

**Miele**

Top-class safety, cleanliness and material compatibility.  
Lab washers.

**Miele Professional. Immer Besser.**



**NEW 2019:** PLW 6011 and PLW 6111  
The new SlimLine lab washers

# A systematic approach from Miele Professional

A clear decision in favour of Miele



In developing reprocessing solutions for laboratory glassware, Miele Professional has always placed its focus on close cooperation with the experts in industry, with research laboratories and with highly reputable glassware manufacturers. The result of this cooperation based on trust and innovation are machines and processes which convince discerning users all along the line.

## **Quality**

Reproducible analyses require quality - quality in terms of laboratory glassware and its reprocessing. Miele's proverbial standards of quality can be relied on at all times: Sophisticated design and high-quality materials underline the first-class reputation of Miele Professional in laboratories. And this is equalled by the quality of service which has won Miele numerous awards over the years.

## **Performance**

Lab washers from Miele Professional have a proven ability to stand up to the stresses and strains of everyday laboratory life. Their insatiable appetite for work, a wide range of accessories and practical processes ensures perfect results and a high throughput capacity each time round, even when reprocessing special loads. Valuable laboratory glassware is ready for re-use again within next to no time.

## **Efficiency**

Profit daily from excellent efficiency: Machines from Miele Professional are thorough and fast, affording top-rate protection to materials in the process. Thanks to their high quality, they also require little maintenance and are highly durable, safeguarding your investments in many respects. The efficient use of water and chemicals also equates to low running costs.



Miele Professional is a decision in favour of top performance, quality and efficiency. High-quality machines which reliably meet the expectations of the discerning, day in and day out, underline the trust placed by commercial users in Miele: 97% of all clients\* would buy from Miele again next time round.

#### Dependability

For four generations, Miele has carried a special responsibility as a family-run company towards its customers, its business partners and its employees as well as for its products, processes and natural resources.

- Product development with a clear focus on quality, durability and sustainability
- Innovations 'Made in Germany' which have set their stamp on the industry
- Award-winning ergonomics, functionality and product design
- Entire systems from a single supplier
- Lower operating costs over entire product life cycle (Total Cost of Ownership)
- Highly commended after-sales service offering blanket coverage and a fast response



**55** YEARS **Laboratory Technology**

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# Compact lab washer

PG 8583, PG 8593, PG 8583 CD

Lab washers from Miele Professional represent a commercial-grade solution for laboratory glassware for analytical experiments. This approach is particularly gentle on materials and is recommended by leading manufacturers of laboratory glassware such as DWK Life Sciences.

**Developed for perfect lab glass reprocessing:  
System4Lab**

**The systematic approach to cleaning, combining the gentle treatment of materials with cost efficiency in laboratories.**

- **Washing and disinfection**

Innovative lab washers with individually selectable features

- **Process chemicals**

Tailored process chemicals for the thorough and gentle cleaning of all laboratory glassware

- **Process documentation**

Intelligent documentation software for reproducible and uninterrupted process monitoring

- **Services**

Miele guarantees the highest of standards in providing advice, financing, after-sales service and maintenance





DESIGN  
AWARD  
2015



# Product benefits

PG 8583, PG 8593, PG 8583 CD lab washers

## Competent and innovative



recommended by



- Intensive development work and close cooperation
- Trend-setting process development and product specifications



## Greater capacity

- High capacity (e.g. up to 260 injector nozzles in combination with the modules for pipettes and laboratory glassware), achieved through optimised chamber dimensions and a completely redesigned range of load carriers, saves time, storage space and costs.
- Rear basket docking enables full use of space in load carriers. Laboratory glassware turnaround is increased and work is speeded up at peak hours.



## Greater purity

- Excellent cleaning performance.
- Variable-speed pump for perfect spray pressure in all programme phases.
- Laser technology is used to weld the chamber sections to give a perfectly smooth, crevice-free finish for the ultimate in hygiene.
- No more heater elements in the wash chamber.
- Multi-stage filtration system is highly efficient in removing particulate soil from water in circulation.
- Spray pressure and spray arm monitoring detects any loss in pressure as well as load items preventing spray arm rotation.
- Conductivity monitoring ensures required water quality.



## Greater flexibility

- A new, modular basket concept offers maximum flexibility and intuitive operation as modules can be used in different combinations and can easily be reconfigured.
- Wide range of combination options guarantees flexibility in catering for different loads.
- Reduction in number of load carriers needed saves both on investments and storage space.
- In addition to a broad selection of standard programmes, client-specific cycles ensure that reprocessing suits the type of soil and the type and quantity of laboratory glassware.

# Overview of further product benefits

PG 8583, PG 8593, PG 8583 CD lab washers



## Design and user interface

The modern design and the intuitive user interface make for the incredibly simple use of lab washers.

- The new control panel is the central design element and represents an intelligent combination of door handle and control panel. It consists of a single, flush stainless-steel surface with embedded 'touch-on-steel' controls.
- Inclined control panel for improved legibility.
- 3-line text display and intuitive user interface for hassle-free operation.
- Programmes catering for all types of glassware and soils and vacant programme slots for user-specific programmes.
- Freely assignable direct-access buttons and individually selectable programme names for fast access to routine tasks.
- Flush, smooth control panel and handle surfaces for simple wipe cleaning.



## Ergonomics

An easily accessible salt container in the door and the AutoClose functions simplify the work of those operating these machines.

- The patented door salt container has a capacity of approx. 2 kg. Replenishing the salt no longer requires bending or stooping as the job can be performed standing upright. Similarly, there is no longer any need to remove heavy baskets and load carriers to access the salt container.
- AutoClose: Slight contact between the door and the machine is sufficient to automatically close the door. As a result, only a minimum of effort is required to reliably close and lock the door.



## Highly efficient drying

Depending on the model, the new lab washers feature DryPlus hot-air drying or EcoDry to assist drying by releasing steam.

- EcoDry: The door of the PG 8581 opens automatically at the end of a programme once the temperature in the chamber drops below 70°C. This releases hot, moisture-laden air, allowing the load to dry and cool down faster.
- DryPlus hot-air drying on the PG 8593/PG 8583 CD represents an ideal solution when dealing with intricate and narrow-lumened laboratory glassware and equipment. An upstream Class H13/H14 HEPA filter ensures the reliable removal of particles from the air taken in for drying. The filter is easily accessible for servicing via a hatch in the machine toekick panel (PG 8593) or in the side unit (PG 8583 CD).



#### **Hygienic chamber**

A completely redesigned chamber on the new lab washers enables high standards of hygiene and purity for analytical experiments.

- Laser technology is used to weld the chamber sections to give a perfectly smooth, crevice-free finish offering no nooks or crannies where blood or soil can accumulate.
- The removal of heater elements from the chamber removes a further potential source of a build-up of contamination and eliminates the risk of damage to plastic items.
- Greater space in the chamber facilitates a higher capacity per cycle (e.g. 128 laboratory phials or 98 pipettes together with other laboratory glassware).



#### **Rear basket docking system**

The relocation of the docking system for upper and lower baskets and load carriers to the rear of the chamber guarantees a more streamlined water and air circuit and improves the use of resources.

- Shorter circulation paths help minimise pressure losses and reductions in water temperature.
- Automatically self-sealing valves when not in use ensure uniformly high spray pressure.
- Use of same docking system to supply load carriers with water and hot air for internal drying.



#### **Optimised spray arms**

The new spray arm design consistently improves on progress made on previous model series and ensures the ultimate in reprocessing reliability.

- Different nozzle forms ensure the forceful removal of persistent soil and the uniform wetting of wash loads.
- Full spray jet coverage thanks to new arrangement of nozzles on spray arms.
- Lower water consumption per cycle without any trade-off in terms of cleaning performance.



#### **Safety through constant checks**

The new lab washers feature spray pressure and spray arm monitoring and some models also monitor water conductivity. These advanced sensors make a considerable contribution towards ensuring the reliability of reprocessing.

- Blockages caused by protruding load items are immediately detected
- Spray pressure losses as a result, for example, of excessive foaming is reliably detected.
- Deviations from the selected conductivity level in the final rinse water are reliably detected.
- Thanks to integrated sensors, deviations from the programme parameters are immediately recognised, allowing rapid intervention on the part of users - Range 0  $\mu\text{S}/\text{cm}$  - 1  $\text{mS}/\text{cm}$ .

# Appliance overview

PG 8583, PG 8593, PG 8583 CD



| Lab washers (left to right)                                        | PG 8583         | PG 8593         | PG 8583 CD  |
|--------------------------------------------------------------------|-----------------|-----------------|-------------|
| Width                                                              | 600             | 600             | 900         |
| Height, Depth [mm]                                                 | 835 (820*), 600 | 835 (820*), 600 | 820*, 600** |
| Shortest cycle*** [mins.]                                          | 20              | 20              | 20          |
| Capacity: Lab phials                                               | 128             | 128             | 128         |
| Capacity: Pipettes                                                 | 98              | 98              | 98          |
| Capacity: Mixed load consisting of laboratory phials and pipettes  | 130             | 130             | 130         |
| Capacity: Mixed load consisting of laboratory glassware and phials | 260             | 260             | 260         |
| Drying                                                             | EcoDry          | DryPlus         | DryPlus     |
| Integrated dispenser pump (depending on version)****               | 1 or 2          | 1               | 2           |
| Drawer for supply canisters (3 x 5 l or 2 x 10 l)                  | –               | –               | •           |
| Electrical connection 3N AC 400 V, 50 Hz                           | •               | •               | •           |
| Total rated load [kW]                                              | 9.3             | 9.3             | 9.3         |

\* Undercounter units

\*\* Free-standing unit with lid (optional) H 835, D 700 mm

\*\*\* Mini programme

\*\*\*\* Length of siphon: 333 mm für 5 l and 10 l canisters

# Programmes, cycle times, consumption

| PG 8583          |            |      |      |      |        | Drying     |        |
|------------------|------------|------|------|------|--------|------------|--------|
|                  | Main wash  |      |      |      |        | Cycle time | Energy |
|                  | Cycle time | CW   | HW   | AD   | Energy |            |        |
|                  | [mins.]    | [l]  | [l]  | [l]  | [kWh]  | [mins.]    | [kWh]  |
| Universal        | 34         | 4.5  | 31.5 | 18.5 | 1.7    | 3          | –      |
| Standard         | 29         | 5.0  | 14.0 | 18.5 | 1.7    | 2          | –      |
| Intensive        | 36         | 4.5  | 23.5 | 27.5 | 1.9    | 3          | –      |
| Anorganica       | 38         | 5.0  | 24.0 | 27.5 | 1.8    | 2          | –      |
| Organica         | 40         | –    | 37.0 | 18.5 | 2.0    | 3          | –      |
| Injector Plus    | 40         | 6.0  | 42.0 | 24.0 | 1.8    | 3          | –      |
| Pipettes         | 43         | 7.5  | 37.5 | 45.0 | 1.8    | 2          | –      |
| Plastics         | 34         | 36.0 | –    | 18.5 | 1.5    | –          | –      |
| Mini             | 20         | –    | 19.0 | 9.5  | 2.3    | –          | –      |
| Oils             | 41         | –    | 47.0 | 18.5 | 1.9    | 3          | –      |
| Special 93°C-10' | 53         | 11.9 | 29.6 | 14.0 | 3.4    | 3          | –      |
| De-min. rinse    | 6          | –    | –    | 10.0 | –      | –          | –      |
| Drain            | 4          | 10.0 | –    | –    | –      | –          | –      |

| PG 8593          |    |      |      |      |     |    |     |
|------------------|----|------|------|------|-----|----|-----|
| Universal        | 33 | 4.5  | 31.5 | 18.5 | 2.1 | 37 | 0.7 |
| Standard         | 28 | 5.0  | 14.0 | 18.5 | 2.8 | 37 | 0.7 |
| Intensive        | 35 | 4.5  | 23.5 | 27.5 | 2.3 | 37 | 0.7 |
| Anorganica       | 36 | 5.0  | 24.0 | 27.5 | 2.4 | 37 | 0.7 |
| Organica         | 38 | –    | 37.0 | 18.5 | 1.8 | 37 | 0.7 |
| Injector Plus    | 38 | 6.0  | 42.0 | 24.0 | 2.0 | 37 | 0.7 |
| Pipettes         | 40 | 7.5  | 37.5 | 45.0 | 2.3 | 47 | 0.6 |
| Plastics         | 33 | 36.0 | –    | 18.5 | 1.6 | 52 | 0.7 |
| Mini             | 18 | –    | 19.0 | 9.5  | 2.3 | 37 | 0.7 |
| Oils             | 39 | –    | 47.0 | 18.5 | 1.6 | 37 | 0.7 |
| Special 93°C-10' | 51 | 11.9 | 29.6 | 14.0 | 1.5 | 79 | 1.4 |
| De-min. rinse    | 6  | –    | –    | 10.0 | 1.6 | –  | –   |
| Drain            | 4  | 10.0 | –    | –    | 3.0 | –  | –   |
| Drying           | –  | –    | –    | –    | –   | 40 | 0.7 |

| PG 8583 CD       |    |      |      |      |     |    |     |
|------------------|----|------|------|------|-----|----|-----|
| Universal        | 33 | 4.5  | 31.5 | 18.5 | 2.1 | 37 | 0.7 |
| Standard         | 28 | 5.0  | 14.0 | 18.5 | 2.8 | 37 | 0.7 |
| Intensive        | 35 | 4.5  | 23.5 | 27.5 | 2.3 | 37 | 0.7 |
| Anorganica       | 36 | 5.0  | 24.0 | 27.5 | 2.4 | 37 | 0.7 |
| Organica         | 38 | –    | 37.0 | 18.5 | 1.8 | 37 | 0.7 |
| Injector Plus    | 38 | 6.0  | 42.0 | 24.0 | 2.0 | 37 | 0.7 |
| Pipettes         | 40 | 7.5  | 37.5 | 45.0 | 2.3 | 47 | 0.6 |
| Plastics         | 33 | 36.0 | –    | 18.5 | 1.6 | 52 | 0.7 |
| Mini             | 18 | –    | 19.0 | 9.5  | 2.3 | 37 | 0.7 |
| Oils             | 39 | –    | 47.0 | 18.5 | 1.6 | 37 | 0.7 |
| Special 93°C-10' | 51 | 11.9 | 29.6 | 14.0 | 1.5 | 79 | 1.4 |
| De-min. rinse    | 6  | –    | –    | 10.0 | 1.6 | –  | –   |
| Drain            | 4  | 10.0 | –    | –    | 3.0 | –  | –   |
| Drying           | –  | –    | –    | –    | –   | 40 | 0.7 |

Heating: 8.5 kW (3N AC 400V 50Hz), connection to cold water (15°C), hot water (65°C) and demineralised water (15°C)





## Innovative load carrier system

Load carriers and inserts offering improved efficiency

In the interests of the safety and retaining the value of laboratory glassware and equipment, Miele Professional offers a wide range of accessories, consisting of upper and lower baskets, load carriers and inserts for a variety of glassware types.

