Laboratory Glassware Washing Systems
for Research Facilities



Steelco

Miele Group Member

Global Manufacturer and Supplier for Cleaning and Sterilization Solutions

Born from Steelco and Belimed, SteelcoBelimed pioneers sterile workflow solutions with innovation, reliability, and customer focus. “Innovate with confidence” defines our commitment to high-quality products and services, setting new industry standards in Infection Control and Life Science.

Customer Centricity

Our commitment to fully understand customers’ needs and satisfaction is prioritized.

Our products and services are designed to meet those specific needs, ensuring every decision we make benefits our customers for the best results.

Innovation

Our dedication to progress drives us to constantly seek out and embrace new ideas, technologies and methods.

This commitment ensures our products and services continually evolve and improve.

Efficiency

We strive for peak productivity by optimizing our processes, resources, and operations.

Our goal is to deliver solutions and services swiftly and effectively, without compromise, minimizing waste and maximizing value.

Reliability

We stand by our word, delivering solid and trustworthy solutions every time.

Our aim is to forge long lasting relationships built on trust and mutual respect by consistently meeting our commitments.

SteelcoBelimed

Miele Group Member

Laboratory Glassware Washing Systems
for Research Facilities

Steelco’s understanding of the requirements of modern biomedical research and laboratory facilities results in a wide selection of individually tailored solutions to meet the diverse needs of the Life Sciences industry.

Our laboratory washers and sterilizers are leaders in safety and contamination prevention, focusing on cleanliness, reliability, and consistency. Their versatility and automation guarantee workflow optimization at minimal costs.

Our range of high-capacity laboratory glassware washers and dryers provides fast, reliable, and efficient washing and drying results. State-of-the-art technologies and machine integrations ensure excellent performance and workflow optimization.



LAB 600	LAB 610	LAB 640	LAB 1000
200 lt	250 lt	350 lt	500 lt

Key Advantages
a Winning Combination

Our complete range of glassware washers and dryers, carefully designed to effectively treat daily use materials in scientific laboratories, provides optimum cleaning, HEPA 14 drying efficiency, and maximum safety, ensuring unrivaled levels of efficiency.

Tailor-made customization, combined with a wide selection of trolleys and accessories, meets the most diverse treatment needs.



LAB 660/680

600 lt



LAB 1500

568 lt

Process Quality Focus

High-quality stainless steel AISI 316 washing chamber and washing arms for optimal performance, with washing and drying injection system integrated into the same circuit. Low friction bearings ease chamber and cart washing arms rotation for improved efficiency in water and air distribution.

Compliance to Standards

Steelco Laboratory glassware washers comply with the current European directives and standards as follow: 2006/42/EC, 2014/30/EU and 2011/65/EU Directives, EN 61010-1, EN IEC 61010-2-040, EN 61326-1 current standards

Optimized Process Speed

Quality and speed of the washing process are of utmost importance as well as water, detergent and energy consumption. Our washing systems can be configured with preheating tanks with water and energy recovery systems and ensure a high flow rate combined with adequate spray pressure.

Loading Configuration Flexibility

Maximum flexibility is combined with intuitive use.

The improved SmartLoad Plus system allows more flexibility with the availability of up to three loading levels simultaneously. In addition, loading is made fast and easy with a wide range of standard and configurable loading options.

Loading Configuration Flexibility

A comprehensive choice of racks and accessories to meet different capacity and cleaning demands, allowing to maximize the numbers of different utensils and glassware that can be washed, preventing movement and damage, and ensuring complete coverage of the loads.

Washing Carts Customizable

The final pages of the catalog are dedicated to choosing the most appropriate optimal accessories for convenient loading and to the selection of injection nozzles to set up configurable wash carts.

LAB 600 - LAB 610
Freestanding Glassware Washers

Electrical or steam heated, these washers are capable of injection washing and drying on different levels (3 or 4), providing maximum flexibility through multiple chamber configurations, depending on the loaded items' height.
The hinged full glass manual drop-down door serves as a loading platform at convenient height for the bottom level.
The upper levels can be removed depending on the height of the loaded glassware.



LAB 600



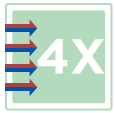
650mm wide washers capable injection washing and drying on up to 3 independent levels with 2 possible rack locations

Overall Dimensions WxDxH:
650 x 660 x 1685 mm

Chamber Volume
~200 lt
Basket Volume
~170 lt



LAB 610



650mm wide washers with injection washing and drying on up to 4 independent levels with 3 possible rack locations

Overall Dimensions WxDxH:
650 x 687 x 1840 mm

Chamber Volume
~250 lt
Basket Volume
~220 lt

Key Features:

- Chemical dosing
  Two standard peristaltic pumps. Additional dosing pump available upon request.
- Flow meter and conductivity sensor
  For accurate volumetric dosing of chemicals and for measuring the conductivity value during the final rinse phase.
- Drying efficacy
  Powerful built-in HEPA filtered forced hot air drying system. Adjustable time and temperature settings for the optimization of cycle duration and energy consumption.
- Intuitive control system
  Soft touch control panel, LCD display, 40 programs.
- On board integrated thermal printer for validating washing phases.



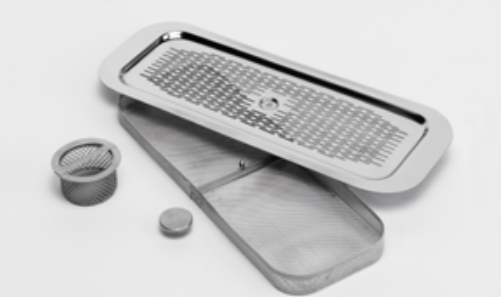
Hygienic Design

The washing chamber and spray arms, as well as tank filters, are made of high quality AISI 316 L stainless steel (DIN 1.4404). The washing chamber has rounded edges in order to avoid any dirt traps,



Easy and safe loading/unloading

Ergonomic design of the door level height allows a convenient loading/unloading job to the user, with the additional support of a manual loading/unloading trolley upon request. Telescopic bearing rails enable easy and safe loading/unloading of the glassware.



Smart Filtering System

Our Lab Series of glassware washers is equipped with a triple water filtering system. Ergonomically accessible from the washing chamber, it captures residues preventing their re-circulation, thus extending pump life.

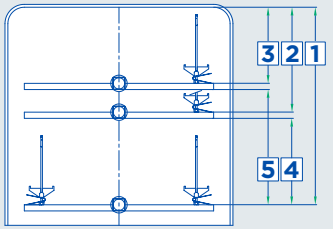


Easy maintenance and access to chemicals

The machine is developed considering technicians' access to the maintenance and service area – easy access to all components and electrical cabinet. Frontal sliding drawer for storage of up to three 5-liter chemical containers.

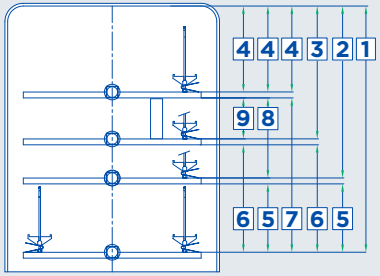
Wide Range of Racks, Inserts, Trays, and Accessories

LAB 600 level positions



1	480 mm
2	250 mm
3	180 mm
4	210 mm
5	280 mm

LAB 610 level positions



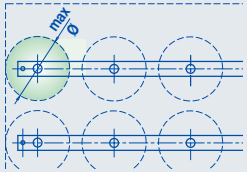
1	630 mm
2	440 mm
3	340 mm
4	220 mm
5	170 mm
6	270 mm
7	390 mm
8	200 mm
9	100 mm

The use of an upper level washing cart provided with spray arm reduces the useful height of the level placed below by 40mm but allows a gain of 15mm" on top.

In the next page you can find examples of washing carts configured and reference tables of the maximum glassware diameter and number of injection positions.

LAB 600-610
Washing carts configurations

The table shows the maximum glassware diameter in the washing cart frame and position options of LAB 600 and LAB 610 Series.



