kg/m2





* The increased depth of 770mm refers to the product when the optional PAD1 is installed, applied to the back of the device.

STAINLESS STEEL

- Washing chamber and inner door AISI 316L – thickness 6/10 – 8/10 mm – with rounded edges and sloping surfaces to avoid water stagnation, self-cleaning to remove any risk of bacterial proliferation.
- External panels AISI 304 – perfectly smooth “Scotch-brite” finish to prevent dust and/or dirt accumulation, made with quick-coupling panels for easy maintenance and cleaning;
- Removable front panels to facilitate access to the parts inside the machine and allow considerable maintenance time-saving;

The product is manufactured to ensure absolute thermal and acoustic insulation.

AUXILIARY FUNCTIONS

- USB port for wash cycle log downloads
- LAN port for network connection (optional)
- Serial port RS232 for connecting to an external printer (optional)

The total verification of the thermal disinfection process is one of the most important aspects as explicitly required by the regulations. So it is essential that the glassware are equipped with the necessary device for communicating data of the performed process.
The Smeg GW1260 glassware washer includes a standard issue USB port to allow connection to a computer or flash drive and for downloading all the information on the washing and thermal disinfection cycles carried out.
The electric card makes it possible to save the data of the most recent programmes run; the number of programmes that can be saved depends on their complexity but is never less than 100.

Cycle archive - Cycle archive download: WD-CONNECT / TXT format

PROCESS TRACEABILITY

The traceability of the washing and thermal disinfection cycles carried out using professional glassware washers is the indispensable condition for verifying the effective success of the operations.
The printer is a fundamental accessory that provides a detailed report containing all the information relating to the cycles carried out.
Alternatively, the machine can be connected to an electronic data storage system via the LAN port (optional).)

LAN CONNECTION

The new generation of Smeg glassware can be equipped with the optional “WD-LANI2”, data communication card that is able to connect the glassware washer directly to any data network available.
The LAN connection and dedicated Smeg WD-CONNECT software make it possible to view each appliance as though it were a terminal by making all the machine data available directly on the computer.

The option, to be set via instructions in the installation manual, therefore allows communication and monitoring of the machine from any access point to the local network

AVAILABLE OPTIONALS

PAD1	Booster pump for demineralised water not under pressure (tank h>85 cm)
PAD2	Booster pump for non-pressurised demineralised water (ground tank)
PAD2R	Relay kit for pad2 pump
PAD2X	Stainless steel booster pump for demineralised water not under pressure (tank
TOP45I	Earth)
WD-232PRINT	Top closure for undercounter built-in 45 cm
WD-LANI2	RS232 serial port
WD-LS3060	Lan communication card
WD-PRINTE	Detergent level sensor
WD-LS3060	External printer for documenting cycle data and for real-time validation of the thermo-disinfection cycle carried out. For each process, data is tracked such as: date and time of each event, main washing parameters (time, temperatures, detergent dosage, etc.)
FLUX4060	Detergent level sensors
TPO45I	Detergent dosage control - flow switch

ACCESSORIES RANGE – VERSATILITY AND FLEXIBILITY

In laboratories, the washing and disinfection with the combined action of time and temperature are considered a necessary step to get top results for glassware cleaning.
Thanks to the high number of specifically designed accessories, Smeg offers a wide range of solutions to fulfil each single need.
It is also possible to work out on custom requirements for achieving tailored solutions.

DETERGENTS AND ADDITIVES

The use of specific detergents is essential for obtaining thorough washing and even more effective disinfection of the glassware. Smeg can provide you a wide range of alkaline detergents (for washing phase) and acidic neutralizers (for neutralization phase) which have been designed specifically to ensure an efficient cleansing so that the disinfection process can be optimal.
Furthermore, Smeg offer various detergents for processing of laboratory glassware and tools which are able to prolong their lifetime ensuring certain e repeatable results.

TECHNICAL ASSISTANCE SERVICE

Smeg takes care of its customers throughout the product's lifecycle, by making available highly-specialised technical service centres throughout Italy and worldwide, that take care of installation, testing and personnel training.

In addition, a single national helpdesk provides qualified assistance to meet all requirements.

Choosing Smeg means finding an after-sales service with a 5,000 m2 warehouse able to ensure next-day delivery of spare parts, thanks to a comprehensive web-based management system (SmegTech)

WARRANTY

24 months by the local Smeg service centre.