The load carrier system has undergone further optimisation in order to make loading even simpler. Thanks to EasyLoad, loading was never simpler!

# EASYLOAD

### Great efficiency and versatility

The new EasyLoad system utilises the available space in the chamber to a higher degree, allowing more laboratory glassware and equipment and other load items to be washed in each cycle. Another benefit accrues from the redesigned water and air circuit: Wash liquor and drying air is fed along a shorter and streamlined circuit and with minimal pressure losses on the way to the spray arms and injector nozzles. Optimum pressure conditions are also created by the automatically self-sealing docking valves when not occupied. The modular nature of the new load carriers represents a further product benefit, facilitating future extensions.

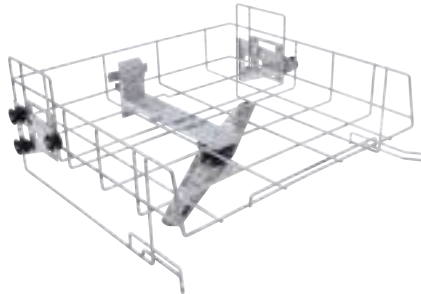
# Overview of upper and lower baskets and load carriers

for PG 8583, PG 8593 and PG 8583 CD



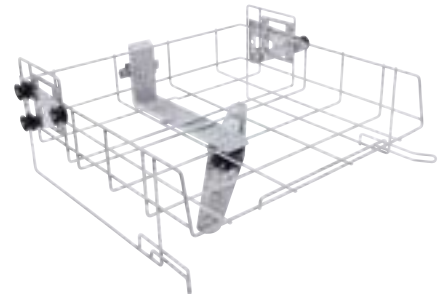
## A 100 upper basket for modules

- Upper basket with two docking pipes
- For the connection of up to two injector modules
- Automatically self-sealing docking valves
- H 141, W 528, D 525 mm
- Loading dimensions H 235, W 485, D 435 mm



## A 101 upper basket/open front

- Open front
- For various inserts
- Height-adjustable
- Built-in spray arm
- H 206, W 528, D 527 mm
- Loading dimensions H 160 +/- 30, W 475, D 443 mm



## A 102 upper basket/open front

- Open front
- For various inserts
- Height-adjustable
- Built-in spray arm
- H 206, W 528, D 527 mm
- Loading dimensions H 205 +/- 30, W 475, D 443 mm



## A 150 lower basket for modules

- Lower basket with two docking pipes
- For the connection of up to two injector modules
- Automatically self-sealing docking valves
- H 154, W 529, D 546 mm
- Loading dimensions H 235, (with A 100 upper basket) W 490, D 435 mm



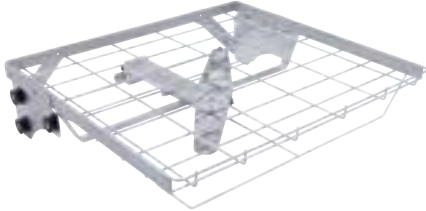
## A 151 lower basket/open front

- For various inserts
- H 88, W 529, D 110 mm
- Loading dimensions
  - H with A 100: 235 mm
  - H with A 101: 275 +/- 40 mm
  - H with A 102: 230 +/- 30 mm
  - H with A 103: 305 mm
  - H without upper basket 495
- W 490, D 489 mm



## A 202 load carrier

- For inserts on 2 levels
- Built-in spray arm
- Loading dimensions, lower level:
  - H 95, W 519, D 485 mm or H 135, W 494, D 500 mm (with/without rack inserts)
- Loading dimensions, upper level: H 135, W 516, D 462
- 6 additional LuerLock connections
- H 223, W 529, D 542 mm



#### **A 103 upper basket/open front**

- Open front
- For various inserts
- Built-in spray arm
- Particularly suitable for the reprocessing of shallow loads in combination with A 202 load carrier.
- H 133, W 528, D 528 mm
- Loading dimensions H 95, W 505, D 472 mm



#### **E 802 nozzle**

- Applies to lab washer with powder dispensing
- For use with injector modules to rinse out powder residue from door dispenser
- H 187, W 30, D 15 mm

# EasyLoad – Fast loading and highly efficient use of chamber space. The new loading system for cleaning laboratory glassware.

Miele reinvents loading: with EasyLoad

## EASYLOAD

- New injector system for all common injector modules and a large number of further load carriers
- Optimum use of available vertical clearance
- Particularly fast and simple arrangement of load
- Thorough internal cleaning of glassware of all shapes and sizes
- Secure hold and exceptional material protection during wash cycle

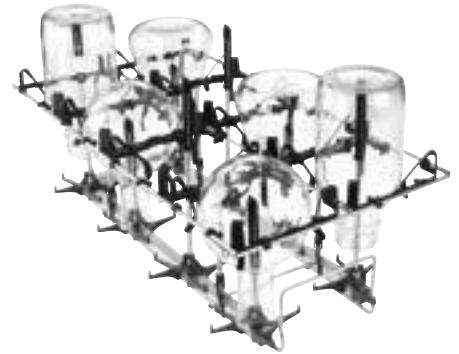
**EasyLoad means efficiency and a systematic approach to convenience:**

- New injector nozzles (3 diameters, 6 lengths)
- New plastic holders and rests
- New injector modules (8, 18 or 32 injectors)
- New support frames (for 8, 18 or 32 injector positions)
- Available for PG 8583, PG 8583 CD, PG 8593 and PG 8536

**The use of the new injector nozzles and rests without a support frame is possible in virtually all Miele lab load carriers.**



Even if a nozzle tip rests against the base of a glass, the new injectors still guarantee thorough cleaning. The new rest surrounds the injectors in the module or basket, preventing lateral movement without wasting valuable height.



The new support frame provides additional hold. As and when required, it is placed on top of the injector module, providing a secure hold to even large items of laboratory glassware in a vertical and protected position.

# Injector modules for laboratory glassware

For use with A 100 upper basket and A 150 lower basket

**EASYLOAD**



## A 300/3 module 2x4

- For laboratory glassware, e.g. Erlenmeyer flasks, round flasks, laboratory bottles, measuring flasks and measuring cylinders (250 - 1,000 ml)
- 4x A 840 injector nozzles, 4x A 841 injector nozzles
- H 228, W 208, D 479 mm



## A 301/5 module 3x6

- For laboratory glassware, e.g. Erlenmeyer flasks, round flasks, laboratory bottles, measuring flasks and measuring cylinders (50 - 250 ml)
- 9x A 842 injector nozzles, 9x A 843 injector nozzles
- H 203, W 229, D 493 mm



## A 302/3 module 4x8

- For laboratory glassware, e.g. Erlenmeyer flasks, round flasks, laboratory bottles, measuring flasks and measuring cylinders (25 - 100 ml)
- 16x A 844 injector nozzles, 16x A 845 injector nozzles
- H 143, W 240, D 477 mm



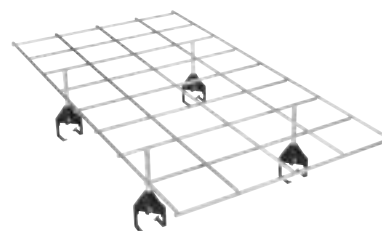
## A 860 holder rack 2x4

- For improved protection and centring of load items
- For use with A 300/3 und A 300/2 modules



## A 861 holder rack 3x6

- For improved protection and centring of load items
- For use with A 301/5 und A 301/4 modules



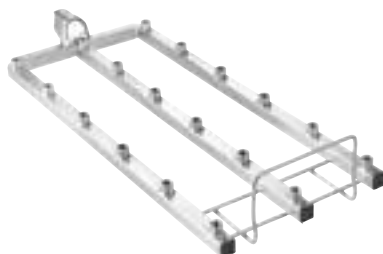
## A 862 holder rack 4x8

- For improved protection and centring of load items
- For use with A 302/3 und A 302/2 modules



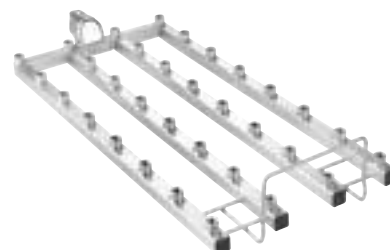
## **A 300/2 module 2x4 (w/o nozzles)**

- For laboratory glassware, e.g. Erlenmeyer flasks, round flasks, laboratory bottles, measuring flasks and measuring cylinders
- For up to 8 injector nozzles (particularly suitable for Ø 6 mm, e.g. A 840 or A 841, other diameters possible depending on application)
- H 73, W 133, D 475 mm



## **A 301/4 module 3x6 (w/o nozzles)**

- For laboratory glassware, e.g. Erlenmeyer flasks, round flasks, laboratory bottles, measuring flasks and measuring cylinders
- For up to 18 injector nozzles (particularly suitable for Ø 4 mm, e.g. A 842 or A 843, other diameters possible depending on application)
- H 73, W 173, D 475 mm



## **A 302/2 module 4x8 (w/o nozzles)**

- For laboratory glassware, e.g. Erlenmeyer flasks, round flasks, laboratory bottles, measuring flasks and measuring cylinders
- For up to 32 injector nozzles (particularly suitable for Ø 2.5 mm, e.g. A 844 or A 845, other diameters possible depending on application)
- H 73, W 195, D 475 mm



A 840 injector nozzle Ø 6x130 mm (1 off)  
 A 840/1 injector nozzle Ø 6 x 130 mm (5 off)  
 A 840/2 injector nozzle Ø 6 x 130 mm (10 off)  
 A 840/3 injector nozzle Ø 6 x 130 mm (20 off)



A 841 injector nozzle Ø 6 x 210 mm (1 off)  
 A 841/1 injector nozzle Ø 6 x 210 mm (5 off)  
 A 841/2 injector nozzle Ø 6 x 210 mm (10 off)  
 A 841/3 injector nozzle Ø 6 x 210 mm (20 off)



A 842 injector nozzle Ø 4 x 90 mm (1 off)  
 A 842/1 injector nozzle Ø 4 x 90 mm (5 off)  
 A 842/2 injector nozzle Ø 4 x 90 mm (10 off)  
 A 842/3 injector nozzle Ø 4 x 90 mm (20 off)



A 843 injector nozzle Ø 4 x 185 mm (1 off)  
 A 843/1 injector nozzle Ø 4 x 185 mm (5 off)  
 A 843/2 injector nozzle Ø 4 x 185 mm (10 off)  
 A 843/3 injector nozzle Ø 4 x 185 mm (20 off)



A 844 injector nozzle Ø 2.5 x 80 mm (1 off)  
 A 844/1 injector nozzle Ø 2.5 x 80 mm (5 off)  
 A 844/2 injector nozzle Ø 2.5 x 80 mm (10 off)  
 A 844/3 injector nozzle Ø 2.5 x 80 mm (20 off)



A 845 injector nozzle Ø 2.5 x 125 mm (1 off)  
 A 845/1 injector nozzle Ø 2.5 x 125 mm (5 off)  
 A 845/2 injector nozzle Ø 2.5 x 125 mm (10 off)  
 A 845/3 injector nozzle Ø 2.5 x 125 mm (20 off)

# Compatibility with entire product range

In particular the nozzles of the EasyLoad system can be fitted on virtually all Miele lab washers:

| EasyLoad components                                                                |            |                                                                                   |                                                                                     |                                                                                     |
|------------------------------------------------------------------------------------|------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                                                                    |            |  |  |  |
| Lab washers                                                                        |            | Modules                                                                           | Nozzles                                                                             | Holder rack                                                                         |
| Current model series                                                               |            |                                                                                   |                                                                                     |                                                                                     |
|  | PG 8583    | •                                                                                 | •                                                                                   | •                                                                                   |
|                                                                                    | PG 8593    | •                                                                                 | •                                                                                   | •                                                                                   |
|                                                                                    | PG 8583 CD | •                                                                                 | •                                                                                   | •                                                                                   |
|                                                                                    | PG 8536    | -                                                                                 | •                                                                                   | -                                                                                   |
| Previous model series                                                              |            |                                                                                   |                                                                                     |                                                                                     |
|  | G 7883     | -                                                                                 | •                                                                                   | -                                                                                   |
|                                                                                    | G 7893     | -                                                                                 | •                                                                                   | -                                                                                   |
|                                                                                    | G 7883 CD  | -                                                                                 | •                                                                                   | -                                                                                   |
|                                                                                    | PG 8535    | -                                                                                 | •                                                                                   | -                                                                                   |
| SlimLine                                                                           |            |                                                                                   |                                                                                     |                                                                                     |
|  | PLW 6111   | -                                                                                 | -                                                                                   | -                                                                                   |
|                                                                                    |            |                                                                                   |                                                                                     |                                                                                     |
|                                                                                    |            |                                                                                   |                                                                                     |                                                                                     |
| Large machine series                                                               |            |                                                                                   |                                                                                     |                                                                                     |
|  | G 7825     | -*                                                                                | •                                                                                   | -*                                                                                  |
|                                                                                    | PG 8527    | -*                                                                                | •                                                                                   | -*                                                                                  |
|                                                                                    |            |                                                                                   |                                                                                     |                                                                                     |

\*cf. separate brochure on large lab washers.