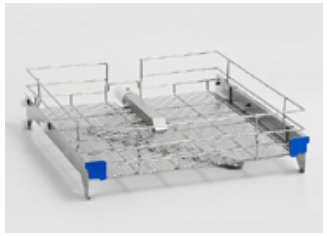
Upper level empty racks

empty rack code	max Ø mm	nr. of injection positions		notes
C1092E	32	156	❶	only for mm Ø nozzles
C1192E	40	110	❶	only for mm Ø nozzles
C837E	35	84	❶	only for mm Ø nozzles
C724E	70	42	❶	
C1603E	80	36	❶	
C725E	100	20	❶	
C838E	110	16	❶	
C1443E	75	27	❶	
C991E	20	121	❷	mm 200×490 space
C746E	75	24+121	❸	see C1086, C1061, C1105 accessories
C1148E	25	121	❹	only for mm Ø nozzles

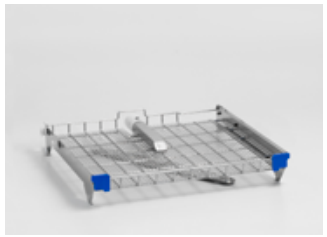
Lower level empty racks

empty rack code	max Ø mm	nr. of injection positions		notes
C1093E	40	110	❶	only for mm 2,5 Ø nozzles
C1570E	52	70	❶	only for mm 2,5 Ø nozzles
C1127E	60	56	❶	only for mm 2,5 Ø nozzles
C729E	70	42	❶	
C1604E	80	36	❶	
C730E	100	20	❶	
C839E	110	16	❶	
C1442E	75	27	❶	
C885E	130	12	❶	
C1571E	160	9	❶	
C731E	70	24	❷	mm 230×490 space
C732E	100	12	❷	mm 220×490 space
C836E	75	24+121	❸	see C1086, C1061, C1105 accessories
C1149E	25	121	❹	only for mm 2,5 Ø nozzles

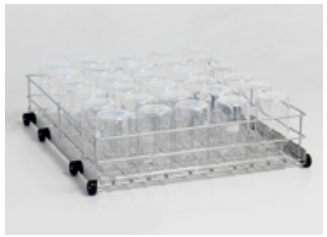
Full loading space



C728 Upper washing cart with washing arm, loading space 485x525mm
(19x 20)



C1512 Upper level wash cart with washing arms



C736 Lower washing cart, loading space 470x540mm

With injection nozzles for mid size glassware



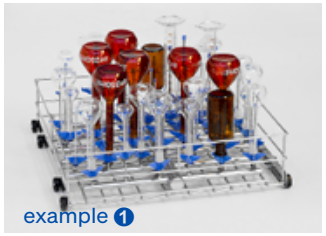
Upper level
Suggested configurations

A 42 positions
max glassware:
ø 70mm
h 160mm
C724E frame
+ 42 nozzles C054548

B 20 positions
max glassware:
ø 100mm
h 230mm
C725E frame
+ 20 nozzles C054550

C 42 positions
mixed nozzles average glassware:
ø 70mm
h 200/300mm
C724E frame
+ 10 nozzles C054550
+ 32 nozzles C054548

With injection nozzles for mid size glassware



Lower level
Suggested configurations

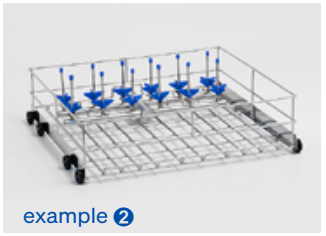
A 42 positions
max glassware:
ø 70mm
h 230mm
C729E frame
+ 42 nozzles C054549

B 20 positions
max glassware:
ø 100mm
h 300mm
C730E frame
+ 20 nozzles C054551

C 42 positions
mixed nozzles
average glassware:
ø 70mm
h 200/300mm
C729E frame
+ 10 nozzles C054550
+ 32 nozzles C054548

D 42 positions
mixed nozzles with supports average glassware:
ø 70mm
h 180/280mm
C729E frame
+ 12 nozzles C054560
+ 30 nozzles C054947

With half space + injection nozzles for glassware



Lower level
Suggested configurations

A 24 positions
mixed nozzles,
max glassware:
ø 70mm
h 200/300mm
loading space 30x490mm

C731E frame
+ 12 nozzles C054551
+ 12 nozzles C054549

B 12 positions
mixed nozzles with supports,
max glassware
ø 100mm
h 180/280mm
loading space 220x490mm

C732E frame
+ 6 nozzles C054560
+ 6 nozzles C054947

Multipurpose with injection nozzles + pipettes



C1328 lower level
(for LAB 600 only)

5 positions for pipettes

min pipette length
250mm

max pipette length
535 mm

2 nozzles h 220mm
and ø max 130mm

4 nozzles h 220mm
and ø max 98mm

3 nozzles (C054550)
h 175mm and ø max 60mm+
additional loading space
260x230mm

With injection nozzles for large size glassware



Lower level

C1039 up to 4 items Ø max 240mm, up to 5 items Ø max 190mm

C1040 up to 2 items Ø max 295mm + 2 items Ø max 190mm

C1121 for 50 lt carboy,
for LAB 610 model only

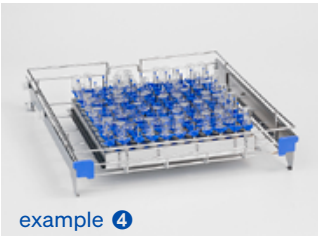


C1255 up to 16 positions for graduated cylinders:
max ø 85mm, base ø 150mm,
max height 680mm,
for LAB 610 only

C1642 bioreactor's glass:
1 Ø max 360 mm +
1 Ø max 260 mm max height 680mm
for LAB 610 only



With injection nozzles for vials



example ❹

Upper level
suggested configurations

A 121 positions
max glassware:
ø 25mm
h 90mm

C1148E frame
+ 121 nozzles C054953

note: see also C1150 accessory

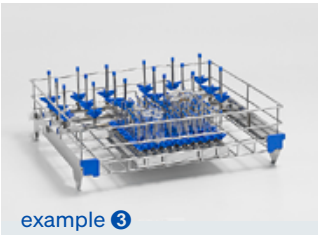
Lower level
suggested configurations

A 121 positions
max glassware:
ø 25mm
h 140mm

C1149E frame
+ 121 nozzles C054953

note: see also C1150 accessory

With injection nozzles + nozzles for vials



example ❸

Upper level
suggested configurations

A 121 positions
max glassware:
ø 20mm
h 160mm

24 positions
max glassware
ø 75mm
h 160mm

C746E frame
+ 121 nozzles C054544
+ 24 nozzles C054548

note: see also C1061, C1086 and C1105 accessories

Lower level
suggested configurations

A 121 positions
max glassware:
ø 20mm
h 160mm
24 positions
max glassware:
ø 75mm
h 300

C836E frame
+ 121 nozzles C054544
+ 24 nozzles C054551

note: see also C1061, C1086 and C1105 accessories

Injection washing for pipettes



C989 lower level,
max 56 positions

Min. pipette length
250mm and 300mm.

Max. pipette length:
535mm on LAB 600,
760mm on LAB 610.



C733
lower level, max 121 positions.
Min. pipette length
135mm.

Max. pipette length: 470mmon LAB 600,
620mm on LAB 610.

Immersion washing for pipettes



C734 lower level, with 2 pipettes cassettes,
for LAB 610 only.
Max. pipette length
520mm

C735 lower level, with 3 pipettes cassettes,
for LAB 610 only.
Max. pipette length
290mm

C1141 lower level, with 2 pipettes cassettes,
for LAB 600 only.
Max. pipette length
290mm

Pipettes must be fully covered by water and fully immersed within the cassette.

LAB 640 SL
Freestanding Glassware Washer



The LAB 640 SL is a large capacity, fully automatic frontal loading laboratory glassware washer aimed to satisfy medium/large size facility needs.

Available in electrical or steam heated versions, this washer is equipped with a motorized vertical sliding down door thus allowing the reduction of the space needed in the laboratory.

