GWF29

FLEXILOAD LINE

Laboratory glassware washer

GWF29 is a glassware washer designed to operate with two independent washing levels. It can be installed under the counter to optimize space while ensuring high washing efficiency.

The modular internal configuration provides excellent adaptability for glassware of different shapes and sizes, allowing each load to be optimized and quickly reconfigured according to the laboratory's needs.

This system ensures greater operational flexibility and more efficient washing cycles, with a significant reduction in time and consumption.

Equipped with a stainless-steel drop-down door (also available with a glass door option), it offers washing, thermal and chemical disinfection up to 95°C, and a forced hot-air drying system with H13 HEPA filter. An integrated compartment allows storage of two detergent canisters.

The appliance's control system features a sophisticated full-color touch-on-glass LCD display, enabling complete management of all operating parameters as well as recording of every event and program performed.

Technical features

Electronic control	Microprocessor
Standard programs stored	20
Custom programs	20
Display	Colour graphic LCD display with touch on glass keyboard
Alarm display	Yes, acoustic and visible
Troubleshooting menu	Yes
Washing cycle progress indicator on the display	Yes
Washing temperature	Up to 95°C
Accuracy	0.1°C
Door	Drop-down stainless-steel door (glass door version available)
Safety door lock	Yes, with electromagnetic release and automatic opening
Traceability	Storage of data for at least 300 most recently run programs
Internal datalogger	Yes
Cycle and alarms data download	Yes, through USB; optional through printer, LAN connection or RS232 serial port

Construction

Washing chamber material	AISI 316L
External panels material	AISI 304
External dimensions (WxDxH)	900 x 605 x 850 mm
Packaging dimensions (WxDxH)	950 x 790 x 1050 mm
Internal net dimensions (WxDxH)	525 x 520 x 555 mm
Net washing capacity (l)	152
Gross washing capacity (l)	171
Net weight (Kg)	100
Gross weight (Kg)	116
Noise level	Max 60 dB(A)

Equipment

Washing levels with telescopic guides	N° 2
Enhanced bottom sprayer arm with inclined angles	Standard
Upper sprayer arm	Optional (cod. IRCF)
Peristaltic pump for liquid neutralizer dosing	Standard
Peristaltic pump for liquid detergent dosing	Standard on specific versions (see table below)
Powder detergent dispenser	Standard on specific versions (see table below)
Additional peristaltic pumps	Yes, up to 2
Peristaltic pump for caustic soda dosing	Optional
Peristaltic pump for antifoam dosing	Optional
Steam condenser	Standard on specific versions (see table below)
Water softener	Standard
Detergent level sensor	Optional, max n° 3
Dosing control for peristaltic pumps	Optional, through flow switch
Temperature probe in washing chamber	N° 1 x PT 1000 CLASSE B IEC 60751
Pass-through hole for temperature probe entry	Standard
Detergent storage compartment	Standard, for 2 x 5 l canisters (4 with optional cod. TANKBSK)

Drying system

Drying temperature	From 70 to 120°C
Electrical resistance power	1200 W
Drying pre-filter class C 98%	Standard
Absolute HEPA filter HEPA H14 99,995%	Optional

Available versions

VERSION	POWDER DETERGENT DISPENSER	LIQUID DETERGENT DOSING PUMP	NEUTRALIZER DOSING PUMP	ADDITIONAL DOSING PUMPS	STEAM CONDENSER	GLASS DOOR
GWF29-00-000	●	○	●	○	-	-
GWF29-S0-000	-	●	●	○	-	-
GWF29-0C-000	●	○	●	○	●	-
GWF29-SC-000	-	●	●	○	●	-
GWF29-SC-00G	-	●	●	○	●	●

●	standard feature
○	optional features (some can **only be installed in the factory at the time of ordering**)
-	feature not provided and not installable