# Combination options

## Upper and lower baskets, modules

| Basket | + | Module                                   | + | A 100 upper basket | A 101 upper basket |        |     | A 102 upper basket |        |     | A 103 upper basket |
|--------|---|------------------------------------------|---|--------------------|--------------------|--------|-----|--------------------|--------|-----|--------------------|
|        |   |                                          |   |                    | Position           |        |     | Position           |        |     |                    |
|        |   |                                          |   |                    | Bottom             | centre | top | Bottom             | centre | top |                    |
| A 150  |   | A 300/3 or A 300/2 with EasyLoad nozzles |   | -                  | -                  | •      | •   | -                  | -      | !   | •                  |
|        |   | A 301/5 or A 301/4 with EasyLoad nozzles |   | •                  | •                  | •      | •   | •                  | •      | •   | •                  |
|        |   | A 302/3 or A 302/2 with EasyLoad nozzles |   | •                  | •                  | •      | •   | •                  | •      | •   | •                  |
|        |   | A 301/4 module with SD-B nozzles         |   | -                  | -                  | -      | -   | -                  | -      | -   | •                  |
|        |   | A 303                                    |   | -                  | -                  | -      | -   | -                  | -      | -   | -                  |
|        |   | A 304                                    |   | •                  | •                  | •      | •   | •                  | •      | •   | •                  |
|        |   | A 306                                    |   | -                  | -                  | -      | -   | -                  | -      | -   | -                  |

| Basket | + | Module                                   | + | Loading recommendation |
|--------|---|------------------------------------------|---|------------------------|
| A 100  |   | A 300/3 or A 300/2 with EasyLoad nozzles |   | -                      |
|        |   | A 301/5 or A 301/4 with EasyLoad nozzles |   | •                      |
|        |   | A 302/3 or A 302/2 with EasyLoad nozzles |   | •                      |
|        |   | A 301/4 module with SD-B nozzles         |   | -                      |
|        |   | A 303                                    |   | -                      |
|        |   | A 304                                    |   | •                      |
|        |   | A 306                                    |   | -                      |

• Recommended combination  
 - - Combination not recommended  
 ! Combination not possible

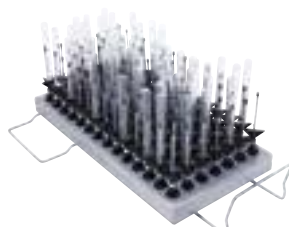
# Injector modules and load carriers for pipettes, phials and measuring cylinders

For use with A 100 upper basket and A 150 lower basket



## A 303 module for pipettes

- For e.g. 98 measuring and full pipettes
- Height of retaining frame 150 mm
- H 185, W 225, D 471 mm
- Vertical clearance without upper basket: 450 mm (with A 150 lower basket)
- 1 off, for use in A 150 lower basket



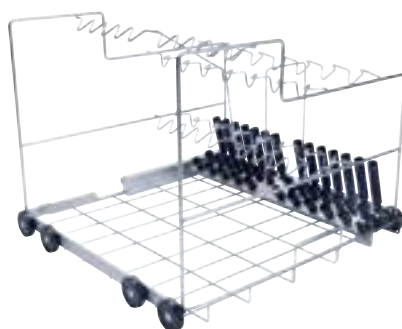
## A 304 module for phials

- For 98 tubes, e.g. centrifuge tubes, phials, test tubes or autosampler tubes
- H 130, W 222, D 471 mm
- One each for A 100 upper basket or A 150 lower basket



## A 306 module for measuring cylinders

- For laboratory glassware, in particular large measuring cylinders
- Capacity: four 1-2 l measuring cylinders, tall
- Contact surfaces plastic coated
- H 418, W 235, D 471 mm



## A 200 load carrier

- For 38 pipettes in 3 rows
- 1st row: 10 pipettes, max. 100 ml, Spacing 20 mm
- 2nd row: 14 pipettes, max. 25 ml, Spacing 26 mm
- 3rd row: 14 pipettes, max. 10 ml, Spacing 26 mm
- H 397, W 529, D 546 mm

# Accessories for reprocessing with fully demineralised water

for PG 8583, PG 8593 and PG 8583 CD



## PG 8595 Aqua Purificator

- Housing unit for 2 water demineralisation cartridges VE P 2000 / VE P 2800
- Compatible with PG 8583, PG 8593, PG 8583 CD
- Generally recommended quality for final rinse < 19 µS/cm
- H 835 (820), W 300, D 600 mm
- Freestanding unit, can be built under
- Outer panelling in stainless steel or white
- Condition as supplied: Empty housing unit. Cartridges and fittings must be ordered separately.



## CM/1 ConductivityMeter

- Conductivity module for water demineralisation cartridges
- VE P 2000 and VE P 2800
- • Single-line display
- 10-point measurement in 0 - 199.9 µS/cm range: 1/3/5/10/15/20/50/75/100/199.9 µS/cm
- Optical and acoustic 'change cartridge' indicator
- Optical and acoustic fault indicator
- Wall bracket
- Connection to external LED (optional)
- Manual calibration on site
- H 110, W 125, D 52 mm
- Input: 110 - 240V, 50/60 Hz, 85 mA; Output: 9V, 400 mA, 3.6 VA
- Includes: Sensor cell with LED indicator and connection lead (length 1.0 m), 1 pressure hose 3/4" (length 1.94 m), 1 hose 3/4" (length 1.5 m)



## LP 2800 demineralisation cartridge, empty

- Can be charged with 19 l of single-use resin

## E 315 disposable resin

- 20 l homogenous, mixed-bed resins for LP 2800
- Box with 2 x 10 l bags, vacuum-sealed in plastic bags
- Replacement filter bag

## E 316 refill set

- Plastic barrel with lid and funnel for 30 l of disposable resin

## SK fast-action coupling for water demineralisation cartridges

- Conversion kit for simple replacement of cartridges consisting of:
  - 2 x VA adapters from 3/4" to fast-action for direct connection to cartridge
  - 2 x fast-action couplings with 3/4" PVC double nipple including gaskets for existing set of hoses.

## UfZ conversion kit for spare cartridges

- If two cartridges are used, the 2 x VA 3/4" connections can be screwed onto the second cartridge. This avoids the need to change fittings.



## VE P 2800 water demineralisation cartridge, charged

- Pressure-proof stainless-steel cartridge
- Throughflow max. 800 l/h
- Delivery capacity can be monitored with conductivity module (ConductivityMeter CM/1)
- Complete with vent and pressure relief valve
- Pressure range 0.5 - 10 bar
- Contains 19 l of mixed, reactivatable resin
- Connection 3/4"
- Stainless-steel casing
- Dimensions: Ø 230 mm, H 570 mm +/- Hose connection radius (installation on either side of PG 8595 / PG 8596 possible)
- Max. supply temperature 40°C



## VE P 2000 water demineralisation cartridge, charged

- Pressure-proof stainless-steel cartridge
- Throughflow max. 450 l/h
- Delivery capacity can be monitored with conductivity module (ConductivityMeter CM/1)
- Complete with vent and pressure relief valve
- Pressure range 0.5 - 10 bar
- Contains 12.5 l of mixed, reactivatable resin
- Connection 3/4"
- Stainless-steel casing
- Dimensions: Ø 230 mm, H 410 mm +/- hose connection radius
- Max. supply temperature 40°C

Capacity in litres between cartridge reactivation cycles

| °d German hardness | 5     | 10    | 15    | 20    | 25    | 30  |
|--------------------|-------|-------|-------|-------|-------|-----|
| µS/cm              | 150   | 300   | 450   | 600   | 750   | 900 |
| VE P 2800          | 5,600 | 2,800 | 1,850 | 1,400 | 1,120 | 930 |
| VE P 2000          | 4,000 | 2,000 | 1,330 | 1,000 | 800   | 660 |

1°d corresponds to approx. 30 µS/cm.  
The information provided in this chart is intended as a guide only.

# Dispensing accessories

for PG 8583, PG 8593 and PG 8583 CD



## PG 8596 dispenser unit

- Housing unit for process chemicals and dispenser modules
- H 835 (820), W 300, D 600 mm
- Compatible with PG 8583, PG 8593
- Freestanding unit, can be built under
- Unit with removable door
- Outer panelling in stainless steel or white
- Interior dimensions: H 690 / 380 / 285 mm (top drawer removed / lower / upper drawer), W 250 mm, D 555 / 425 mm (without / with drip tray and dispenser modules)

## 2 levels:

Removable telescopic drawers with drip tray liners for canisters containing process chemicals

## Canister sizes:

Accommodates a total of 6 x 5 l canisters (L 245 x W 145 x H 225 mm\*).

Lower drawer offers space for larger canisters:

- 2 x 10 l, 140 x 193 x 307 mm
- 2 x 10 l, 223 x 203 x 321 mm
- 2 x 10 l, 229 x 193 x 323 mm
- 2 x 10 l, 194 x 204 x 353 mm
- 1 x 20 l, 289 x 233 x 396 mm
- 1 x 25 l, 288 x 234 x 456 mm

\* Only possible with DOS K 85/1 dispenser unit with short siphon



## DOS K 85/1 dispenser module

- For liquid alkaline detergents and chemical disinfectants, neutralising agent
- Peristaltic pump, adjustable via machine's electronic controls
- Integrated dispenser monitoring function ensuring high level of process security
- Short siphon (200 mm) for 5 l canister, incl. level fill monitoring
- Length of connection cable: 3.00 m
- Length of suction hose: 1.80 m



## DOS K 85 dispenser module

- As DOS K 85/1
- But with long siphon (300 mm) for 5 l and 10 l canisters
- Option: Conversion kit, Part no. 5458034, for siphon (10-30 l containers) available from Spares.

# Plinths and conversion kits

for PG 8583, PG 8593 and PG 8583 CD



## UG 30-60/60-85 plinth

- For use on PG 8583 and PG 8593
- Stainless-steel plinth, bolted to machine
- H 300, W 600, D 600 mm



## UG 30-90/60-85 plinth

- For use on PG 8583 and PG 8593 in combination with PG 8595 or PG 8596 (installation on either side of PG 8595 / PG 8596 possible)
- Stainless-steel plinth, bolted to machine
- H 300, W 900, D 600 mm



## UG 30-90/70-85 plinth

- For use with PG 8583 CD
- Stainless-steel plinth, bolted to machine
- H 300, W 900, D 700 mm



## UG 70-60/80

- For use on PG 8583 and PG 8593
- Stainless-steel box plinth with door, bolted to machine
- Fitted with floor tray, door with lock and key, bracket for conductivity meter and flowmeter, fixture for status LED in door frame
- Possible load configurations
  - 2 new-generation dispenser modules (e.g. DOS K 85) 2 canisters for liquid products, max. 10 l, 2 full demineralisation cartridges (e.g. VE P 2800), 1 conductivity module
- H 700, W 600, D 550 mm



## UBS 1 conversion kit

- For use of selected load carriers from G 78 series on PG 85 series
- For older load carriers with drying connection



## UBS 3 conversion kit

- For use of selected upper baskets from G 78 series on PG 85 series
- For older upper baskets without drying connection



## UBS 2 conversion kit

- For use of selected upper baskets from G 78 series on PG 85 series
- For older injector units without drying unit connection





## Lab washers

PG 8536

Miele Professional has set innovative milestones for more than five decades and stands for the efficient and safe machine-based reprocessing of laboratory glassware. The PG 8536 lab washer excels by offering added value: greater cleaning performance, improved process security and better efficiency.

**55**  
**YEARS** Laboratory  
Technology

# Product benefits

PG 8536



## PerfectTouchControl –

### Simple operation and cleaning

- Controls with flush, uninterrupted touch glass screen
- Reliable operation possible even when wearing gloves
- Chemical-proof surface is flush with machine front
- Simple and effective wet-wipe disinfection

Exclusive  
to Miele



## PerfectPureSensor –

### Residue-free rinsing

- Patented conductivity monitoring system
- Detection and removal of undesirable substance from process water (e.g. dissolved salts from alkaline or acidic process chemicals)
- Individually definable limits
- Low-maintenance and precise system thanks to contact-free conductivity monitoring
- Reliable documentation and reproduction of validated reprocessing results

Exclusive  
to Miele



## PerfectFlowSensor –

### Dispensing control

- Ultrasound volumetric control for highest process security
- Precise dispensing of liquid chemicals
- Measuring system independent of viscosity and ambient temperature
- Use of particularly durable bellows-type dispenser pumps

Competent and innovative



recommended by



- Intensive development work and close cooperation
- Trend-setting process development and product specifications

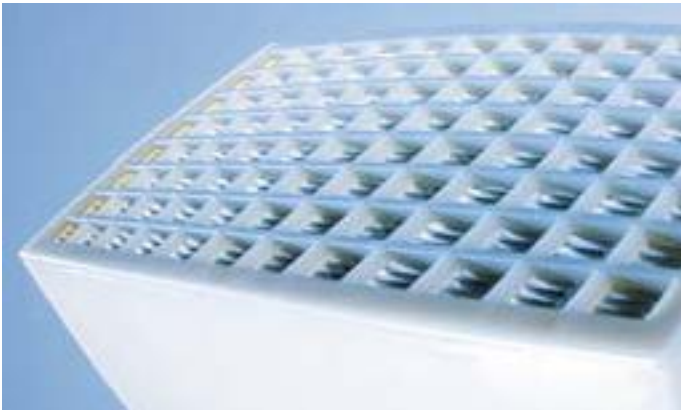


#### **PerfectSpeedSensor –**

##### **Spray arm monitoring**

- Precise speed control for safe reprocessing results
- Monitoring of all spray arms in machine and on baskets and load carriers
- Hygienic contact-free system with sensor outside chamber
- Safe reproduction of validated reprocessing results through early detection of excessive foaming or blockages

**Exclusive  
to Miele**



#### **PerfectHEPA Drying**

- Exceptional cleanliness, including during the drying phase, is guaranteed by PerfectHepaDrying.
- Highly temperature-resistant HEPA-grade Class 13 filters able to filter out more than 99.95% of particles.
- Upstream position at entrance to cabinet prevents unwanted particles entering with drying air
- Streamlined air flow: All parts of cabinet are reliably reached by stream of hot air