A pre-heating tank configured with electrical heating elements allows for a no-recirculate final rinse.

LAB 640 SL

4X

Injection washing and drying
on 4 independent levels
with 3 possible rack locations

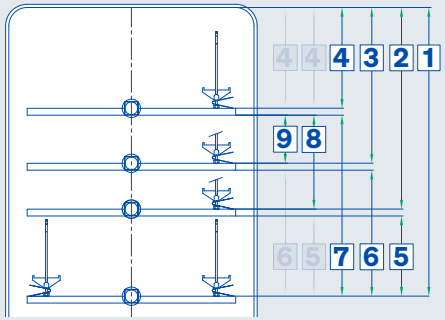
Overall Dimensions WxDxH:
765 x 800 x 1975 mm
Chamber Volume
~350 lt
Basket Volume
~280 lt

Key Features:

- Single-pass final rinse option
- Flow meter and conductivity sensor for quality process.
- Triple water filtering system
- Drying efficacy, powerful built-in HEPA filtered forced hot air drying system, with adjustable time and temperature.
- Easy access to chemicals.
- 5.7" user-friendly HMI, touch screen display, 65 programs.
- On board integrated thermal printer for validating washing phases as an option.

LAB 640 L
Washing carts configurations

Level positions



1	630 mm
2	440 mm
3	340 mm
4	220 mm
5	170 mm
6	270 mm
7	390 mm
8	200 mm
9	100 mm

The use of an upper level washing cart provided with spray arm reduces the useful height of the level placed below by 40mm but allows a gain of 15mm on top.

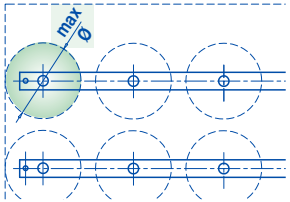
Upper and lower level empty racks

The table shows the maximum glassware diameter in the washing cart frame and position options.

empty rack code	max Ø mm/in.	nr. of injection positions		Upper level Lower level	notes
C1412E	41	208	❶	U/L	only for mm 2,5 Ø nozzles
C1411E	51	137	❶	U/L	only for mm 2,5 Ø nozzles
C1408E	60	90	❶	U/L	only for mm 2,5 Ø nozzles
C1407E	76	56	❶	U/L	only for mm 2,5-4 Ø nozzles
C1521E	80	36	❶	U/L	
C1406E	95	35	❶	U/L	
C1518E	110	22	❶	U/L	
C1405E	120	18	❶	U/L	
C1519E	135	14	❶	U/L	
C1520E*	180	8	❶	U/L	
C1410E	95	20	❺	U	

*Inserts for glassware alignment/support for C1520:
C1520900 max Ø 180mm
C1520901 max Ø 100mm

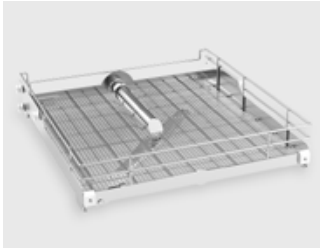
Right below you can find examples of configured washing carts and reference of the maximum glassware diameter and number of injection positions.



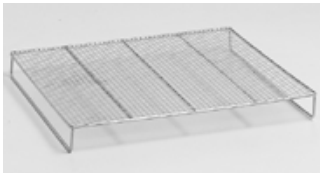
Glassware diameter
Top view of a portion of an injection washing cart showing the maximum glassware diameter.

Wash cart frame selection for custom configurations
Selection of an empty rack enables users to customize the wash cart frame using different nozzles and accessories. See final pages of the catalogue.

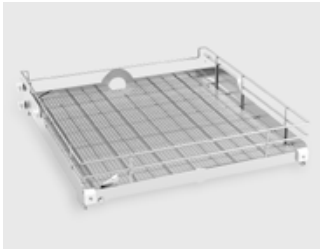
Full loading space



C1390 Upper washing cart with washing arm, loading space 570×600mm



C1502 Support grid to have a flat surface on a C1390, usable height reduced by 50mm



C1389 Lower washing cart, loading space 570×600mm

Injection nozzles for small size glassware



Upper/lower levels
Suggested configurations

A 208 positions
max glassware:
ø 41mm
h 160mm
C1412E frame
+ 208 nozzles C054544

B 137 positions
max glassware:
ø 51mm
h 180mm
C1411E frame
+ 137 nozzles C054548

C 90 positions,
max glassware:
ø 60mm
h 230mm
C1408E frame
+ 90 nozzles C054549

Injection nozzles for mid size glassware



Upper/lower levels
Suggested configurations

A 56 positions
max glassware:
ø 76mm
h 230mm
C1407E frame
+ 56 nozzles C054549

B 35 positions
max glassware:
ø 95mm
h 280mm
C1406E frame
+ 35 nozzles C054551

C 18 positions
max glassware:
ø 120mm
h 330mm
C1405E frame
+ 18 nozzles C054552

Injection nozzles for large size glassware



Upper/lower levels
Suggested configurations

C1404
Capacity: up to 8 items
Ø max 200mm

C1403
Capacity: up to 5 items
Ø max 240mm

C1515
Capacity: up to 4 items Ø max 280mm
7 measuring cylinders:
4 x max Ø130mm,
3 x max Ø 180mm"

C1455
Capacity: up to 4 items Ø max 280mm
1 measuring cylinder
Ø max 95mm

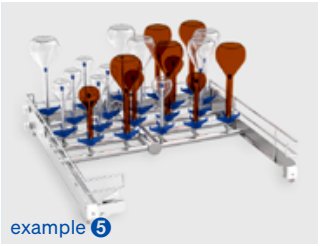
C1402
Capacity: up to 3 items
Ø max 305mm

C1670
Upper/lower-level washing cart for 2lt graduated cylinders, max 12 pcs

Injection washing for pipettes



C1409 lower level,
max 200 positions.
Min. pipette length 150mm
Max. pipette length 620mm



C1410E upper level,
to be used combined with C1409 wash cart for pipettes

Suggested configuration

A 20 positions
max glassware:
ø 95mm
h 280mm
C1410E frame
+ 20 nozzles C054551

LAB 1000
High Capacity Pass-Through Double Door Glassware Washer





LAB 1000 is a large capacity glassware washer specially developed for laboratories that require to clean large quantities of items on a daily basis.

Steelco LAB 1000 ensures outstanding washing and drying results of all laboratory glassware thanks to the accurate distribution of the air on all the chamber zones and on the washing cart levels.

A built-in pre-heating tank is available upon request to perform faster washing cycles. In this configuration the washer can perform a complete cycle in less than 40 minutes.



LAB 1000 washing cart system comprises a support washing cart that can be configured with removable cassettes on two levels.

LAB 1000



Injection washing and drying on up to 4 independent levels with 3 possible rack locations

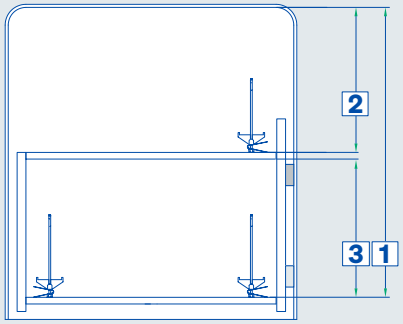
Overall Dimensions WxDxH:
1100 x 960 x 1940 mm
Chamber Volume
~500 lt
Basket Volume
~350 lt

Key Features:

- Electrical or steam heated.
- Single or double door pass through version.
- Two standard peristaltic pumps. Additional dosing pump available as option.
- Flow meter and conductivity sensor.
- Powerful built-in HEPA filtered forced hot air drying system with adjustable time and temperature.
- Triple water filtering system.
- Easy access to chemicals.
- 5.7” user-friendly HMI, touch screen display, 65 programs.
- On board integrated thermal printer for validating washing phases as an option.
- Loading and unloading washing carts by using manual or automatic transfer trolleys.