Optional

AF4060	Absolute HEPA filter (H14)
AS4190	AquaStop water leak kit
FLUX4060	Dosing control kit for peristaltic pumps
IRCF	Additional upper sprayer arm, to improve washing efficiency
LEDF	LED lighting in washing chamber
KITSUPPR	Wheels reinforced support kit for upper basket
P14190	Peristaltic pump for liquid detergent dosing
P34290	Peristaltic pump for caustic soda dosing
P44290	Peristaltic pump for defoaming dosing
PAD1	Booster pump for non-pressurized demineralised water (tank H >85 cm)
PAD2X	St. steel booster pump for non-pressurized demineralised water
PAD2R	Relay kit for PAD2X pump
T9040	Stainless steel frame (to increase H machine to 70 cm from the floor)
TANKBSK	Upper canister basket
TOP90IC	Built-in top, reduces machine height at 830 mm
WD-232PRINT	RS232 serial port, for connection to external printer
WD-EC4290-1	Single-phase electrical connection
WD-EC4290-3	Three-phase electrical connection without neutral
WD-LAN4290	LAN communication card, equipped with RS232 serial port
WD-LS4190	Detergent level sensor
WD-PRINT4290	Panel printer

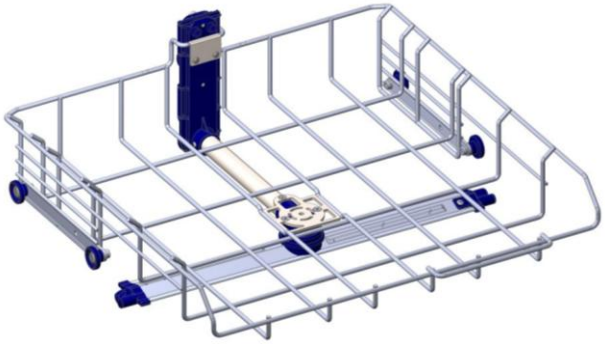
Plinths and support frames

B9040L
STAINLESS STEEL PLINTH WITH LOCK
- dimensions WxDxH: 900 x 530 x 400 mm
- bring the load level of the machine to 70 cm from the ground
- equipped with detergent compartment with anti-drip bottom surface
- front door with key lock

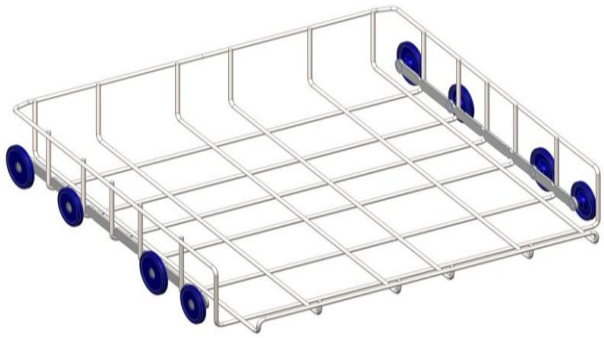
T9040
STAINLESS STEEL SUPPORT FRAME
- dimensions WxDxH: 900 x 530 x 400 mm
- bring the load level of the machine to 70 cm from the ground
- allows cleaning under the machine

Washing trolleys and modules

Base trolleys for spray washing

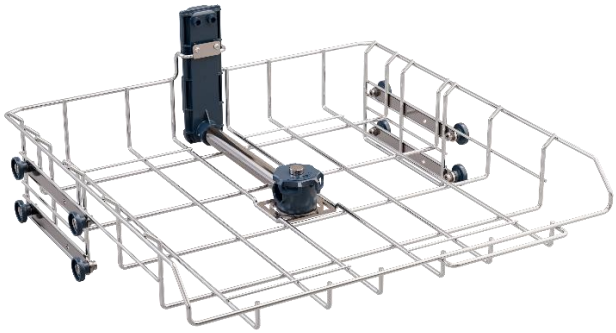


CFM-S
UPPER TROLLEY
- Suitable for positioning wide-necked glassware for spray washing and/or for positioning specific washing baskets and supports
- Integrated sprayer arm for enhanced spray washing on the upper level
- Usable height: 226 mm
- Usable dimensions (WxD): 474 x 468 mm



CFM-I
LOWER TROLLEY
- Suitable for positioning wide-necked glassware for spray washing and/or for positioning specific washing baskets and supports
- Usable height: 230 mm
- Usable dimensions (WxD): 484 x 501 mm