#### **PerfectDoc**

- Network interface for process documentation as standard feature
- PerfectDoc module: Connection to process documentation software and to a hospital's own network.
- Documentation of numerous parameters such as temperature over time
- Recording of complete process protocols including A0 values, dispenser quantities, spray arm speeds and conductivity
- Documentation via printer possible

**Exclusive  
to Miele**

# Appliance overview

PG 8536



| Lab washers                                  |  | PG 8536   |
|----------------------------------------------|--|-----------|
| Width [mm]                                   |  | 900       |
| Height, Depth [mm]                           |  | 1175, 700 |
| Duration / VarioTD** [mins.]                 |  | 41        |
| Capacity: Lab phials                         |  | 128       |
| Capacity: Pipettes                           |  | 98        |
| + other laboratory glassware                 |  | •         |
| Drying                                       |  | DryPlus   |
| Integrated dispenser pump                    |  | 2         |
| Capacity of drawer for supply canisters, 5 l |  | 4         |
| Electrical connection 3N AC 400 V, 50 Hz     |  | •         |
| Total rated load [kW]                        |  | 10.2      |

# Programmes, cycle times, consumption

| <b>PG 8536</b> | <b>Main wash</b> |      |      |      |      | <b>Drying</b> |     |
|----------------|------------------|------|------|------|------|---------------|-----|
| LAB STANDARD   | 33               | 8.5  | 38.5 | 18   | 2.6  | 34.3          | 0.6 |
| LAB UNIVERSAL  | 35               | 8.5  | 55   | 21   | 2.3  | 34.3          | 0.6 |
| LAB INTENSIVE  | 43               | 8.5  | 40   | 48   | 2.7  | 34.3          | 0.6 |
| LAB-PIPETTES   | 46               | 11.5 | 74.5 | 44   | 2.5  | 34.3          | 0.3 |
| PLASTICS       | 38               | 62.5 | -    | 20   | 2.5  | 44.6          | 0.4 |
| ORGANICA       | 41               | 1    | 64   | 21   | 2.8  | 34.3          | 0.6 |
| ANORGANICA     | 43               | 4    | 49   | 48   | 2.4  | 34.3          | 0.6 |
| LAB-OIL        | 47               | 1    | 80.5 | 21   | 2.5  | 34.3          | 0.3 |
| DES-VAR-TD     | 54               | 36.3 | 24.2 | 16   | 3.7  | 34.3          | 0.6 |
| SPECIAL 93/10  | 48               | 22   | 25.5 | 15.5 | 3.97 | 39.3          | 0.7 |

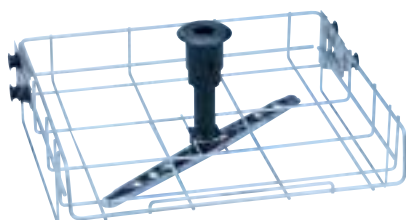
\* with 6-minute steam condensation pause (No. 48-50 4.33 mins.)

Heating: 9 kW (3N AC 400 V, 10.2 kW)

Connection to cold water (15°C), hot water (65°C), demineralised water (15°C) and steam condenser water supply (approx. 20°C)

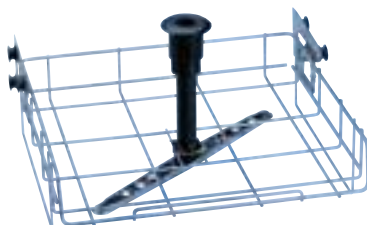
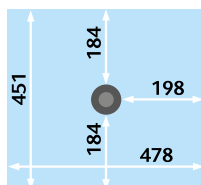
# Upper and lower baskets

for PG 8536



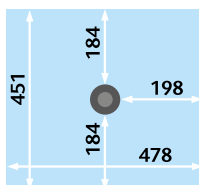
## O 188/2 upper basket/open front

- Open front
- For various inserts
- Vertical clearance 165 mm
- Height adjustment range +/- 20 mm
- Built-in spray arm with magnetic tip for spray arm sensing
- H 215, W 531, D 475 mm



## O 190/2 upper basket/open front

- As O 188/2
- Vertical clearance 215 mm
- Built-in spray arm with magnetic tip for spray arm sensing
- H 265, W 531, D 475 mm



## O 175 upper basket/injector unit with drying connector

- For narrow-necked laboratory glassware
- 33 injector nozzles
- Vertical clearance 170 mm\*
- Connection for hot-air drying unit
- H 250, W 531, D 475 mm, H with drying connection 412 mm
- Powder dispensing not possible

Supplied as standard with:

- 33 nozzles (E 351), Ø 4 x 160 mm
- 33 clips for nozzles 4 x 160 mm (E 353)

\* Clearance may be less, depending on type of laboratory glassware

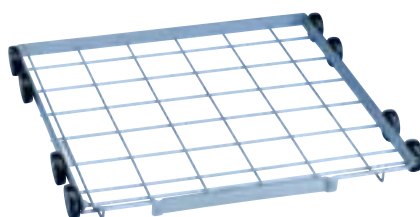


## O 184 upper basket/injector unit with drying connector

- For items such as centrifuge tubes, phials, test tubes for fraction collectors or autosampler tubes
- 96 injector nozzles
- Vertical clearance 170 mm
- Connection for hot-air drying unit
- H 260 (468 with drying connector), W 531, D 475 mm
- Powder dispensing not possible

Supplied as standard with:

- 96 nozzles, Ø 2.5 x 110 mm with plastic support



## U 874/1 lower basket/open front

- Open front
- For various inserts
- Clearance heights in combination with upper basket:
  - O 175 TA approx. 230 mm +/- 20 mm
  - O 184 approx. 205 mm +/- 20 mm
  - O 187 approx. 225 mm +/- 20 mm
  - O 188/2 approx. 270 mm +/- 20 mm
  - O 190/2 approx. 220 mm +/- 20 mm



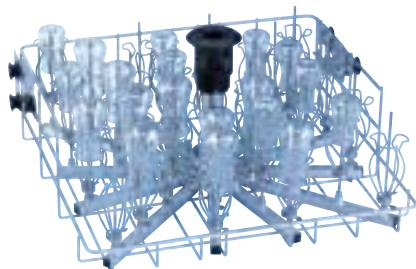
## U 175/1 lower basket/injector unit

- For narrow-necked glassware
- 33 injector nozzles
- Vertical clearance approx. 170 mm
- Only in conjunction with

O 175/O 187/O 184 upper baskets  
H 250, W 531, D 475 mm

Supplied as standard with:

- 33 nozzles (E 351), Ø 4 x 160 mm
- 33 clips for nozzles (E 353), 4 x 160 mm
- 1 irrigation nozzle



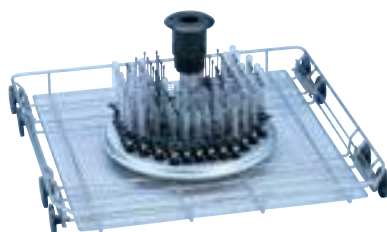
#### **O 187 upper basket/injector unit**

- For narrow-necked laboratory glassware
- 34 injector nozzles
- Vertical clearance 170 mm\*
- H 250, W 531, D 475 mm
- Powder dispensing not possible

#### **Supplied as standard with:**

- 34 nozzles (E 351), Ø 4 x 160 mm
- 34 clips for nozzles 4 x 160 mm (E 353)

\* Clearance may be less, depending on type of laboratory glassware



#### **U 184/1 lower basket/injector unit**

- For items such as centrifuge tubes, phials, test tubes for fraction collectors or autosampler tubes
- 96 injector nozzles
- Only in conjunction with

O 175/O 187/O 184 upper baskets

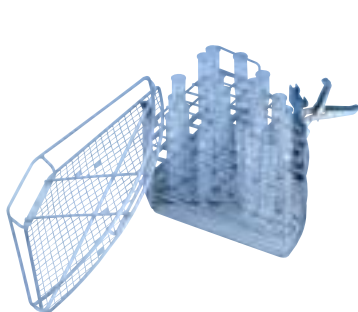
- Vertical clearance approx. 170 mm
- H 250, W 531, D 515 mm

#### **Supplied as standard with:**

- 96 nozzles 2.5 x 90 mm with plastic supports

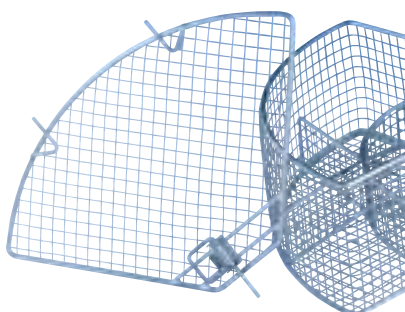
# Inserts for test tubes, funnels, beakers, wide-necked glassware

for PG 8583, PG 8593, PG 8583 CD and PG 8536



## **E 149 insert 1/4**

- For 80 test tubes, max. 16 x 105 mm, incl. A 13 lid
- 80 compartments, 18 x 18 mm
- Mesh size on base 8 x 8 mm
- Lid available from Spares, Mat. no.: 05618390
- H 132 (152), W 200, D 320 mm



## **A 13 lid**

- As replacement for E103, E104, E105 and E139 inserts
- Stainless steel
- 1 mm wire mesh
- 8 mm mesh gauge
- 4 mm all-round frame



## **E 103/1 insert 1/4**

- For approx. 200 test tubes, max. 12 x 75 mm
- 6 compartments, incl. A 13 lid
- Mesh size 8 x 8 mm
- H 102 (122), W 200, D 320 mm

## **E 104/1 insert 1/4**

- As E 103, but for test tubes, max. 12 x 105 mm, incl. A 13 lid
- Mesh size 8 x 8 mm
- H 132 (152), W 200, D 320 mm

## **E 105/1 insert 1/4**

- As E 103, but for test tubes, max. 12 x 165 mm, incl. A 13 lid
- Mesh size 9 x 9 mm
- H 192 (212), W 200, D 320 mm

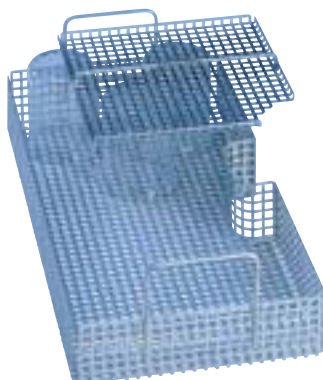
## **E 139/1 insert 1/4**

- As E 103, but for test tubes, max. 12 x 200 mm, incl. A 13 lid
- Mesh size 9 x 9 mm
- H 223 (243), W 200, D 320 mm



## **AK 12 insert 1/2**

- For funnels, beakers, wide-necked glassware, etc.
- H 67/122, W 225, D 434 mm

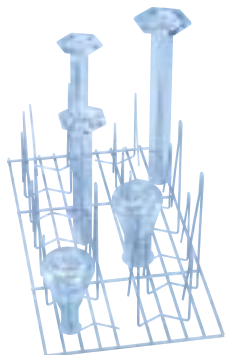


## **A 14 lid 1/4**

- For AK 12 insert
- Stainless steel
- 7 x 7 mm perforations, 3 mm ridge
- H 20, W 210, D 210 mm

# Inserts for beakers, wide-necked glassware, measuring cylinders

for PG 8583, PG 8593, PG 8583 CD and PG 8536



## **E 106 insert 1/2 (illustrated)**

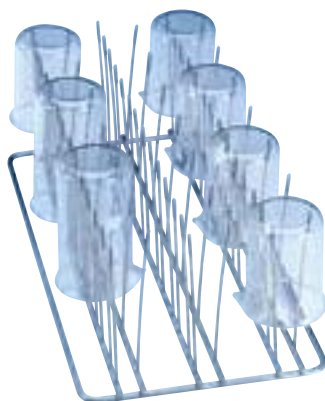
- For wide-necked glassware, measuring cylinders, etc.
- 10 spring hooks, H 175 mm
- 16 spring hooks, H 105 mm, spacing approx. 60 mm
- H 186, W 220, D 445 mm

## **E 106/1 insert 1/2**

- 26 small spring hooks, H 105 mm, spacing approx. 60 mm
- H 116, W 220, D 445 mm

## **E 106/2 insert 1/2**

- 13 large spring hooks, H 175 mm, spacing approx. 85 mm
- H 186, W 220, D 445 mm



## **E 109 insert 1/2 (illustrated)**

- For 21 beakers up to 250 ml
- 21 x 3 spikes
- H 155, W 230, D 460 mm

## **E 110 insert 1/2**

- For 10 beakers, 250 ml to 600 ml
- 10 x 3 spikes
- H 175, W 230, D 460 mm

## **E 111 insert 1/2**

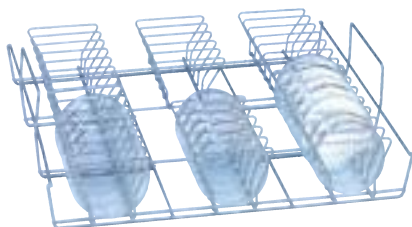
- For 8 beakers, 600 to 1,000 ml
- 8 x 3 spikes
- H 205, W 230, D 460 mm

## **E 144 insert 1/2**

- For 18 beakers up to 250 ml
- 18 x 3 spikes
- H 131, W 200, D 445 mm

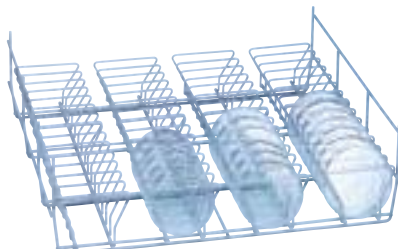
# Inserts for Petri dishes, watch glasses, micro-titre plates, etc.

for PG 8583, PG 8593, PG 8583 CD and PG 8536



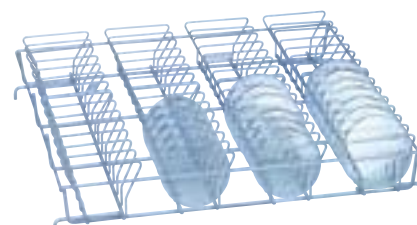
## **E 118 insert 1/1**

- For 38 Petri half-dishes, 100 mm
- 38 holders, Height 70 mm
- Spacing approx. 26 mm
- H 120, W 460, D 445 mm