LAB 1000
Washing carts configurations

Level positions



1	605 mm
2	275 mm
3	315 mm

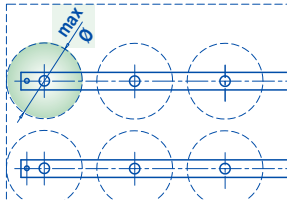
The use of an upper level washing cart provided with spray arm reduces the useful height of the level placed below by 40mm but allows a gain of 15mm on top.

Upper and lower level empty racks

The table shows the maximum glassware diameter in the washing cart frame and position options.

empty rack code	max Ø mm	nr. of injection positions		Upper level Lower level
C409E	40	99	❶	all
Notes: only mm 2,5 Ø nozzles can be used				
C407E	50	76	❶	all
C402E	75	34	❶	all
C406E	98	24	❶	all
C403E	92	22	❶	all
C470E	104	18	❶	all
C469E	190	5	❶	all

Right below you can find examples of configured washing carts and reference of the maximum glassware diameter and number of injection positions.



Glassware diameter
Top view of a portion of an injection washing cart showing the maximum glassware diameter.

Wash cart frame selection for custom configurations
Selection of an empty rack enables users to customize the wash cart frame using different nozzles and accessories. See final pages of the catalogue.

Base injection washing cart



C400W
Base injection washing cart suitable for removable cassettes on 2 levels

Injection Washing for Pipettes

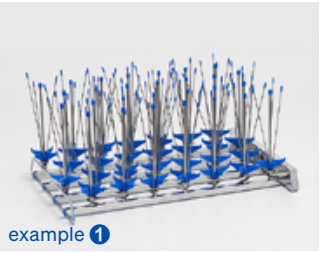


C408
lower vertical pippettes cassette 68 positions.

Minimum pipette length 270mm

Maximum pipette length 590mm

Injection nozzles all levels



Suggested configurations

A 34 positions
max glassware:
ø 75mm
h 160mm

composition:
C402E frame
+ 34 nozzles C054548



B 24 positions
max glassware:
ø 98mm
h 230mm

composition:
C406E frame
+ 24 nozzles C054550

LAB 660 - LAB 680
High Capacity Swing Door Glassware Washers



The LAB 660 and LAB 680 are high capacity frontal loading glassware washers designed to meet the needs of medium and large facilities, with the capacity of cleaning bottles for up to 100 lt

Electrical or steam heated, the two washers are capable of injection washing on multiple levels providing maximum flexibility through multiple chamber configurations depending on the height of the loaded items. The drop down hinged door with glass window serves as a loading platform at convenient height for the bottom level.

LAB 660

3X Injection washing and drying on 3 independent levels with 3 possible rack locations.

Overall Dimensions WxDxH:
1140 x 930 x 1685 mm

Chamber Volume
~600 lt
Basket Volume
~430 lt

LAB 680

5X Injection washing and drying on 5 independent levels with 4 possible rack locations

Two washing pumps feeding washing circuits.

Key Features:

- Electrical or steam heated
- Chemical dosing
  Two standard peristaltic pumps. Additional dosing pump available as option.
- Drying efficacy
  Powerful built-in HEPA filtered forced hot air drying system. Adjustable time and temperature settings for the optimization of cycle duration and energy consumption.
- Easy access to chemicals
  Frontal sliding drawer for storage of chemicals, up to three tanks of 10 lt.
- User friendly HMI
  High safety and easy to use LCD display control system, 40 programs.
- Traceability
  RS 232 dedicated port for printing washing/disinfection cycles.



Washing Efficacy

Washing pumps feeding washing circuits to ensure high flow rate combined with effective spray pressure. The washing chamber and spray arms, as well as tank filters, are made of high quality AISI 316 L stainless steel (DIN 1.4404).



Smart Filtering System

Design quality and proper maintenance are critical to ensure compliance with standards, sustainability, and an enduring life cycle. Our Lab Series of glassware washers is equipped with a triple water filtering system. Ergonomically accessible from the washing chamber, it captures residues preventing their re-circulation, thus extending pump life.



Easy and safe loading/unloading

Ergonomic design of the door level height allows a convenient loading/unloading job to the user, with the additional support of a manual loading/unloading trolley upon request.

Telescopic bearing rails enable easy and safe loading/unloading of the glassware. The upper levels can be removed depending on the height of the loaded glassware.



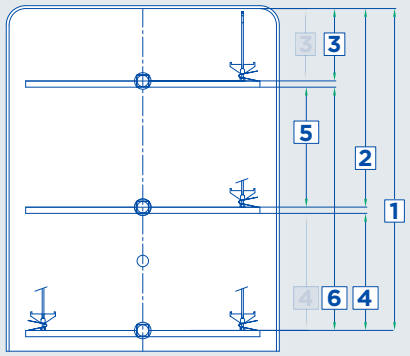
Easy maintenance and access to chemicals

The machine is developed considering technicians' access to the maintenance and service area – easy access to all components and electrical cabinet. Frontal sliding drawer for storage of chemical containers, up to three tanks of 10 lt .



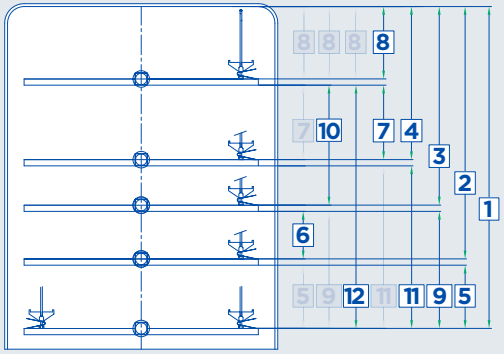
LAB 660-680
Washing Carts Configurations

LAB 660 level positions



1	770 mm
2	480 mm
3	170 mm
4	280 mm
5	290 mm
6	580 mm

LAB 680 level positions

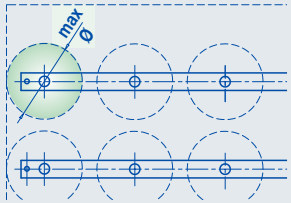


1	770 mm
2	610 mm
3	480 mm
4	370 mm
5	150 mm
6	115 mm
7	180 mm
8	170 mm
9	280 mm
10	290 mm
11	390 mm
12	580 mm

The use of an upper level washing cart provided with spray arm reduces the useful height of the level placed below by 50mm but allows a gain of 15mm on top.

LAB 660 - LAB 680
Upper and lower level empty racks

The table shows the maximum glassware diameter in the washing cart frame and position options.



Glassware diameter
Top view of a portion of an injection washing cart showing the maximum glassware diameter.

empty rack code	max Ø mm	nr. of injection positions		Upper level Lower level	notes
C423E	25	330	❶	U	only for mm 2,5Ø nozzles
C410E	65	72	❶	U	
C411E	84	56	❶	U	
C425E	90	48	❶	U	
C1238E	105	35	❶	U	
C444E	150	18	❶	U	
C413E	85	21	❷	U	mm 480×585 space
C421E	75	40+121	❸	U	see C1086, C1061, C1105 accessories
C414E	75	72	❶	L	
C415E	85	56	❶	L	
C424E	90	48	❶	L	
C1239E	105	35	❶	L	
C443E	150	18	❶	L	
C426E	190	10	❶	L	
C427E	250	6	❶	L	

On the side you can find examples of configured washing carts and reference of the maximum glassware diameter and number of injection positions.

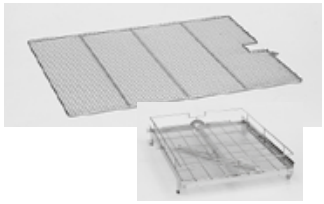
Wash cart frame selection for custom configurations
Selection of an empty rack enables users to customize the wash cart frame using different nozzles and accessories. See final pages of the catalogue.