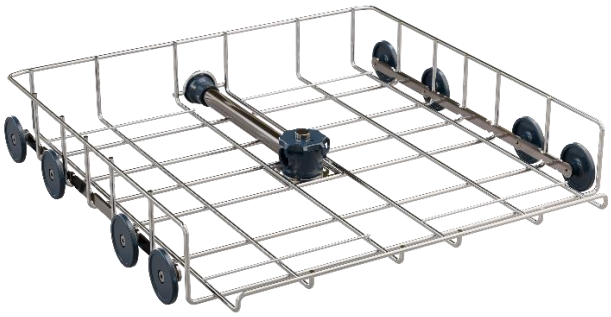
Base trolleys for injection washing



CFL-S

UPPER TROLLEY

- Suitable for positioning wide-neck glassware or specific washing modules
- Central selector switch that allows two modules to be fitted at the same time or divert the water flow to a specific module or manifold
- Configurable trolley height to allow different washing options: 250 or 196 mm depending on the configuration chosen
- Usable dimensions: 208x468 mm (WxD) per side



CFL-I

LOWER TROLLEY

- Suitable for positioning wide-neck glassware or specific washing modules
- Central selector switch that allows two modules to be fitted at the same time or divert the water flow to a specific module or manifold
- Usable height: 250 or 305 mm depending on the configuration chosen for the upper trolley
- Usable dimensions: 217x501 mm (WxD) per side

Injection modules for narrow-necked bottles and glassware

MFL-8P

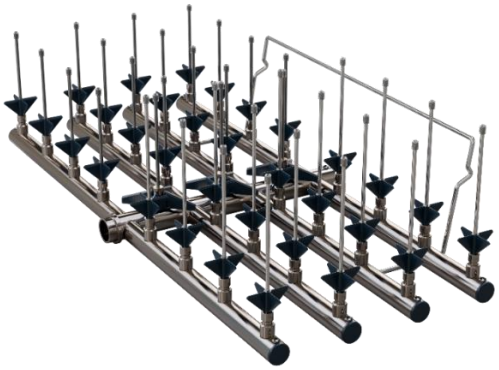
INJECTION MODULE FOR LARGE GLASSWARE

- Suitable for washing 8 bottles of 1000 ml
- Max. diameter of processable glassware: 120 mm
- Equipped with the following nozzles: 8 x U6170 (170 mm)

MFL-20P

INJECTION MODULE FOR MEDIUM-SIZED GLASSWARE

- Suitable for washing 100 ml flasks
- Max. diameter of processable glassware: 74 mm
- Equipped with the following nozzles: 9 x U3110 (110 mm) and 9 x U4140 (140 mm) with height-adjustable bottle supports; 2 x U4140 (140 mm) with lowered bottle supports



MFL-35P

INJECTION MODULE FOR SMALL GLASSWORKS

- Suitable for washing 25-50 ml flasks and flasks
- Diameter of processable glassware: 52 mm
- Equipped with the following nozzles: 16 x U390 (90 mm) and 16 x U3110 (110 mm) with height-adjustable bottle holders; 3 x U390 (90 mm) with lowered bottle holders

Injection modules for vials and test tubes

MFL-KP100

INJECTION MODULE FOR VIALS AND TUBES

- Suitable for washing vials, tubes and vials
- Equipped with the following nozzles: 105 x U390 (90 mm)
- Max. diameter of processable glassware: 10 mm

Pipette injection modules

MFL-PT100

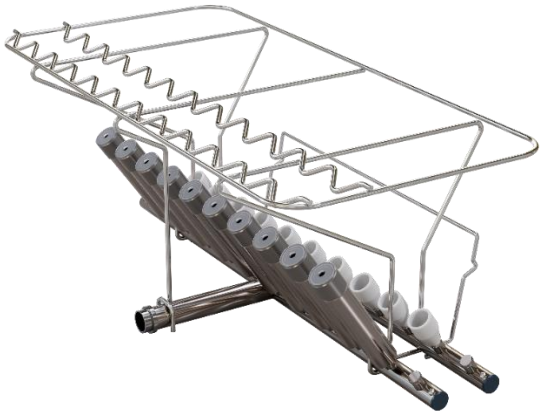
PIPETTE INJECTION MODULE

- Suitable for washing 105 standard pipettes
- Max. height of glassware that can be processed: 480 mm
- Max. diameter of glassware that can be processed: 18 mm
- Can only be used on the lower washing level

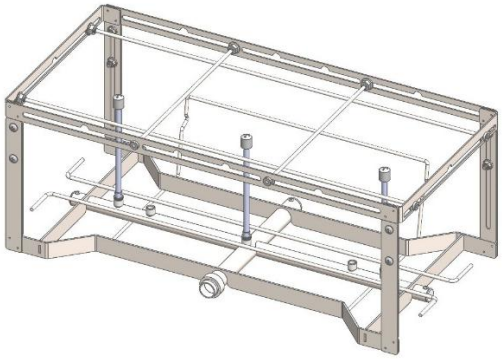
MFL-PT20L

PIPETTE INJECTION MODULE

- Suitable for washing 20 standard pipettes
- Max. height of processable glassware: 580 mm
- Equipped with 10 cylindrical fittings and 10 conical fittings
- Can only be used on the lower washing level