## **E 136 insert 1/1**

- For 56 Petri half-dishes, 100 mm
- 56 holders, Height 70 mm
- Spacing approx. 26 mm
- H 145, W 485, D 445 mm



## **E 137 insert 1/1 for E 136**

- For 56 Petri half-dishes, 100 mm
- 56 holders, Height 70 mm
- Spacing approx. 26 mm
- H 95, W 485, D 445 mm



## **E 402 insert 1/2**

- For 44 Petri dishes, 80-125 mm
- 23 supports, distance between supports 15 mm
- H 53, W 200, D 445 mm



## **E 403 insert 1/2**

- For 105 Petri dishes, 50-60 mm
- 36 supports, distance between supports 9 mm
- H 35, W 200, D 445 mm



#### **E 134 insert 1/2**

- For 210 slides
- 210 compartments 26 x 11 mm
- Wire gauge 3 mm
- H 73, W 200, D 445 mm

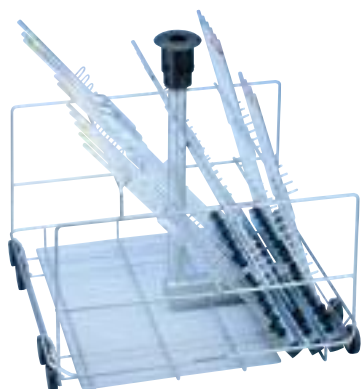


#### **E 494 insert 1/2**

- For 5 micro-titre plates
- H 35, W 205, D 440 mm

# Injector unit for pipettes

for PG 8536



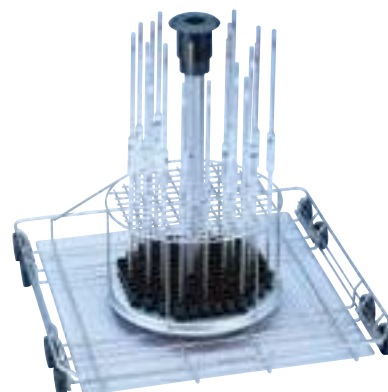
## E 404/1 injector unit

- For 38 pipettes in 3 rows:
  - Row 1: 10 pipettes 100 ml (length up to 550 mm), Spacing 20 mm,
  - Row 2: 14 pipettes 25 ml, Spacing 26 mm
  - Row 3: 14 pipettes 10 ml, Spacing 26 mm
- Without holder for ML/2 magnetic strip for automatic load carrier recognition/spray arm sensing



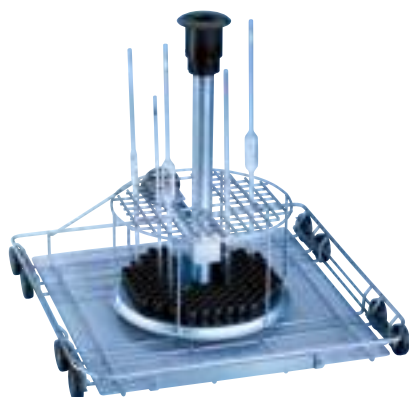
## E 405/1 injector unit with drying connection

- As E 404/1
- Connection for hot-air drying unit
- With holder for ML/2 magnetic strip for automatic load carrier recognition/spray arm sensing



## E 406 injector unit

- For 116 pipettes up to 450 mm
- Compartment size 16 x 16 mm
- Complete with retaining frame, height 150 mm
- Without holder for ML/2 magnetic strip for automatic load carrier recognition/spray arm sensing



## E 408 injector unit with drying connection

- As E 406 but for 96 pipettes
- Connection for hot-air drying unit
- With holder for ML/2 magnetic strip for automatic load carrier recognition/spray arm sensing



# Inserts for narrow-necked glassware

for PG 8536



## E 355 injector unit 1/2

- For narrow-necked glassware
- 16 injector nozzles
- One half vacant for other inserts

### Supplied as standard with:

- 7 x E 351 injector nozzles, Ø 4.0 x 160 mm
- 7 x E 353 clips for nozzles, 4.0 x 160 mm
- 9 x E 352 injector nozzles, Ø 6.0 x 220 mm
- 9 x E 354 clips for nozzles, 6.0 x 220 mm
- 1 x rinse nozzle for door powder dispenser



## E 385 1/2 injector unit with drying connection

- As per E 355, but with connection for hot air drying unit
- 16 injector nozzles
- Holder for ML/2 magnetic strip for automatic load carrier recognition

### Supplied as standard with:

- 7 x E 351 injector nozzles, Ø 4.0 x 160 mm
- 7 x E 353 clips for nozzles, 4.0 x 160 mm
- 9 x E 352 injector nozzles, Ø 6.0 x 220 mm
- 9 x E 354 clips for nozzles, 6.0 x 220 mm
- 1 x rinse nozzle for door powder dispenser



## E 340 injector unit 1/2

- For narrow-necked glassware
- 19 injector nozzles
- One half vacant for other inserts

### Supplied as standard with:

- 3/3/3 nozzles, Ø 4.0 x 140/160/180 mm
- 3/3/4 nozzles, Ø 6.0 x 200/220/240 mm
- 1 x rinse nozzle for door powder dispenser



## E 408 injector unit with drying connection

- As E 350 but with 32 nozzles/clips
- Connection for hot-air drying unit

### Supplied as standard with:

- 14 x E 351 injector nozzles, Ø 4.0 x 160 mm
- 14 x E 353 clips for nozzles, 4.0 x 160 mm
- 18 x E 352 injector nozzles, Ø 6.0 x 220 mm
- 18 x E 354 clips for nozzles, 6.0 x 220 mm
- 1 x rinse nozzle for door powder dispenser



## E 329 injector unit 1/1

- For narrow-necked glassware
- 39 injector nozzles

### Supplied as standard with:

- 4/5 nozzles, Ø 2.5 x 90/110 mm
- 5/5/5 nozzles, Ø 4.0 x 140/160/180 mm
- 5/5/5 nozzles, Ø 6.0 x 200/220/240 mm
- 1 x rinse nozzle for door powder dispenser



## E 414 1/1 injector unit with drying connection

- As E 329, but with 37 nozzles
- Connection for hot-air drying unit
- With holder for ML/2 magnetic strip for automatic load carrier recognition/spray arm sensing

### Supplied as standard with:

- 4/3 nozzles, Ø 2.5 x 90/110 mm
- 5/5/5 nozzles, Ø 4.0 x 140/160/180 mm
- 5/5/5 nozzles, Ø 6.0 x 200/220/240 mm
- 1 x rinse nozzle for door powder dispenser

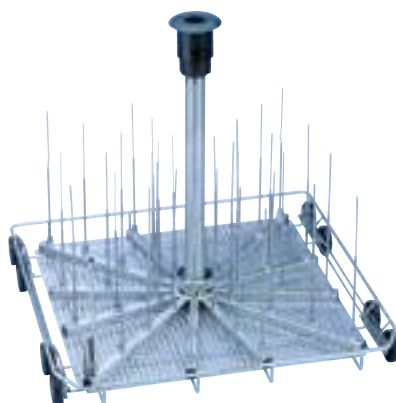


#### **E 350 injector unit 1/1**

- For narrow-necked glassware
- 33 injector nozzles

#### **Supplied as standard with:**

- 15 x E 351 injector nozzles, Ø 4.0 x 160 mm
- 15 x E 353 clips for nozzles, 4.0 x 160 mm
- 18 x E 352 injector nozzles, Ø 6.0 x 220 mm
- 18 x E 354 clips for nozzles, 6.0 x 220 mm
- 1 x rinse nozzle for door powder dispenser



#### **E 331 injector unit 1/1**

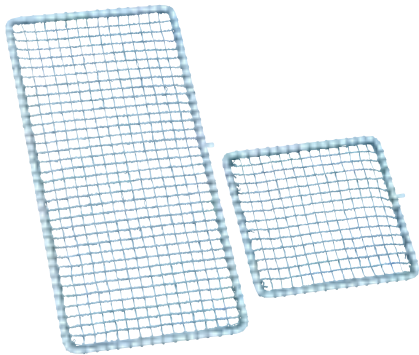
- For butyrometers
- 39 injector nozzles

#### **Supplied as standard with:**

- 39 SD-B injector nozzles for butyrometers
- 1 x rinse nozzle for door powder dispenser

# Accessories

for PG 8583, PG 8593, PG 8583 CD and PG 8536

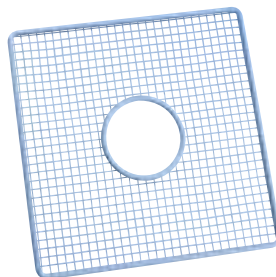


## A 2 cover net 1/2 (similar to photo)

- Plastic-coated metal frame with plastic netting
- For 1/2 inserts
- 216 x 456 mm

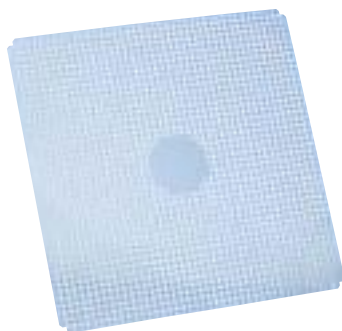
## A 3 cover net 1/4 (similar to photo)

- Plastic-coated metal frame with plastic netting
- For 1/4 inserts
- 206 x 206 mm



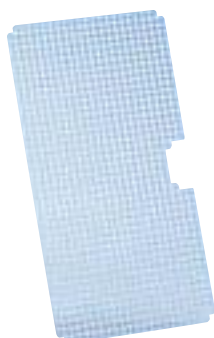
## A 5 cover

- Stainless-steel frame with plastic net (material quality PA 12)
- For O and U 184, E 747, E 947
- H 8, W 280, D 280 mm



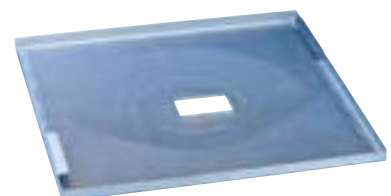
## A 11/1 insert 1/1 underframe

- With perforations 7 x 7 mm
- For upper or lower basket
- Stainless steel
- W 429, D 429 mm



## A 12/1 insert 1/2 underframe

- With perforations 7 x 7 mm
- For upper or lower basket
- Stainless steel
- W 429, D 224 mm



## E 319/3 insert 1/1

- Surface filter for coarse soil
- Contains soiling e.g. labels from laboratory glassware, glass splinters etc.
- W 500, D 488 mm



#### **E 336 irrigation sleeve**

- Plastic, with screw fitting
- For pipettes (max. length 445 mm) in injector units
- Ø 11 mm
- Length 121 mm



#### **E 351 injector nozzle**

- For injector unit
- For combination with E 353
- Ø 4 x 160 mm, screw thread

#### **E 352 injector nozzle**

- For injector unit
- For combination with E 354
- Ø 6 x 220 mm, screw thread

#### **E 353 clip for nozzle**

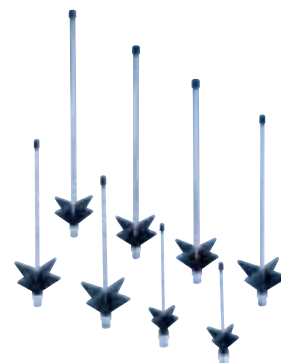
- For E 351 injector nozzle
- Height-adjustable
- Ø 4 x 160 mm

#### **E 354 clip for nozzle**

- For E 352 injector nozzle
- Height-adjustable
- Ø 6 x 220 mm

#### **E 470 injector nozzle with clip**

- For injector unit
- Ø 2.5 x 90 mm, screw thread



#### **Injector nozzle with plastic support**

- ID 90**
- Ø 2.5 x 90 mm
- ID 110**
- Ø 2.5 x 110 mm
- ID 140**
- Ø 4 x 140 mm
- ID 160**
- Ø 4 x 160 mm
- ID 180**
- Ø 4 x 180 mm
- ID 200**
- Ø 6 x 200 mm
- ID 220**
- Ø 6 x 220 mm
- ID 240**
- Ø 6 x 240 mm



#### **SD-B injector nozzle for butyrometers**

- For E 331 load carrier
- L 240 mm incl. thread, 4 x 140 mm plus welded, compressed nozzle, 1.5 x 100 mm

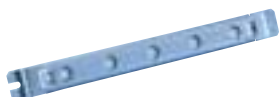


#### **E 362 blanking screw**

- M 8 x 1 thread, to seal connectors on load carriers

# Transport trolleys, accessories

for PG 8536



## **ML/2 magnetic strip**

- Magnetic strip for automatic load carrier recognition
- 5 magnets, configurable, 15 combination options

## **Retrofittable magnetic spray arm**

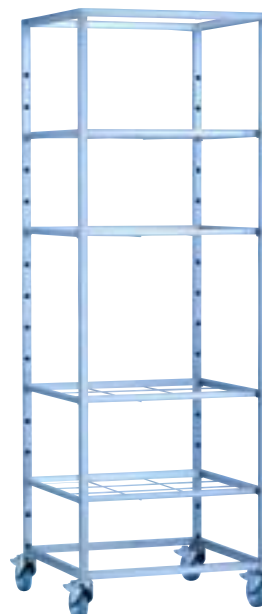
- For spray arm sensing function with retrofittable magnetic spray arms on PG 8535, PG 8536 on baskets/inserts without magnetic spray arms.