Full loading space

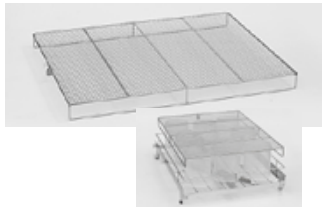


C420 Upper washing cart with washing arm, loading space 585×765mm

C419 Lower washing cart without washing arm, loading space 620×765mm

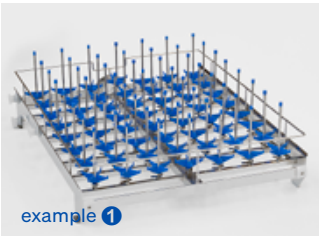


C446 Grid to allow the loading of small object on std. washing carts dim. 752×582mm



C447 Grid cover to be positioned over light object dim. 752×582mm

Injection nozzles for small size glassware



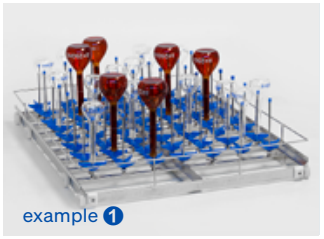
Upper levels
Suggested configurations

A 72 positions
max glassware:
ø 65mm
h 160mm
C410E frame
+ 72 nozzles C054548

B 48 positions
max glassware:
ø 90mm
h 230mm
C425E frame
+ 48 nozzles C054550

C 72 positions,
mixed nozzles,
max glassware:
ø 65mm
h 200/300mm
C410E frame
+ 18 nozzles C054550
+ 54 nozzles C054548

Injection nozzles for mid size glassware



Lower levels
Suggested configurations

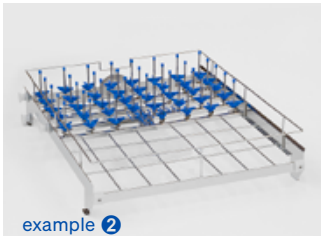
A 72 positions
max glassware:
ø 75mm
h 230mm
C414E frame
+ 72 nozzles C054549

B 48 positions
max glassware:
ø 90mm
h 300mm
C424E frame
+ 48 nozzles C054551

C 72 positions
mixed nozzles
average glassware:
ø 75mm
h 200/300mm
C414E frame
+ 18 nozzles C054550
+ 54 nozzles C054548

D 72 positions
mixed nozzles
with supports,
max glassware:
ø 75mm
h 180/280mm
C414E frame
+ 18 nozzles C054560
+ 54 nozzles C054947

With half space + injection nozzles for mid size



Upper levels
Suggested configurations

A 21 positions
max glassware:
ø 85mm
h 300mm

loading space mm 480×585

C413E frame
+ 21 nozzles C054551

With injection nozzles for large size glassware

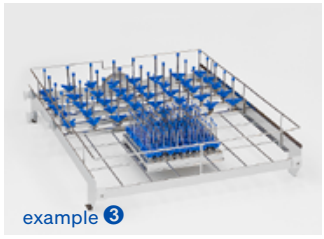


C1360 Lower level, capacity: up to 4 items
ø max 240mm,
1 item Ø max 315mm

C1177 Lower level, capacity: up to 4 items
ø max 300mm

C1178 Lower level, capacity: up to 2 items
ø max 400mm

With injection nozzles + nozzles for vials



Upper levels
Suggested configurations

A 121 positions
max glassware
ø 20mm
h 160mm

40 positions
max glassware:
ø 75mm
h 230mm
C421E frame
+ 121 nozzles C054544
+ 40 nozzles C054549

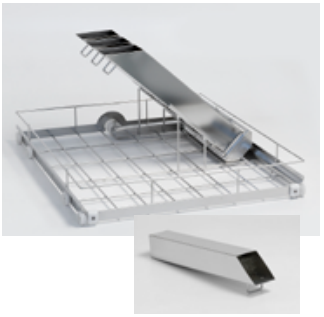
note: see also C1061, C1086 and C1105 accessories

Injection washing for pipettes



C416 lower level
max 88 positions.
Min. pipette length 300mm
Max. pipette length 450mm
with 2 upper levels installed and 700mm with
1 upper level installed.

Immersion washing for pipettes



C418 Lower level
with 3 pipettes cassettes,
Max. pipette length 520mm

C417 Lower level
with 2 pipettes cassettes,
Max. length 520mm

Pipettes must be fully covered by water and therefore must stay within the cassette.

LAB 1500
High Capacity Laboratory Glassware Washer and Dryer



The LAB 1500 is a high capacity glassware washer and dryer specially developed for laboratories that require to clean large quantities of items on a daily basis.

This lab washer features a full visibility motorized space-saving sliding down door.

Two heavy duty washing pumps dedicated to separate washing – providing a high water flow rate combined with adequate spray pressure – ensure outstanding glassware washing results.

As standard, two peristaltic pumps provide precise dosing of liquid chemical agents. A convenient hinged door allows for easy access to storage of up to two 10-liter chemical tanks.

LAB 1500

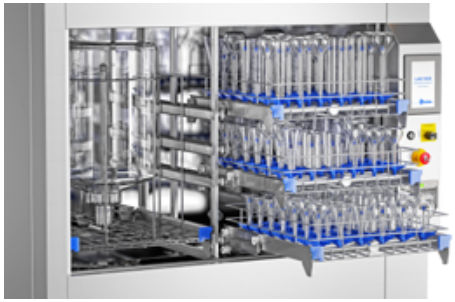


Injection on up to
6 levels with
8 possible rack locations

Overall Dimensions WxDxH:
1350 x 840 x 1985 mm
Chamber Volume
568 lt
Basket Volume
~ 369 lt

Key Features:

- Flexible solutions
  The electrical or steam stainless steel heat exchanger provides rapid heating of water in washer sump.
- Drying efficacy
  Built-in HEPA 14 filtered forced air drying with adjustable temperature and time settings.
- Easy loading/unloading
  with fully extendable telescopic rails.
- Tank for no-recirculated final rinse
  A pre-heating tank configured with electrical heating elements allows for a no-recirculate final rinse.
- Process quality
  Flow meters for redundancy chemical dosing control and a conductivity sensor.
- 7” user-friendly HMI
  Industrial PLC with intuitive 7’ touch-screen HMI, allowing for 65 programming options.



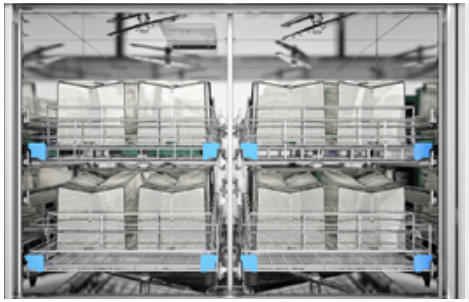
High and Flexible Capacity

With a chamber volume of ~ 484 lt / 19.95 cu ft, the LAB 1500 has the largest chamber capacity in the market within the smallest footprint. The device is capable of injection washing on up to 6 levels with 8 possible rack locations, providing maximum flexibility through multiple chamber configurations.



Washing Efficacy

High-quality AISI 316 L washing chamber and four rotatory spray arms, two on the bottom and two on the top of the chamber, ensure optimal washing performance. Additional spray arms are available on dedicated upper level wash carts.



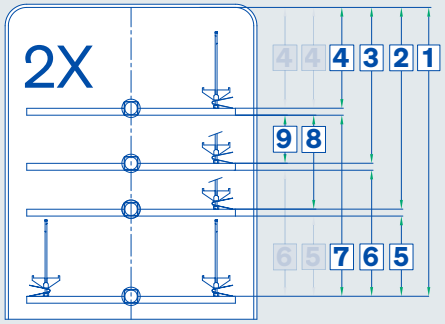
Aquatic Tank Package

Specific kit designed for the reprocessing of the aquatic tank used in vivarium and research facilities. It includes three chemical dosage pumps, an upgrade to washing circuit, flow meters, and conductivity probe.



LAB 1500
Washing carts configurations

Level positions



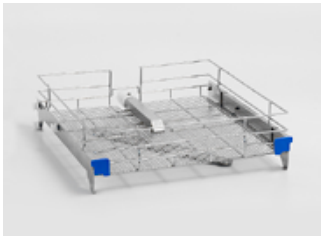
1	630 mm
2	440 mm
3	340 mm
4	220 mm
5	170 mm
6	270 mm
7	390 mm
8	200 mm
9	100 mm

The use of an upper level washing cart provided with spray arm reduces the useful height of the level placed below by 40mm but allows a gain of 15mm on top.