Injection modules for large bottles and glassware



MFL-LBT3

INJECTION MODULE FOR LARGE GLASSWARE

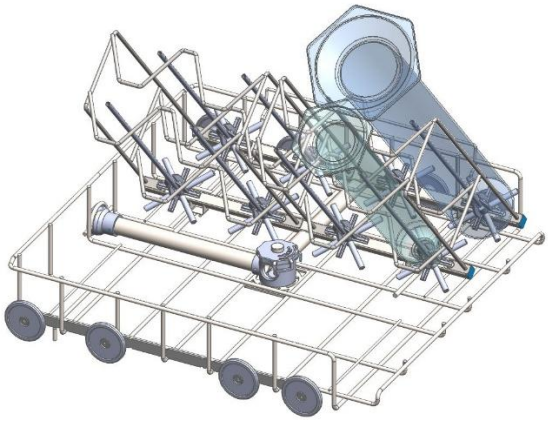
- Suitable for injection washing of 2 or 3 large glassworks
- Max. glassware diameter: Ø 230 mm in case of 2 positions used, Ø 160 mm in case of 3 positions used
- Equipped with the following nozzles: n° 3 nozzles Ø 6 mm H 140 mm complete with support (code ULB6140) + n° 3 caps for the 2/3 unused positions
- Equipped with dividers for secure storage of glassware

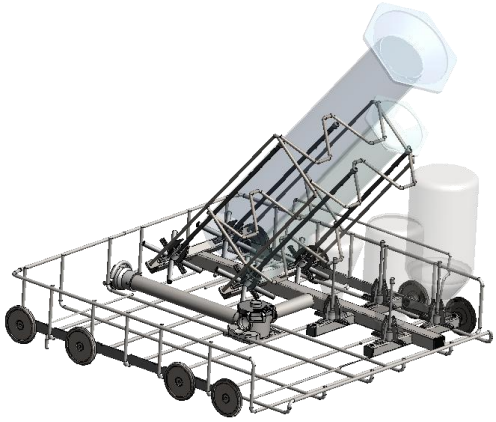
Injection modules for cylinders

MFL-C8

CYLINDER INJECTION MODULE

- Suitable for washing 8 cylinders
- equipped with 8 nozzles Ø 6 mm H 240 mm (code U6240)
- Equipped with n° 8 cross supports
- Support structure for cylinder housing





MFL-C4B4

CYLINDER INJECTION MODULE

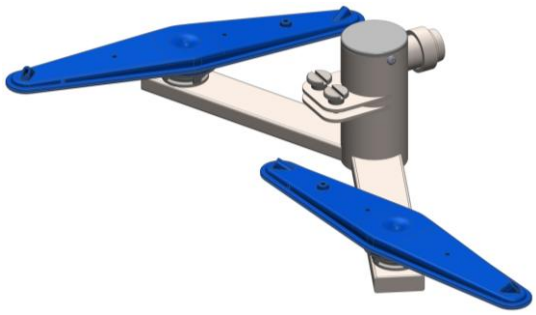
- Suitable for washing 4 cylinders
- Equipped with 4 nozzles Ø 6 mm H 240 mm (code U6240)
- equipped with 4 cross supports
- Support structure for cylinder housing
- Equipped with 4 positions for small-medium dimension glassware

Modules for spray washing for upper floor

MFL-IRS

MODULE FOR SPRAY WASHING 1/2 UPPER LEVEL

- Designed for washing wide-neck glassware in the space of 1/2 upper level
- Equipped with 2 spray arms for enhanced spraying washing on the upper level
- Usable dimensions (WxD): 150 x 468 mm
- Compatible with CFL-S upper rack



Supports

Flask and beakers supports

Cod. SB15

Cod. SB30

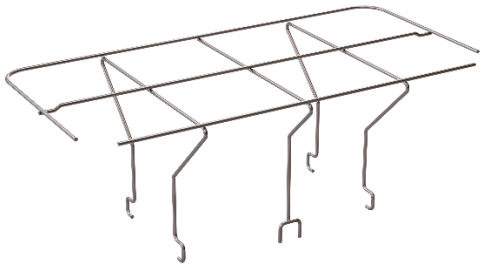
Possible configurations:

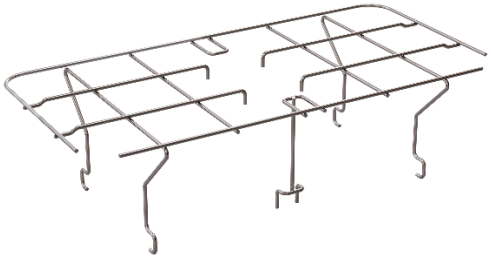
- **SB15:** SPRING SUPPORT - 16 POSITIONS
  - for beakers / Erlenmeyer flasks from 500 to 1000 ml
  - occupies 1/2 base trolley
- **SB25:** SPRING SUPPORT - 25 POSITIONS
  - for beakers / Erlenmeyer flasks from 250 to 500 ml
  - occupies 1/2 base trolley
- **SB28:** SPRING SUPPORT - 25 POSITIONS
  - for beakers / Erlenmeyer flasks from 250 to 1000 ml
  - occupies 1/2 base trolley
- **SB30:** 30 POSITIONS BEAKERS SUPPORT
  - for cylinders of max 100 ml and funnels
  - occupies 1/2 base trolley

SB8F

GLASSWARE SUPPORT – 8 POSITIONS

- Designed for greater stability of the glassware during the washing cycle
- To be combined with module code MFL-8P





SB20F

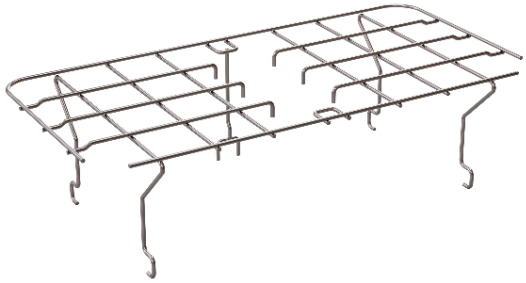
GLASSWARE SUPPORT – 20 POSITIONS

- Designed for greater stability of the glassware during the washing cycle
- To be combined with module code MFL-20P

SB35F

GLASSWARE SUPPORT – 35 POSITIONS

- Designed for greater stability of the glassware during the washing cycle
- To be combined with module code MFL-35P



GW-NEST

GLASSWARE SUPPORT

- Suitable for glassware positioning for greater stability during the washing cycle
- Min-max processable diameter of the glassware: 30-85 mm

GW-NEST-L

GLASSWARE SUPPORT

- Suitable for glassware positioning for greater stability during the washing cycle
- Min-max processable diameter of the glassware: 75-120 mm

Test tubes supports

CP105

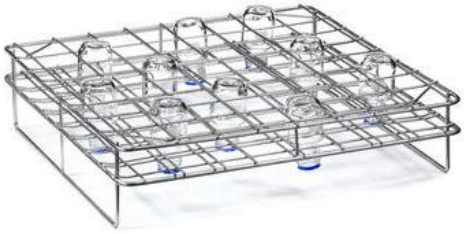
TEST TUBE BASKET - H = 75 MM

- capacity: 160 standard test tubes
- equipped with 2 removable compartments with lid
- occupies 1/4 base trolley CFM-S / CFM-I

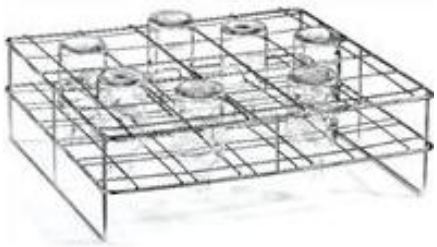
Other configurations:

- **CP132:** TEST TUBE BASKET - H = 105 MM
- **CP192:** TEST TUBE BASKET - H = 165 MM
- **CP222:** TEST TUBE BASKET - H = 200 MM

Bottles supports



Cod. PB50



Cod. PB250

Cod. PB1000

Possible configurations:

PB50: SUPPORT FOR 50 ML WIDE NECK BOTTLES

- capacity: 56 x 50 ml wide neck bottles
- bottle max. dimensions Ø x H: 46 x 87 mm
- positionable on base trolleys CFM-S / CFM-I