## **MC/2 Mielcar, supply and disposal trolley**

- For loading lab washers and handling baskets and inserts
- 2 levels (sloping towards centre)
- Rail handle and docking plate
- Docking height H 640–885 mm, infinitely adjustable
- 4 wheels, of which 2 are lockable
- H 1003, W 600, D 805 mm (with docking plate raised D 960 mm)

For use with PG 8536 and lab washers on 30 cm plinth



## **MT Mieltrans trolley**

- Trolley for storing and transporting baskets and inserts
- 4 height-adjustable levels
- Loading dimensions W 549, D 599 mm
- Height-adjustment increments 102.5 mm
- 4 lockable wheels
- H 1985, W 616, D 662 mm





## The new SlimLine lab washers – Compact dimensions, high capacity

With its new SlimLine lab washers, high-performance reprocessing methods, perfectly matching ProCare Lab process chemicals and practical accessories, Miele is offering a comprehensive and systematic solution to the reprocessing of laboratory glassware for analytical experiments. Going beyond standard approaches, Miele engineers together with users have come up with individualised solutions to tackle everyday laboratory challenges.

# Product benefit overview

## PLW 6011 and PLW 6111



### SmartLoad – flexible use of chamber space

The new SlimLine lab washers from Miele Professional excel in terms of high performance on a small footprint. And what's more, the innovative SmartLoad system enables chamber space to be used particularly efficiently.

Models from the PLW 6111 series are able to accommodate up to 3 baskets on telescopic racks. These baskets dock onto the water circulation system at 4 different heights. This allows a wide range of load height combinations, starting with using the lowest rack level only for a maximum vertical clearance of 630 mm.



### Compact machine dimensions combined with large chamber capacity

- Small footprint with width of only 650 mm
- 3 levels with injector nozzles
- Vertical clearance of up to 630 mm for large vessels
- 121 pipettes and 40 bottles (1 l) in a single cycle



### Spotless results through combination of programme cycle and process chemicals

- ProCare Lab process chemicals for optimum results
- Thorough cleaning combined with the gentlest treatment of materials
- Detergents and neutralising agents in various canister sizes



#### Intelligent controls

- Controls with flush, uninterrupted touch glass screen
- All information visible at a glance thanks to 3.5" display
- Maximum of 40 programme slots (standard programmes and vacant programme slots)
- Simple and effective cleaning
- RS232 port for connecting to a printer or PC



#### Simple and efficient cleaning processes

- Chamber, spray arms and tank filters are made from high-grade stainless steel (DIN 1.4404/AISI 316L)
- Conductivity monitoring for high-level process security
- HEPA H14 fine filter for germ-free drying air
- Built-in water softener\*
- Heated boiler for shorter cycle times\*

\* depending on model



#### Visual monitoring of chamber

- Process control thanks to full glass door
- Integrated chamber lighting
- Automatic door lock



#### Wide range of load carriers

- Range specifically designed for laboratory use
- Maximum flexibility combined with intuitive use
- Wide range of standard and configurable loading options
- Possibility to reprocess even the smallest items of laboratory glassware through to very large containers (up to 50 l)

# The new SlimLine lab washers

PLW 6011



SmartLoad  
2 racks  
3 levels

| SlimLine lab washer                             |  | PLW 6011                                                 |
|-------------------------------------------------|--|----------------------------------------------------------|
| External dimensions [Width x Height x Depth mm] |  | 650, 1685, 660                                           |
| Chamber dimensions [Width x Height x Depth mm]  |  | 540, 540, 585                                            |
| Usable volume [l]                               |  | 170                                                      |
| Load concept                                    |  | Rack system with max. 2 levels and 3 different positions |
| Programmes                                      |  | 40 programme positions                                   |
| Programme selection                             |  | Touch on Glass                                           |
| Features                                        |  |                                                          |
| Single-door model                               |  | •                                                        |
| Glass door, bottom-hinged, chamber lighting     |  | •                                                        |
| Electric heating                                |  | •                                                        |
| Hot-air drying, incl. HEPA H14 filter           |  | •                                                        |
| Steam condenser                                 |  | •                                                        |
| Integrated dispenser pumps                      |  | 2                                                        |
| Drain pump                                      |  | •                                                        |
| Water connections                               |  | HW, CW, de-mineralised water                             |
| Electrical connection 3N AC 400 V, 50 Hz        |  | •                                                        |
| Total rated load [kW]                           |  | 8.25                                                     |
| Conductivity meter                              |  | model-dependent                                          |
| Water softener                                  |  | model-dependent                                          |
| Sampling tap                                    |  | model-dependent                                          |
| USB port                                        |  | model-dependent                                          |
| Load capacity                                   |  |                                                          |
| 100 ml laboratory bottles                       |  | 84                                                       |
| 250 ml laboratory bottles                       |  | 84                                                       |
| 1000 ml laboratory bottles                      |  | 20                                                       |
| Phials                                          |  | 312                                                      |
| Pipettes                                        |  | 121                                                      |

# The new SlimLine lab washers

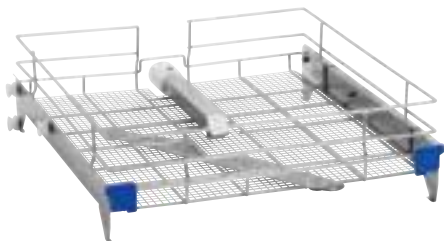
PLW 6111



 **SmartLoad**  
3 racks  
4 levels

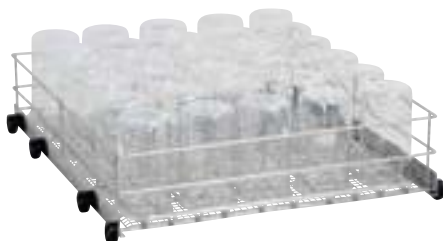
| SlimLine lab washer                             |  | PLW 6111                                                 |
|-------------------------------------------------|--|----------------------------------------------------------|
| External dimensions [Width x Height x Depth mm] |  | 650, 1840, 687                                           |
| Chamber dimensions [Width x Height x Depth mm]  |  | 540, 690, 585                                            |
| Usable volume [l]                               |  | 218                                                      |
| Load concept                                    |  | Rack system with max. 3 levels and 4 different positions |
| Programmes                                      |  | 40 programme positions                                   |
| Programme selection                             |  | Touch on Glass                                           |
| <b>Features</b>                                 |  |                                                          |
| Single-door model                               |  | •                                                        |
| Glass door, bottom-hinged, chamber lighting     |  | •                                                        |
| Electric heating                                |  | •                                                        |
| Hot-air drying, incl. HEPA H14 filter           |  | •                                                        |
| Steam condenser                                 |  | •                                                        |
| Integrated dispenser pumps                      |  | 2                                                        |
| Drain pump                                      |  | •                                                        |
| Water connections                               |  | HW, CW, de-mineralised water                             |
| Electrical connection 3N AC 400 V, 50 Hz        |  | •                                                        |
| Total rated load [kW]                           |  | 8.25                                                     |
| Conductivity meter                              |  | model-dependent                                          |
| Water softener                                  |  | model-dependent                                          |
| Sampling tap                                    |  | model-dependent                                          |
| USB port                                        |  | model-dependent                                          |
| <b>Load capacity</b>                            |  |                                                          |
| 100 ml laboratory bottles                       |  | 126                                                      |
| 250 ml laboratory bottles                       |  | 84                                                       |
| 1000 ml laboratory bottles                      |  | 40                                                       |
| Phials                                          |  | 468                                                      |
| Pipettes                                        |  | 121                                                      |

# Standard baskets



## **APLW 000 upper basket**

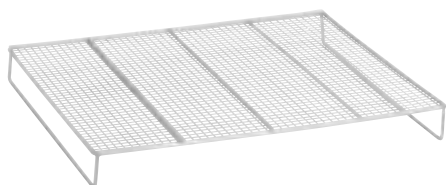
- For laboratory glassware, e.g. beakers
- Useable surface: 485 x 525 mm



## **APLW 001 load carrier**

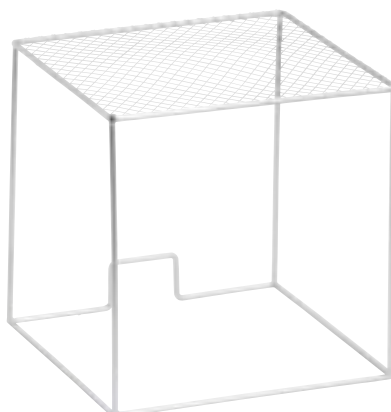
- For laboratory glassware, e.g. beakers
- Useable surface: 490 x 540 mm

# Inserts



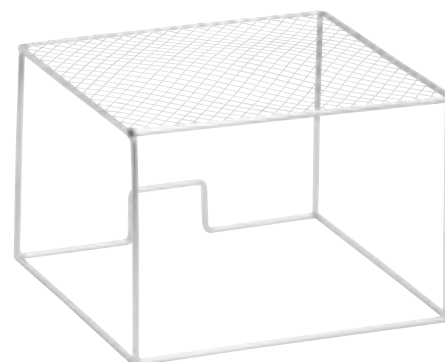
**APLW 033 top frame**

- Vertical clearance reduced by 50 mm



**APLW 034 cover**

- Cover for light-weight laboratory glassware, e.g. test tubes



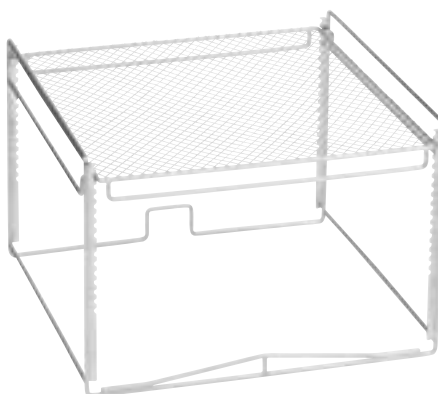
**APLW 035 cover**

- Cover for light-weight laboratory glassware, e.g. test tubes



**APLW 036 cover**

- Basket cover



**APLW 037 protective grid**

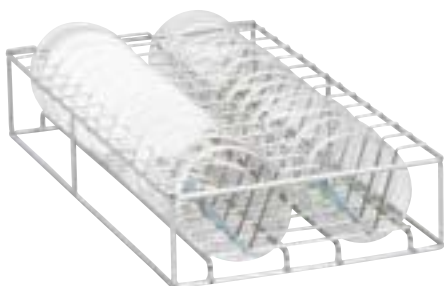
- Adjustable protective cover for the safe reprocessing of test tubes



**APLW 038 insert**

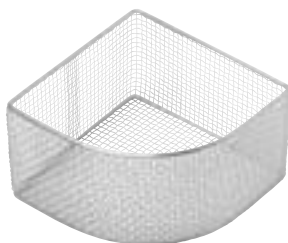
- Insert with spring hook for laboratory glassware
- 14 spring hooks, 175 mm
- 14 spring hooks, 105 mm

# Inserts



**APLW 039 insert**

- For Petri dishes
- 26 items



**APLW 040 insert**

- For test tubes
- Height 115 mm



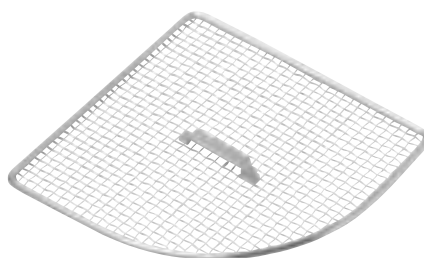
**APLW 041 insert**

- For test tubes
- Height 145 mm



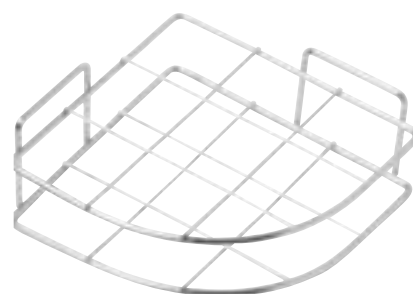
**APLW 042 insert**

- For test tubes
- Height 215 mm



**APLW 043 lid**

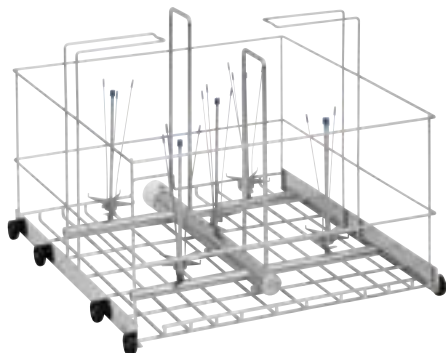
- Cover for APLW 040, APLW 041 and APLW 042



**APLW 044 insert**

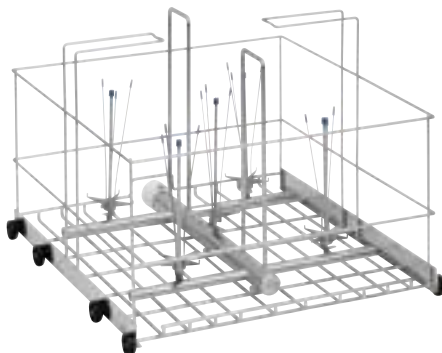
- For test tubes
- Separator for APLW 040, APLW 041 and APLW 042

# Pre-configured baskets



## APLW 002 load carrier

- For bottles (5 and 10 l), large Erlenmeyer flasks
- Up to 4 items, Ø max mm 240
- Up to 5 items, Ø max mm 190



## APLW 003 load carrier

- For bottles (up to 20 l), large Erlenmeyer flasks
- Up to 2 items, Ø max. mm 280



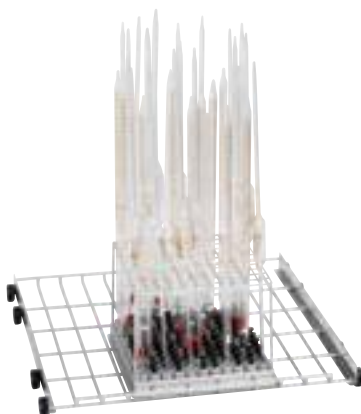
## APLW 004 load carrier

- For bottles, max. 50 l



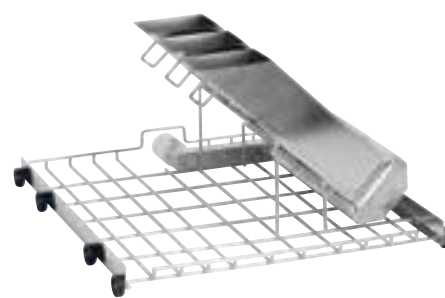
## APLW 005 load carrier

- For pipettes (max. 56)
- Max. pipette length: 760 mm on PLW 6111



## APLW 006 load carrier

- For pipettes (max. 121)
- Max. pipette length: 470 mm on PLW 6011



## APLW 008 load carrier

- For pipettes (reprocessing in 3 cartridges)