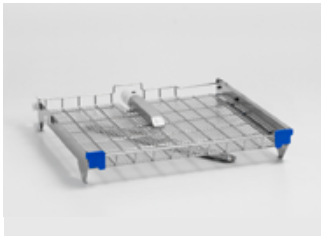
empty rack code	max Ø mm.	nr. of injection positions		Upper or Lower level	notes
C1092E	32	156	❶	U	only for mm 2,5 Ø nozzles
C1192E	40	110	❶	U	only for mm 2,5 Ø nozzles
C837E	35	84	❶	U	only for mm 2,5 Ø nozzles
C724E	70	42	❶	U	
C1603E	80	36	❶	U	
C725E	100	20	❶	U	
C838E	110	16	❶	U	
C1443E	75	27	❶	U	
C746E	75	24+121	❸	U	see C1086, C1061, C1105 accessories
C1148E	25	121	❹	U	only for mm 2,5 Ø nozzles
C1093E	40	110	❶	L	only for mm 2,5 Ø nozzles
C1860E	52	70	❶	L	only for mm 2,5-4 Ø nozzles
C1861E	60	56	❶	L	only for mm 2,5-4 Ø nozzles
C729E	70	42	❶	L	
C1604E	80	36	❶	L	
C730E	100	20	❶	L	
C839E	110	16	❶	L	
C1442E	75	27	❶	L	
C1862E	130	12	❶	L	
C1863E	160	9	❶	L	
C1864E	70	24	❷	L	mm 230×490 space
C1865E	100	12	❷	L	mm 220×490 space
C836E	75	24+121	❸	L	see C1086, C1061, C1105 accessories
C1149E	25	121	❹	L	only for mm 2,5 Ø nozzles

The table shows the maximum glassware diameter in the washing cart frame and position options.

Full loading space



C728 Upper washing cart with washing arm, loading space 485x525mm (19 1/16"x 20 11/16")

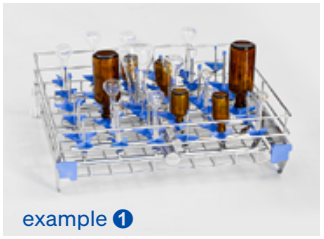


C1512 Upper level wash cart with washing arms



C1853 Upper/lower wash cart without washing arms, loading space 470x540mm (18 1/2"x21 1/4")

With injection nozzles for mid size glassware



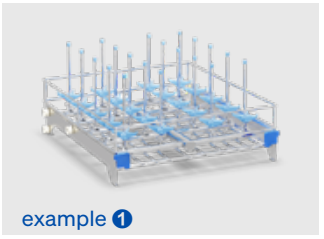
Upper level
Suggested configurations

A 42 positions
max glassware:
ø 70mm/2 3/4"
h 160mm/6 5/16"
C724E frame
+ 42 nozzles C054548

B 20 positions
max glassware:
ø 100mm/3 15/16"
h 230mm/9 1/16"
C725E frame
+ 20 nozzles C054550

C 42 positions
mixed nozzles average glassware:
ø 70mm/2 3/4"
h 200/300mm
C724E frame
+ 10 nozzles C054550
+ 32 nozzles C054548

With injection nozzles for mid size glassware



Lower level
Suggested configurations

A 42 positions
max glassware:
ø 70mm/2 3/4"
h 230mm/9 1/16"
C729E frame
+ 42 nozzles C054549

B 20 positions
max glassware:
ø 100mm/3 5/16"
h 300mm/11 13/16"
C730E frame
+ 20 nozzles C054551

C 42 positions
mixed nozzles
average glassware:
ø 70mm/2 3/4"
h 200/300mm
C729E frame
+ 10 nozzles C054550
+ 32 nozzles C054548

D 42 positions
mixed nozzles
with supports,
average glassware:
ø 70mm/2 3/4"
h 180/280mm
C729E frame
+ 12 nozzles C054560
+ 30 nozzles C054947

With half space + injection nozzles for glassware



example ❷

Lower level
Suggested configurations

A 24 positions
mixed nozzles,
max glassware:
ø 70mm/2 3/4”
h 200/300mm

loading space 30x490mm
(9 1/16”x19 5/16”)

C1864E frame
+ 12 nozzles C054551
+ 12 nozzles C054549

B 12 positions
mixed nozzles
with supports,
max glassware:
ø 100mm/3 15/16”
h 180/280mm

loading space 220x490mm
(8 11/16”x19 9 5/16”)

C1865E frame
+ 6 nozzles C054560
+ 6 nozzles C054947

With injection nozzles for large size glassware



Lower level

C1854 up to 4 items Ø max 240mm/9 7/16”, up to 5 items Ø max 190mm/9 1/2”

C1855 up to 2 items Ø max 280mm/11”

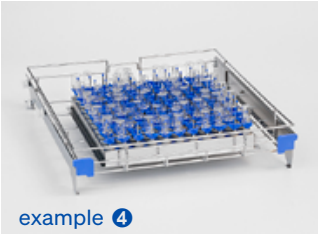


C1856 for 50 lt carboy,
Ø max 400mm/15 3/4”



C1857 up to 16 positions for graduated cylinders:
max ø 85mm/3 1/3”
max height 550mm/21 2/3”,

With injection nozzles for vials



example ❹

Upper level
suggested configurations

A 121 positions
max glassware:
ø 25mm/1”
h 90mm/3 9/16”

C1148E frame
+ 121 nozzles C054953

note: see also C1150 accessory

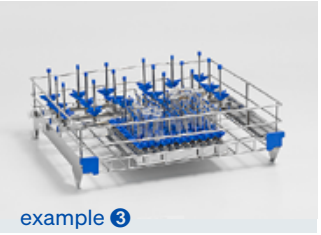
Lower level
suggested configurations

B 121 positions
max glassware:
ø 25mm/1”
h 140mm/5 1/2”

C1149E frame
+ 121 nozzles C054953

note: see also C1150 accessory

With injection nozzles + nozzles for vials



example ❸

Upper level
suggested configurations

A 121 positions
max glassware:
ø 20mm/13/16”
h 160mm/6 5/16”

24 positions
max glassware
ø 75mm/2 5/16”
h 160mm/6 5/16”

C746E frame
+ 121 nozzles C054544
+ 24 nozzles C054548

note: see also C1061, C1086 and C1105 accessories

Lower level
suggested configurations

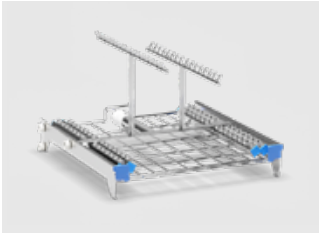
B 121 positions
max glassware:
ø 20mm/13/16”
h 160mm/6 5/16”

24 positions
max glassware
ø 75mm/2 5/16”
h 300mm/11 13/16”

C836E frame
+ 121 nozzles C054544
+ 24 nozzles C054551

note: see also C1061, C1086 and C1105 accessories

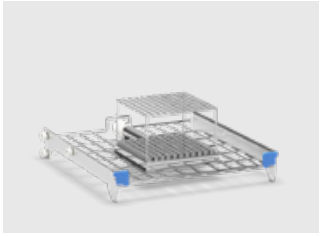
Injection washing for pipettes



C1858 lower level,
max 56 positions

Min. pipette length:
250mm/9 13/16” and 300mm/11 13/16”

Max. pipette length:
760mm/29 15/16”

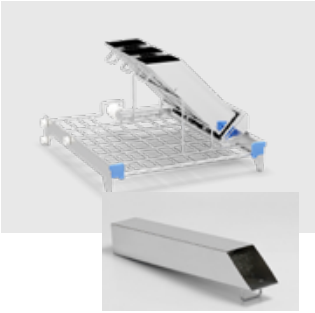


C1859 lower level,
max 121 positions

Min. pipette length:
135mm/5 5/16”

Max. pipette length: 620mm/24 7/16”

Immersion washing for pipettes



C1903 lower level, with 2 pipettes cassettes,
max. pipette length
520mm / 20 1/2”

C1904 lower level, with 3 pipettes cassettes,
max. pipette length
290mm / 11 7/16”

Pipettes must be fully covered by water and fully immersed within the cassette.