PB100: SUPPORT FOR 100 ML WIDE NECK BOTTLES

- capacity: 36 x 100 ml wide neck bottles
- bottle max. dimensions Ø x H: 56 x 100 mm
- positionable on lower-level trolley CFM-I

PB250: SUPPORT FOR 250 ML WIDE NECK BOTTLES

- capacity if collocated on the lower trolley CFM-I: 25 x 250 ml wide neck bottles; 24 x 250 ml if collocated on the upper trolley CFM-S
- bottle max. dimensions Ø x H: 70 x 138 mm

PB500: SUPPORT FOR 500 ML WIDE NECK BOTTLES

- capacity: 21 x 500 ml wide neck bottles
- bottle max. dimensions Ø x H: 90 x 176 mm
- positionable on lower trolley CFM-I

PB1000: SUPPORT FOR 1000 ML WIDE NECK BOTTLES

- capacity: 16 x 1000 ml wide neck bottles
- bottle max. dimensions Ø x H: 110 x 225 mm
- positionable on lower trolley CFM-I; the upper trolley needs to be positioned in the upper possible solution

Plates and slides supports

Cod. SL18

Cod. PV105

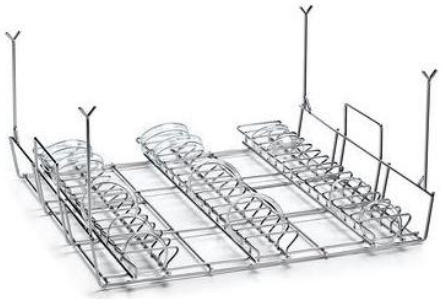
Possible configurations**:**

- **SL9:** SUPPORT FOR CHROMATOGRAPHY PLATES
  - suitable for holding up to 9 plates measuring from 150 x 150 mm to 220 x 220mm
  - occupies 1/2 trolley CFM-S / CFM-I

- **SL18:** SUPPORT FOR CHROMATOGRAPHY PLATES
  - capacity: 18 plates 200 x 200 mm
  - occupies 1/2 trolley CFM-S / CFM-I

- **PV105:** MICROSCOPY SLIDE BASKET
  - suitable for holding 105 standard slides for microscopy

Petri dishes supports



PD70I

LOWER SUPPORT FOR PETRI DISHES 50-70 mm

- capacity: 42 pieces
- positionable on lower trolley CFM-I

Alternative configuration:

- **PD100I:** LOWER SUPPORT FOR PETRI DISHES 70-120 mm

PD70S

UPPER SUPPORT FOR PETRI DISHES 50-70 mm

- capacity: 40 pieces
- positionable on upper trolley CFM-S or on supports PD70I / PD100I

Alternative configuration:

- **PD100S:** UPPER SUPPORT FOR PETRI DISHES 70-120 mm
  - capacity: 38 pieces

Bottom meshes and nets for small glassware

PF1/2F

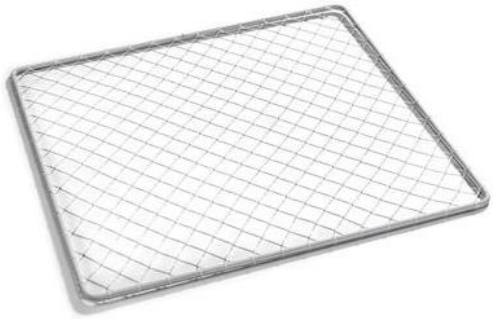
STAINLESS STEEL MESH BOTTOM FOR GLASSWARE POSITIONING

- Suitable for positioning wide-necked glassware for spray washing
- made of stainless-steel flat mesh - mesh 10 x 10 mm

RC1

COMPLETE GLASSWARE FIXING NET

- nylon mesh 25 x 25 mm
- dimensions WxD: 474 x 516 mm
- positionable on lower trolley CFM-I



Available also:

- **RC1/2:** GLASSWARE FIXING NET
  - nylon mesh 25 x 25 mm
  - dimensions WxD: 456 x 214 mm
  - occupies 1/2 base trolleys

- **RC1/4:** GLASSWARE FIXING NET
  - nylon mesh 10 x 10 mm
  - dimensions WxD: 204 x 204 mm
  - occupies 1/4 base trolleys