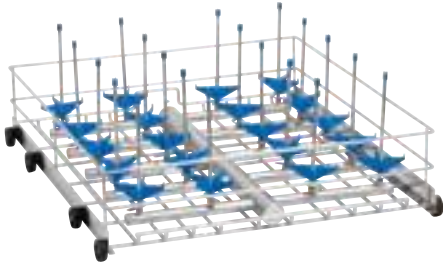
## APLW 007 load carrier

- For pipettes (reprocessing in 2 cartridges)
- Max. pipette length 520 mm



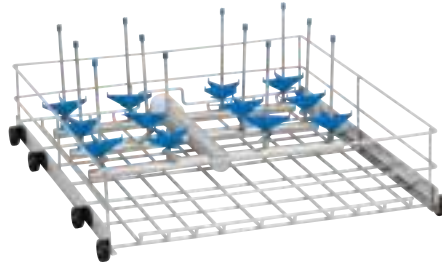
# Upper and lower baskets with configurable nozzles

## Basket layouts



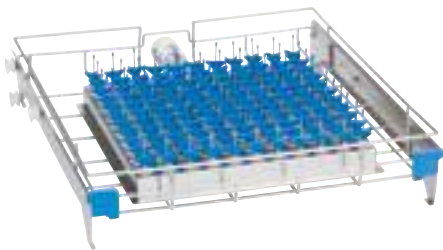
**Basket layout 1**

Fig. shows example of APLW 030 lower basket



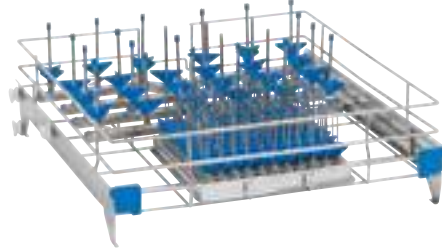
**Basket layout 2**

Fig. shows example of APLW 026 lower basket



**Basket layout 4**

Fig. shows example of APLW 019 upper basket



**Basket layout 3**

Fig. shows example of APLW 018 upper basket

# Upper and lower baskets, with pre-fitted nozzles

## Basket versions

| Upper basket | Ø max. mm | Max. height mm | No. of nozzles | Basket layout | Note                              |
|--------------|-----------|----------------|----------------|---------------|-----------------------------------|
| APLW 013/1   | 70        | 160            | 42             | 2             | With 42x APLW 051                 |
| APLW 013/2   | 70        | 200 - 300      | 10 + 32        | 2             | With 32x APLW 051 + 10x APLW 055  |
| APLW 014/1   | 100       | 230            | 20             | 1             | With 20x APLW 055                 |
| APLW 018/1   | 20 + 75   | 160            | 24 + 121       | 3             | With 121x APLW 048 + 24x APLW 051 |
| APLW 019/1   | 25        | 90             | 121            | 4             | With 121x APLW 047                |

| Lower basket | Ø max. mm | Max. height mm | No. of nozzles | Basket layout | Note                              |
|--------------|-----------|----------------|----------------|---------------|-----------------------------------|
| APLW 020/1   | 25        | 140            | 121            | 4             | With 121x APLW 047                |
| APLW 024/1   | 70        | 230            | 42             | 1             | With 42x APLW 052                 |
| APLW 024/2   | 70        | 200 - 300      | 42             | 1             | With 10x APLW 055 + 32x APLW 051  |
| APLW 024/3   | 70        | 180 - 280      | 42             | 1             | With 12x APLW 067 + 30x APLW 066  |
| APLW 025/1   | 70        | 200 - 300      | 24             | 2             | With 12x APLW 056 + 12x APLW 052  |
| APLW 026/1   | 100       | 300            | 20             | 1             | With 20x APLW 056                 |
| APLW 30/1    | 100       | 180 - 280      | 12             | 2             | With 6x APLW 067 + 6x APLW 066    |
| APLW 032/1   | 20 + 75   | 160 - 300      | 24 + 121       | 3             | With 121x APLW 048 + 24x APLW 056 |

# Upper and lower baskets, empty, freely configurable with nozzles

## Basket versions

| Upper basket | Ø max. mm | No. of nozzles | Basket layout | Note                                  |
|--------------|-----------|----------------|---------------|---------------------------------------|
| APLW 010     | 32        | 156            | 1             | only for 2.5 mm Ø nozzles             |
| APLW 011     | 40        | 110            | 1             | only for 2.5 mm Ø nozzles             |
| APLW 012     | 35        | 84             | 1             | only for 2.5 mm Ø nozzles             |
| APLW 013     | 70        | 42             | 1             |                                       |
| APLW 014     | 100       | 20             | 1             |                                       |
| APLW 015     | 110       | 16             | 1             |                                       |
| APLW 016     | 75        | 27             | 1             |                                       |
| APLW 017     | 20        | 121            | 2             | 200x490 mm grid                       |
| APLW 018     | 75        | 24+121         | 3             | See also APLW 035, APLW 034, APLW 036 |
| APLW 019     | 25        | 121            | 4             | only for 2.5 mm Ø nozzles             |

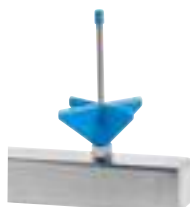
| Lower basket | Ø max. mm | No. of nozzles | Basket layout | Note                                  |
|--------------|-----------|----------------|---------------|---------------------------------------|
| APLW 020     | 25        | 121            | 4             | only for 2.5 mm Ø nozzles             |
| APLW 021     | 40        | 110            | 1             | only for 2.5 mm Ø nozzles             |
| APLW 022     | 52        | 70             | 1             | only for 2.5 mm Ø nozzles             |
| APLW 023     | 60        | 56             | 1             | only for 2.5 mm Ø nozzles             |
| APLW 024     | 70        | 42             | 1             |                                       |
| APLW 025     | 70        | 24             | 2             | 230 x 490 mm usable space             |
| APLW 026     | 100       | 20             | 1             |                                       |
| APLW 027     | 110       | 16             | 1             |                                       |
| APLW 028     | 75        | 27             | 1             |                                       |
| APLW 029     | 130       | 12             | 1             |                                       |
| APLW 030     | 100       | 12             | 2             | 220x490 mm grid                       |
| APLW 031     | 160       | 9              | 1             |                                       |
| APLW 032     | 75        | 24+121         | 3             | See also APLW 035, APLW 034, APLW 036 |

# Injector nozzles for configuration of baskets



## Nozzle type 1

- Standard support, Ø 4 mm for test tubes, low-capacity measuring cylinders, centrifuge tubes
- Fig. shows example of APLW 045



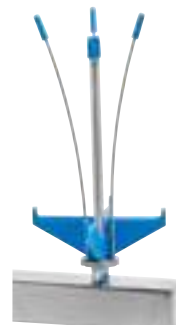
## Nozzle type 2

- Standard support, Ø 5 mm for narrow-necked glasses, measuring cylinders
- Fig. shows example of APLW 050



## Nozzle type 3

- Standard support, Ø 10 mm for narrow-necked glasses, measuring cylinders
- Fig. shows example of APLW 053



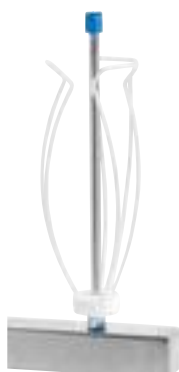
## Nozzle type 4

- Flexible support, interior Ø 10 mm for Erlenmeyer flasks, wide- and narrow-necked glasses, measuring cylinders, Imhoff flasks
- Fig. shows example of APLW 058



## Nozzle type 5

- Rigid support, interior, Ø 10 mm for wide-necked bottles, Erlenmeyer flasks
- Fig. shows example of APLW 061



## Nozzle type 6

- Rigid support, exterior Ø 10 mm for Erlenmeyer flasks, wide- and narrow-necked glasses, measuring cylinders, Imhoff flasks
- Fig. shows example of APLW 066



## Nozzle type 7

- Rigid support, Ø 17 mm for Erlenmeyer flasks, laboratory bottles, funnels, measuring cylinders
- Fig. shows example of APLW 069

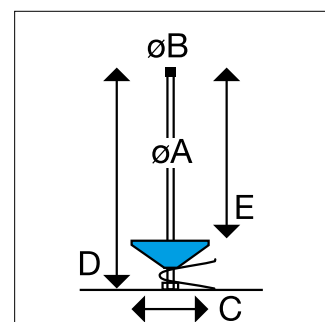
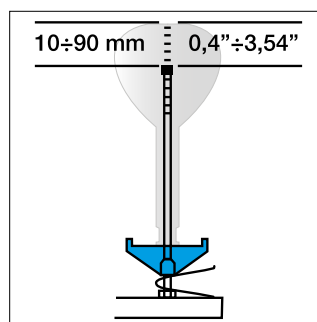


Depending on the form and size of loads, injector nozzles should be chosen to give a gap between the tip of the nozzle and the base of the glass of between 10 and 90 mm.

Various nozzles can be supplied with a spring clip for height adjustment. By adjusting the spring clip, it is possible to reprocess laboratory glassware in a variety of sizes.

When selecting injector nozzles, the following dimensions apply: Gap D must be less than the max. permissible loading height for the respective rack level, measured from the injector base to the bottom of the item of glassware.

Gap E must be adjusted to the height of the item of glassware, measured from the support to the tip of the nozzle.



|                                                                                                                                                    | Ø A mm | Ø B mm | C mm     | D mm | E mm | Model | Clamp |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|----------|------|------|-------|-------|
| <b>Nozzle type 1</b> Standard support, Ø 4 mm for test tubes, low-capacity measuring cylinders, centrifuge tubes                                   |        |        |          |      |      |       |       |
| APLW 045                                                                                                                                           | 2.5    | 4      | 15       | 80   | 75   | 1     | No    |
| APLW 046                                                                                                                                           | 2.5    | 4      | 15       | 80   | 80   | 1     | Yes   |
| APLW 048                                                                                                                                           | 2.5    | 4      | 32       | 80   | 80   | 2     | No    |
| APLW 047                                                                                                                                           | 2.5    | 4      | 32       | 50   | 50   | 2     | No    |
| APLW 049                                                                                                                                           | 2.5    | 4      | 15       | 80   | 80   | 2     | No    |
| <b>Nozzle type 2</b> Standard support, Ø 5 mm for narrow-necked glasses, measuring cylinders                                                       |        |        |          |      |      |       |       |
| APLW 050                                                                                                                                           | 4      | 5      | 54       | 75   | 50   | 2     | No    |
| APLW 051                                                                                                                                           | 4      | 5      | 54       | 110  | 80   | 3     | Yes   |
| APLW 052                                                                                                                                           | 4      | 5      | 54       | 175  | 130  | 3     | Yes   |
| <b>Nozzle type 3</b> Standard support, Ø 10 mm for narrow-necked glasses, measuring cylinders                                                      |        |        |          |      |      |       |       |
| APLW 053                                                                                                                                           | 6      | 10     | 75       | 115  | 85   | 2     | No    |
| APLW 054                                                                                                                                           | 6      | 10     | 75       | 135  | 95   | 3     | Yes   |
| APLW 055                                                                                                                                           | 6      | 10     | 75       | 175  | 130  | 3     | Yes   |
| APLW 056                                                                                                                                           | 6      | 10     | 75       | 225  | 185  | 3     | Yes   |
| APLW 057                                                                                                                                           | 6      | 10     | 75       | 275  | 235  | 3     | Yes   |
| <b>Nozzle type 4</b> Flexible support, interior Ø 10 mm for Erlenmeyer flasks, wide- and narrow-necked glasses, measuring cylinders, Imhoff flasks |        |        |          |      |      |       |       |
| APLW 058                                                                                                                                           | 6      | 10     | 75       | 135  | 105  | 2     | No    |
| APLW 059                                                                                                                                           | 6      | 10     | 75       | 225  | 185  | 3     | Yes   |
| APLW 060                                                                                                                                           | 6      | 10     | 75       | 275  | 235  | 3     | Yes   |
| <b>Nozzle type 5</b> Rigid support, interior, Ø 10 mm for wide-necked bottles, Erlenmeyer flasks                                                   |        |        |          |      |      |       |       |
| APLW 061                                                                                                                                           | 6      | 10     | 75       | 115  | 85   | 2     | No    |
| APLW 062                                                                                                                                           | 6      | 10     | 75       | 135  | 95   | 3     | Yes   |
| APLW 063                                                                                                                                           | 6      | 10     | 75       | 175  | 130  | 3     | Yes   |
| APLW 064                                                                                                                                           | 6      | 10     | 75       | 225  | 185  | 3     | Yes   |
| APLW 065                                                                                                                                           | 6      | 10     | 75       | 275  | 235  | 3     | Yes   |
| <b>Nozzle type 6</b> Rigid support, exterior Ø 10 mm for Erlenmeyer flasks, wide- and narrow-necked glasses, measuring cylinders, Imhoff flasks    |        |        |          |      |      |       |       |
| APLW 066                                                                                                                                           | 6      | 10     | Flexible | 175  |      |       | No    |
| APLW 067                                                                                                                                           | 6      | 10     | Flexible | 175  |      |       | Yes   |
| APLW 068                                                                                                                                           | 6      | 10     | Flexible | 275  |      |       | No    |
| <b>Nozzle type 7</b> Rigid support, Ø 17 mm for Erlenmeyer flasks, laboratory bottles, funnels, measuring cylinders                                |        |        |          |      |      |       |       |
| APLW 069                                                                                                                                           | 8      | 17     | 87       | 255  | 235  |       | No    |
| APLW 070                                                                                                                                           | 8      | 17     | 87       | 320  | 300  |       | No    |
| APLW 071                                                                                                                                           | 8      | 17     | 105      | 320  | 300  |       | No    |