Technical Data

Device configuration	LAB 600	LAB 610	LAB 640 SL	LAB 1000	LAB 660	LAB 680	LAB 1500
Door opening	Hinged	Hinged	Vertical sliding down	Vertical sliding down	Hinged	Hinged	Vertical sliding down
Stainless steel door with glass window	-	-	-	-	•	•	-
Full glass door	•	•	•	•	-	-	•
Double door pass through version	-	-	-	○	-	-	-
Light inside the chamber	○	○	○	○	○	○	○
Nr. of independent levels of the washing and/or drying system	3	4	4	4[1]	3	5	8 (4×2)
Nr. of levels that can be used simultaneously	2	3	3	3	3	4	6 (3×2)
Triple stage water filtering system	•	•	•	•	•	•	•
Preheating boiler for DI water	○[3]	○[3]	-	-	○	○	-
Preheating tank DI water	-	-	○[2]	○	-	-	○
Adjustable water temperature (up to 93°C)	•	•	•	•	•	•	•
Double PT 1000 probe for temperature check	•	•	•	•	•	•	•
Chemicals							
Std equipment of chemical dosing pumps: nr.	2	2	2	2	2	2	2
Additional chemical dosing pumps: up to nr.	4	4	4	4	4	4	4
Storage of chemical tanks, nr. and capacity lt (capacity may vary depending on option configurated in the washer)	3 5lt	3 5lt	2 10	3 10	3 10	3 10	2 10
Drying system							
Forced hot air drying system	•	•	○	•	○	○	○
Pre filter 98%	•	•	○[3]	○[3]	○[3]	○[3]	○[3]
Hepa H14 air filter	○	○	○	○	○	○	○
Steam condenser	•	•	○	○	○	○	•
Control system							
LCD display control panel, 40 programs (20 pre-programmed, 20 user defined)	-	-	-	-	•	•	-
Touch screen display, 65 programs	•[4]	•[4]	•[4]	•[4]	-	-	•[5]
RS232	•	•	-	-	•	•	-
USB port	○	○	-	-	○	○	•
Ethernet connection	○	○	•	•	○	○	•
External printer	○	○	-	-	○	○	-
Integrated printer	○	○	○	○	○	○	•
Utilities							
Electrical feeding	•	•	•	•	•	•	•
Steam feeding	○	○	○	○	○	○	○
Standard electrical connection, others available upon request	400V 3~+N 50Hz	400V 3~+N 50Hz	400V 3~+N 50Hz	400V 3~+N 50Hz	400V 3~+N 50Hz	400V 3~+N 50Hz	400V 3~+N 50Hz
Total power kW	8.25	8.25	14.5	26	20	20	22

• = Standard ○ = Optional - = Not available

Notes:

1. On removable cassettes;
2. Preheating tank. Single pass final rinse option on LAB 640;
3. With forced hot air drying system;
4. 5.7" color touch screen display
5. 7" Industrial PLC with colour touch screen HMI

Capacity and dimensions

Device		Overall dimensions WxDxH mm		Volume lt	Basket volume lt
LAB 600	650	660	1685	200	170
LAB 610	650	687	1840	250	220
LAB 640 SL	765	800	1975	350	280
LAB 1000	1100	960	1940	500	350
LAB 660	1140	930*	1975	600	430
LAB 680	1140	930*	1975	600	430
LAB 1500	1350	840	1985	568	369

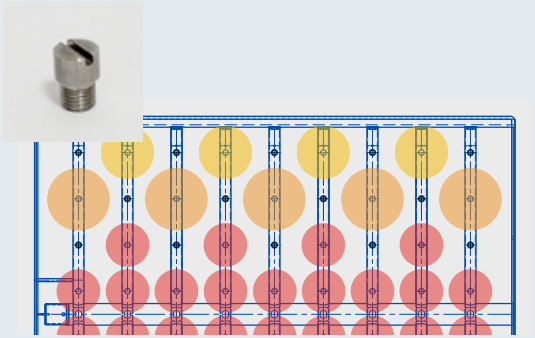
*External with door opened +845mm



How to configure your washing cart?

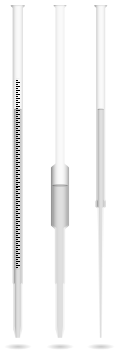
Example of configuration of a washing cart for simultaneous washing of ø 70mm, ø 85mm, and ø 100mm glassware by the use of C057002 cap screws for closing injection nozzle seats.

See example on next pages.