Baskets

CSK2

INSTRUMENT BASKET WITH HANDLES

- suitable for holding medium-sized instruments
- dimensions WxDxH: 450 x 225 x 50 mm
- mesh 5 x 5 mm
- made of stainless steel

CSK1/3

INSTRUMENT BASKET WITH HANDLES

- suitable for holding various medium-sized instruments
- dimensions WxDxH: 435 x 160 x 50 mm
- mesh 5 x 5 mm
- made of stainless steel

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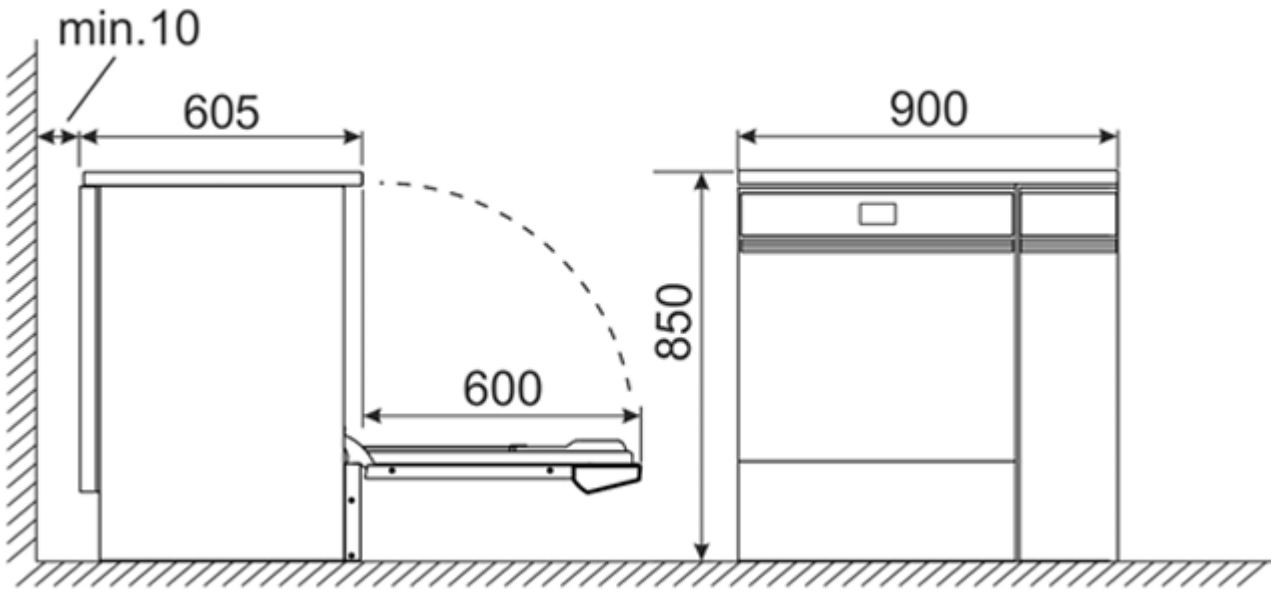
Installation requirements

ELECTRICAL POWER SUPPLY	
Standard power supply	400V 3N~ / PE / 50Hz / 12A (60 Hz version available)
Electrical protection required	3P, 16 A
Power	7 kW
Convertible in single phase (through dedicated optional kit cod. WD-EC4290-1)	1/N/PE 230 V - 50 Hz - 2,8 kW max
Convertible in tri-phase w/o neutral (through dedicated optional kit cod. WD-EC4290-3)	230V 3~ - 50Hz - 19A - 7 kW max

WATER SUPPLY	
Cold water inlet	Max hardness 42°f, max temperature 35°C
Hot water inlet	< 30 µS/cm / 5 -8 ph, max hardness 0.5°f – 0 ppm CaCo3, max temperature 50°C
Demineralised water inlet	Optional, max hardness 42°f, max temperature 50°C
Connection	3/4" - DN20
Required flow rate [min-max]	4 - 12 lt/min
Pressure [min-max]	100 kPa - 600 kPa (1,0 – 6,0 bar)

DRAIN CONNECTION	
Connection	ø 21 mm (1/2'')
Max. flow rate	25 lt/min
Max. drain height from the support surface	800 mm
Max. outlet water temperature	95 °C