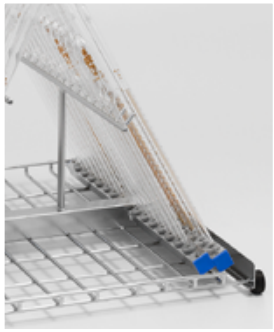


Example of Preconfigured
Supports



Bulb, graduated, Pasteur pipettes

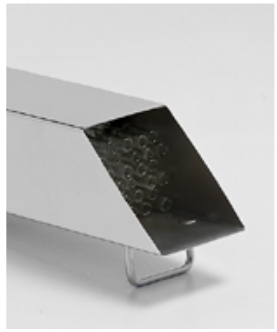
Injection washing





Immersion and flushing washing







Beakers



Jugs



Mugs



Buckets



Jars



Weighing bottles

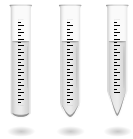
Funnels

Powder funnels



Imhoff cones





Test tubes





Evaporating dishes



Weighing dishes



Petri dishes



Basins



Trays





Erlenmeyer flasks



Bottles



Beakers



Weighing bottles



Example of configurable
Supports





Test tubes and vials



Low capacity volumetric flasks



Centrifuge tubes





Volumetric flasks narrow neck



Graduated cylinders

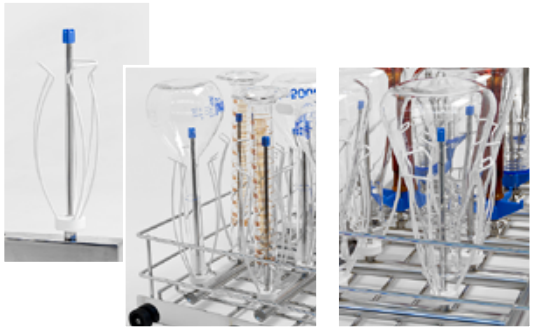




Wide neck bottles



Erlenmeyer flasks wide neck





Erlenmeyer flasks narrow neck



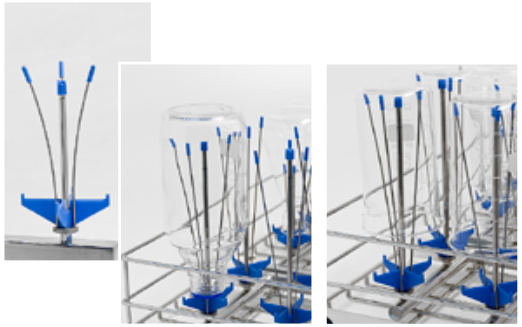
Flat or round bottom flask narrow neck



Funnels



Graduated cylinders





Erlenmeyer flasks wide neck



Wide or narrow neck bottles



Weighing bottles



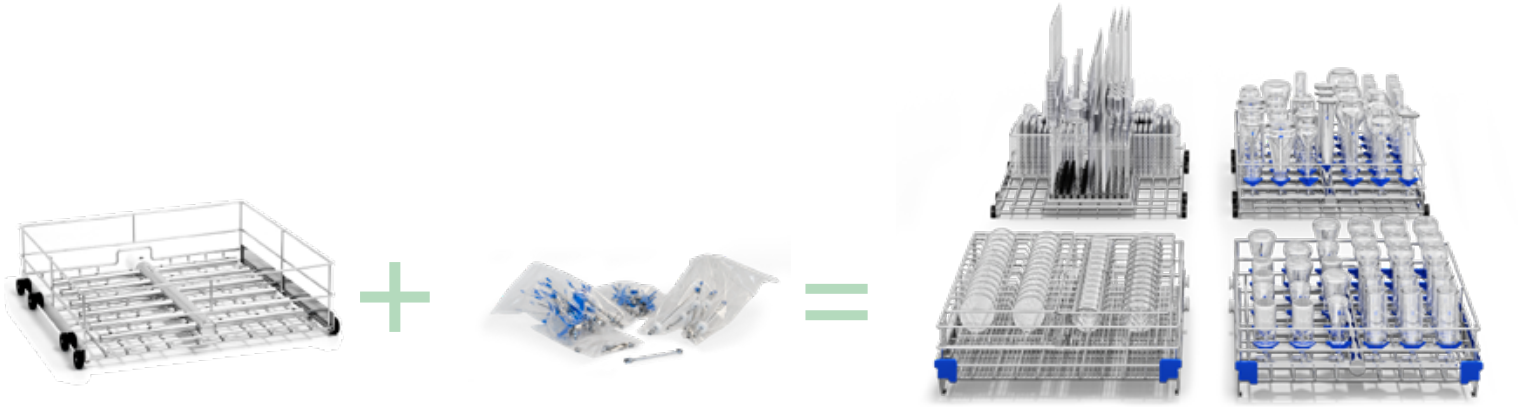
Graduated cylinders



Imhoff cones

Washing Carts Selection
Injection Nozzles, Accessories and Components

Each customer is given the possibility to fully customize the cart frame by using different nozzles and/or accessories.

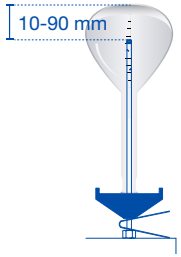


Nozzles are available in different height sizes

According to the glassware shape and dimension, nozzles should be chosen in order to have 10/90 mm clearance from the nozzle final tip and the glassware bottom.

Some kind of nozzles are endowed with adjustable spring retainer.

Spring retainers allow to place glassware of different heights on the same nozzle.



Nozzle dimensions

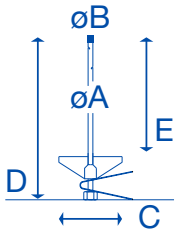
The “critical” dimensions to be considered in choosing the suitable nozzle are the following:

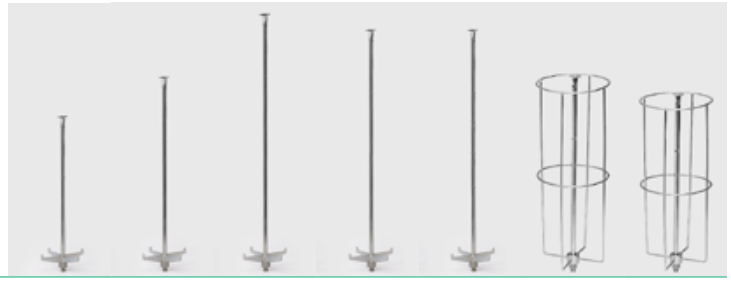
E dimension:

for the correct coupling nozzle/glassware and the check of the distance nozzle/glassware.

D dimension + clearance:

for the compatibility check washing machine/positioning level.

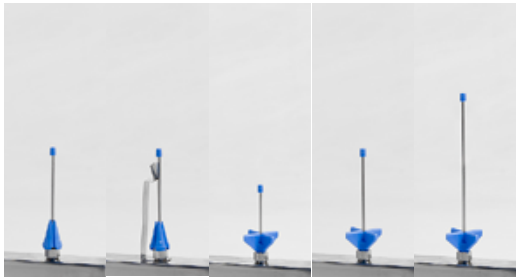




		C057911	C057912	C057914	C057915	C057917*	C057913	C054946
A	mm in.	8	8	8	8	8	8	8
B	mm in.	17	17	17	17	17	17	17
C	mm in.	87	87	105	105	105	105	105
D	mm in.	255	320	445	420	420	320	300
E	mm in.	235	300	425	400	400	300	280

* Radial holes on the total height nozzle

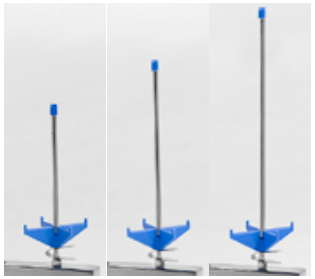
Injection Nozzles Types



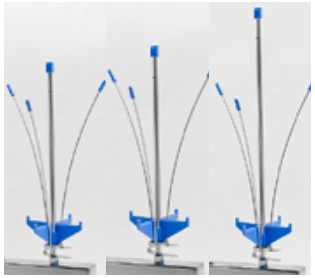
		C054542	C054543	C054953	C054544	C054546
A	mm	2,5	2,5	2,5	2,5	2,5
B	mm	4	4	4	4	4
C	mm	15	15	32	32	32
D	mm	85	85	50	85	105
E	mm	80	80	30	65	85



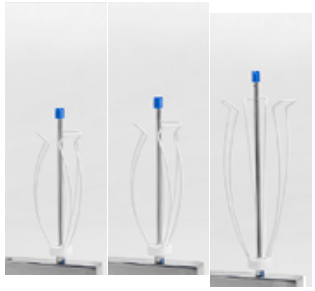
		C054548	C054549
A	mm	4	4
B	mm	5	5
C	mm	54	54
D	mm	135	155
E	mm	105*	110*



		C054550	C054551	C054552
A	mm	6	6	6
B	mm	10	10	10
C	mm	75	75	75
D	mm	195	220	275
E	mm	150*	180*	235*

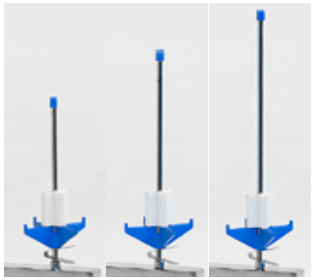


		C054553	C054554	C054555
A	mm	6	6	6
B	mm	10	10	10
C	mm	75	75	75
D	mm	195	220	275
E	mm	165	180*	235*



		C054947	C054559	C054560
A	mm	6	6	6
B	mm	10	10	10
C	mm	flex	flex	flex
D	mm	175	195	220
E	mm	-	-	-

Bottle support ø 28mm code C054037



		C054556	C054557	C054558
A	mm	6	6	6
B	mm	10	10	10
C	mm	75	75	75
D	mm	195	220	275
E	mm	150*	180*	235*

* indicates the maximum dimension for the height regulation of nozzles with spring.

Accessories
Inserts and Components



C61 Insert with 28 spring hooks for laboratory glassware



C63 Net basket mm 120x120x120
C64 cover for C63







C1150 Adjustable height net cover for 121 positions test tubes washing carts (i.e. C1148, C1149)
dim. 365x365x255 h mm

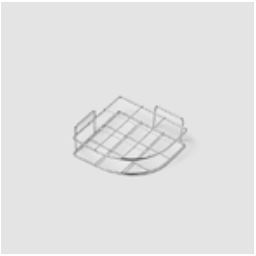


C68 mm 100h
C69 mm 130h
C70 mm 200h

C77 Cover for C68, C69 and C70



C97 26 positions insert for Petri dishes



C86 net separator for 1/4 net basket



C788 Support grid ensuring a flat surface on a C736, usable height reduced by 50mm (2")







Net cover for 121 positions test tubes wash carts (i.e. C421, C441, C723, C804.....)

C1061 248x248x250 h mm
C1086 248x248x175 h mm
C1105 248x248x45 h mm
(C1105 to be laid directly on top of the test tubes)
Usable height reduced by 40mm



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