Technical drawings



Technical appendix

1. ADDITIONAL INFORMATION

Producer	Smeg S.p.A.
Year placed on the market	2025
Intended use	Glassware washers for washing and thermo-disinfecting glassware and various laboratory materials
Main fields of application	Food, pharmaceutical, cosmetic, general chemistry, organic chemistry and biochemistry, research and teaching laboratories.
Compliance	Refer to the CE declaration of conformity

2. PERFORMANCE INFORMATION

Washing and drying dimensions and performance	**Units of Measurement**	**Value**
Gross volume	[l]	171
Net volume (usable)	[l]	152
Washing chamber's steel thickness	[mm]	0.8
Flow rate of the washing pump	[l/min]	520
Drain pump flow rate	[l/min]	18
Electrical power drying resistance	[W]	1200
Max. settable drying temperature	[°C]	120

- Soft-start function to protect the material to prevent thermal shock at the beginning of the washing phases and monitoring of the hydraulic circuit with high pressure switch.
- Four-stage filter for washing chamber:
    1. Thermowell macro-filter in micro-perforated steel mesh
    2. Micro-filter sump in steel mesh
    3. Coarse filter immediately visible in the chamber
    4. Median micro-filter in steel mesh
- Additional micro-filters at the cold water and demineralized water inlet

3. DISPLAY

Colour graphic display for constant and real-time display of all the main operating parameters:

- ✓ Identifier of the current program
- ✓ Program progress status, with progress bar, with indication of the expected remaining time
- ✓ Identification of the current phase
- ✓ Temperature detected inside the chamber
- ✓ Parameter A0 reached
- ✓ Alarm and maintenance messages
- ✓ Electronic date and time with internal backup battery in case of blackout

4. CONNECTION SOFTWARE

WD Connect Multi software for managing, tracking and monitoring the glassware washer supplied as standard. Supplied on a USB stick together with complete documentation of the machine.

WD Connect Multi Features	User	Service
Machine monitoring during washing cycle	X	X
Archive download and data reading	X	X
Editing of custom programs (up to 10 washing phases + 1 extra-drying phase)	X	X
Modification of standard detergent dosage	X	X
Real-time acquisition of machine operating data	X	X
Real-time verification of the parameters characterizing the washing cycle in progress	X	X
Alarm Assistance and Diagnostics		X
Machine configuration editing		X
Calibration of machine components		X
Firmware Version Update		X

5. SAFETY DEVICES AND ALARM INDICATIONS

- ✓ Emergency mechanical release of the door in the event of machine failure and blackout
- ✓ Overheating safety by means of safety thermostats
- ✓ Display of error messages/warnings with visual and acoustic signalling:
  - 14 warning messages
  - 42 Alarm indications
- ✓ Flow meter control of the amount of water introduced
- ✓ Water level control
- ✓ Check that the washing pump is working correctly
- ✓ Operator safety system with optional reduction of the tank temperature at the end of the cycle
- ✓ Washing stop when the door is opened

6. WEIGHT OF MACHINES, MATERIALS, PANELING AND WASHING CHAMBER

	Units of Measurement	GWF06	GWF16-26	GWF29
Curb weight [without load in the machine]	[kg]	72	72	100
Packed weight	[kg]	84	84	116
Maximum weight in use [E.g. for 60cm +37kg max load +10litres water load] [For GWF290 also +20kg, detergent tanks]	[kg]	119	119	167
Max. floor load	[kg/m^2]	330	330	310
Standard washing chamber	-	AISI 304	AISI 316L	AISI 316L
External panelling	-	AISI 304	AISI 304	AISI 304

7. EXTRA-STANDARD DIMENSIONS

- If optional components such as PAD1 or additional peristaltic pumps are installed, the dimensions to be considered are increased by 150 mm in depth: [WxDxH] 600 x 755* x 850 mm
- When the optional AS4060 Aqua Stop component is installed, the height increases to 857mm**

8. ENVIRONMENTAL CONDITIONS

Characteristic	Units of Measurement	Value
Use	-	Internal
Max. altitude	[m a.s.l.]	Up to 1000
Environment temperature [min-max]	[°C]	5°C-40°C
Device IP Rating	-	00
Lighting minimum level required	[lx]	300
Max. humidity	[% HR]	80% for temperatures up to 31°C with linear decrease up to 50% at a temperature of 40°C
Overvoltage category	-	II
Electrical insulation class (ref. IEC 61140)	-	The
Degree of pollution	-	2
Heat emission – machine to the environment, max	[W]	900
Max. noise level	[dB(A)]	60