# Injector nozzle accessories



## APLW 080 holder

- Ø 6 mm
- Height: 140 mm

## APLW 081 holder

- Ø 6 mm
- Height: 186 mm



## APLW 083 bottle support

- Securing of load
- Ø 6 mm
- Height: 130 mm

## APLW 082 bottle support

- Securing of load
- Ø 6 mm
- Height: 200 mm



## APLW 093 irrigation sleeve

- Pipette holder with silicone liner (max. Ø 11 mm)



## APLW 084 bottle neck holder

- Ø 28 mm
- for injector, Ø 6 mm

## APLW 085 bottle neck holder

- Ø 33 mm
- for injector, Ø 6 mm

## APLW 086 bottle neck holder

- Ø 45 mm
- for injector, Ø 6 mm



## APLW 079 support

- Star support
- Ø 75 mm for injector, Ø 6 mm

## APLW 078 nozzle cap

- Cap
- Ø 10 mm for injector, Ø 6 mm



## APLW 088 holder

- Ø 105 mm H = 290 mm
- for injector, Ø 8 mm



#### **APLW 090 holder**

- Holder for pipettes
- Ø 20 mm
- Height: 21 mm

#### **APLW 092 blanking stopper**

- Seal



#### **APLW 091 holder**

- Holder for pipettes
- Ø 25 mm
- Height: 13 mm



#### **APLW 073 support**

- Star support
- Ø 32 mm for injector, Ø 2.5 mm

#### **APLW 074 support**

- Conical support
- Ø 15 mm for injector, Ø 2.5 mm

#### **APLW 075 nozzle cap**

- Cap
- Ø 4 mm for injector, Ø 2.5 mm



#### **APLW 076 support**

- Star support
- Ø 54 mm for injector, Ø 4 mm

#### **APLW 077 nozzle cap**

- Cap
- Ø 5 mm for injector nozzle, Ø 4 mm



#### **APLW 087 support**

- Stainless steel support
- Ø 87 mm
- for injector, Ø 8 mm



#### **APLW 089 adapter**

- Adapter
- Ø 6 mm adapter nipple
- for nozzle, Ø 8 mm

#### **APLW 072 blanking screw**

- For sealing nozzle connectors not in use

SegoSoft - [Aufzeichnung: Demo - Zyklus beendet]

Datei Bearbeiten Ansicht Archiv Diagramm Aufzeichnung Geräte Extras Fenster ?

Chart Report



Ready



# Process documentation

## Systematic and flexible

Miele Professional offers a flexible and holistic approach to the documentation of laboratory glassware reprocessing. The system comprises the DataDiary documentation app and Segosoft Miele Edition documentation software as well as tailored communication modules and accessories. The documentation of reprocessing, including all relevant parameters, represents a clear quality benefit – and offers a wide range of opportunities to optimise both processes and costs.

### Comprehensive

- The easy-to-use app-based DataDiary with wireless data transfer and user-related approvals for the latest generation of Miele lab washers.
- The user-friendly Segosoft Miele Edition allows full traceability and secure documentation of washing and disinfection, sterilisation as well as all other processing stages not involving lab washers (inspection, heat-seal pouching, approvals).
- Automatic recording of process protocols, routine checks and maintenance work
- Digital and conventional records
- Legally compliant documentation

### Flexible

- Depending on the requirements of the installation location, documentation can be performed using two different communication modules.
- RS 232 module: Basic solution for small installations, connection of the APH 500 PRT 100 and APH 510 PRT 110 protocol printers and connection of Segosoft Miele Edition via USB.
- Ethernet module: Standard communication module with extended functionalities (auto-configuration, graphic protocols, update-enabled) and hence particularly suited to direct connection to a PC or a network.

## App-based solution

### Process documentation goes wireless: DataDiary – Simple, economic, safe

To assist with the reprocessing of laboratory glassware, Miele Professional is now offering a particularly time-saving solution based on an app. This receives cycle data automatically from a machine, allowing the approval of individual cycles at a tablet PC – without a cable, USB flash memory or any other intermediate steps. This Plug & Play solution is called DataDiary, an easy-to-use app-based process documentation system from Miele Professional which now extends the existing range.

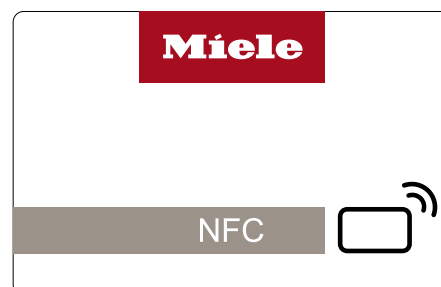


### DataDiary offers:

- Simple Plug & Play solution for PG 8583, PG 8583 CD and PG 8593 lab washers.
- Safe, wireless data transfer via WLAN (WPA2) between Miele machine and tablet
- WLAN link is simple to install with SSID (Service Set Identifier) and password
- Protocolling in PDF format
- User authentication using NFC tag or user ID/PIN
- Modern user interface for Android and Apple devices with a minimum screen size of 7" (min. 1280 x 800 Px)
- App for Android™ 6 and iOS® 10 (for iPad) operating systems



| DataDiary                                                                                                                                                                    | DataDiary ID                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Scope:                                                                                                                                                                       | Scope:                                                                            |
| <ul style="list-style-type: none"> <li>• XKM 3100 W CDS (WLAN communication module)</li> <li>• 5 NFC chipcards</li> <li>• Installation and operating instructions</li> </ul> | <ul style="list-style-type: none"> <li>• 5 NFC chipcards for DataDiary</li> </ul> |
| Data transmission                                                                                                                                                            |                                                                                   |
| <ul style="list-style-type: none"> <li>• Direct wireless link between machine and tablet PC</li> </ul>                                                                       |                                                                                   |
| Machine compatibility                                                                                                                                                        |                                                                                   |
| <ul style="list-style-type: none"> <li>• Miele PG 8583, PG 8583 CD and PG 8593 lab washers</li> </ul>                                                                        |                                                                                   |
|                                                                                                                                                                              |                                                                                   |



# Process documentation

## Opportunities offered by applications

## Segosoft® Miele Edition



### Direct link to a PC

The lab washer is connected directly to a computer running Segosoft Miele Edition. In this case, the PC can be installed in the laboratory or in a neighbouring room.

- Short distances and simple handling by approving loads on-site.
- Most flexible approach to connecting two or more units in hygiene room.
- Automatic data transfer from machine to software.



### Network connection

The lab washer is linked up to the in-house computer network via an Ethernet module or a network converter. This allows data to be processed on a central PC.

- Use of existing computer for documentation
- Automatic data transfer from machine to software



### Documentation via USB

Process data is saved to a USB flash memory connected to a lab washer via the RS232 communication module. Data can later be read out on a PC using the Segosoft Miele Edition for further processing.

- Reduced investment in computer and network infrastructure
- Use of existing computer

### Segosoft Miele Edition 7

Apart from the Ethernet module, no further hardware is required to connect a PG 85x3 lab washer to the Segosoft Miele Edition 7, (e.g. converters or adapters, etc.). Alongside the online activation of licences and automatic configuration of software for fast and simple commissioning, automatic signature updates are also possible during operation.

- Documentation in PDF/A1 format

- Long-term archiving according to ISO 19005-1:2005
- Level of security certified by BSI (German Office of Data Security)
- ServiceCard for compliant operation of software

### XKM RS232 10 Med

- RS 232 module
- Basic USB solution for printer connection
- Memory for up to 25 short/long protocols, no graphic protocols

### XKM 3000 L Med

- Ethernet module
- Universal solution for PC and network connection
- Extended functionalities (updates)
- Ring buffer for up to 30 process protocols and 2 graphic protocols

| Comparison of documentation options                               | Direct PC connection | Network connection | Documentation via USB | Printer |
|-------------------------------------------------------------------|----------------------|--------------------|-----------------------|---------|
| Documentation: Process protocol                                   | •                    | •                  | •                     | •       |
| Documentation: Temperature/pressure charts (depending on machine) | •                    | •                  | –                     | –       |
| Documentation: Routine checks                                     | •                    | •                  | •                     | –       |
| Documentation: Maintenance                                        | •                    | •                  | •                     | –       |
| Advanced digital signature with reference to user                 | •                    | •                  | •                     | –       |
| Manual approval with signature                                    | –                    | –                  | –                     | •       |
| Digital approval with user name/password                          | •                    | •                  | •                     | –       |
| Convenience of short distances within laboratory                  | +++                  | ++                 | ++                    | +++     |
| Paperless filing                                                  | •                    | •                  | •                     | –       |
| Data backup function                                              | •                    | •                  | •                     | –       |
| Legal security                                                    | •                    | •                  | •                     | •       |
| Initial outlay                                                    | +++                  | +++                | ++++                  | +       |
| Medical product                                                   | •                    | •                  | •                     | –       |
| ServiceCard                                                       | •                    | •                  | •                     | –       |

• = available – = not available + = evaluation scale

# Process documentation

## Components and accessories



### APS 101 Sego – Segosoft Miele Edition

- Process documentation software for use in direct PC connections or network connections

#### Scope

- Software download\*, Comfort Plus software package, PDF installation instructions, licence card for 1 machine

#### Max. number of connections

- Serial connection: 4 machines
- Network connection: Any number of machines

#### Data transmission

- Direct connection of machine and PC or machine and laboratory network

#### Machine compatibility

- Miele lab washers
- Machines from other manufacturers on request



### APS 200 Sego – Segosoft Miele USB Edition

- Process documentation software for data transfer using USB flash memory

#### Scope

- Complete package for 1 machine: Software CD\*, ComfortPlus software package, installation instructions, USB data logger module incl. 230 V converter, 1.4 m supply lead, serial interface cable for connecting machine and data logger (cable length: 3 m), USB flash memory
- Dimensions of data logger H 31, L 90, W 109 mm

#### Machine compatibility

- Miele Professional lab washer with TouchControl (PG 8583, PG 8593, PG 8583 CD)



### Connection cable TYP 1 (APH 301)

- 3 m serial connection cable

#### For use on:

- PC direct connection via serial interface
- Network connection via serial interface with Net500 network converter

### Connection cable TYP 2 (APH 302)

- 3 m serial connection cable

#### For use on:

- PC direct connection via serial interface
- Network connection via serial interface with Net500 network converter

### \* System requirements for all software systems

- CPU rate of at least 1.6 GHz, 2.0 GHz or higher recommended
- SVGA graphics with 1024 x 768 Px, 17" monitor or larger, recommended HD 1920 x 1080 Px
- Memory at least 2 GB, 4 GB recommended
- 1 GB free memory, 10 GB or higher recommended
- Min. 2 USB ports, 3 recommended, network interface, Internet access
- Operating systems: Windows 7 Professional SP1, Windows 8.1, Windows 10
- Adobe Acrobat Reader, Version 11.08 or higher

### Additional services mandated by Miele Service Partner:

- ServiceCard scope
- Update of digital signature extending legal validity (BSI-compliant)
- Telephone support, e-mail, remote maintenance
- Flat annual fee per surgery/hospital computer € 215 (due when software is activated)
- Guarantees compliant operation of software
- Configuration management and traceability

### Software download

\* <https://www.miele.de/professional/service-und-support-52.htm>





#### APH 110 Net500 – Net500 network converter

- Connection of machines with serial interface to a laboratory network
- Converts serial data (RS 232) to network protocol (TCP/IP)

##### Scope

- Transformer/rectifier unit
- Supply lead length 1.4 m
- L 31, W 90, H 109 mm

#### Connection cable for Net500

- Machine-side: Serial connection cable (TYPE 1 or 2, depending on machine type) for connection between machine and Net500
- Network-side: Network cable (TYPE 6 or 7, depending on required length) for connection between Net500 and laboratory network



#### Network cable Type 6 (APH 406), Type 7 (APH 407)

- For network connection

##### For use on:

- For connection of Net500 network converter to laboratory network
- Connection of one machine with network interface to laboratory network
- Network cable 3 m Type 6 (APH 406)
- Network cable 5 m Type 7 (APH 407)

#### Network cable Type 8 (APH 408), Type 9 (APH 409)

- Direct PC connection
- Connection of machine with network interface to PC network cable, crossover, 3 m, Type 8 (APH 408)
- Network cable, crossover, 5 m, Type 9 (APH 409)



#### Extension cable Type 3-5

- For connection cable Type 1/2
- Serial extension cable, 3 m, Type 3 (APH 303)
- Serial extension cable, 5 m, Type 4 (APH 304)
- Serial extension cable, 10 m, Type 5 (APH 305)

##### Machine compatibility

- For use with all models with serial interface



#### APH 500 - PRT100 - Protocol printer

- Printer for printing process protocols
- Ink-jet printer with indelible ink

##### Machine compatibility

- All Miele lab washers
- PG 8583, PG 8593 and PG 8583 CD only in combination with XKM RS232 10 Med serial communication module

#### APH 530 – Printer cable for PRT 100 printer

- Printer cable length 15 m (cable not supplied with printer)

##### Cartridges, paper rolls

- APH 590 – Printer cartridge for PRT 100
- APH 591 – Paper rolls, 5 off, for PRT 100



#### APH 510 - PRT110 - Protocol printer

- Printer for printing process protocols

##### Machine compatibility

- All Miele lab washers
- PG 8583, PG 8593 and PG 8583 CD only in combination with XKM RS232 10 Med serial communication module

#### APH 530 – Printer cable for PRT 110 printer

- Printer cable length 15 m (cable not supplied with printer)

##### cartridges, paper rolls

- APH 592 – Black ink ribbon for PRT 110
- APH 591 – Paper rolls, 5 off, for PRT 110

Available from mid-2019.



#### APH 100 - Serial Industrial Converter

- For serial connection of up to 2 Miele Professional lab washers
- USB connection between Serial Industrial Converter and PC
- Galvanic separation of all connections
- L 31, W 90, H 109 mm

##### Scope

- Transformer/rectifier unit
- Supply lead length 1.4 m
- USB cable 0.5 m

##### Machine compatibility

- Miele lab washers G 7883, G 7893, G 7883 CD, PLW 6011, PLW 6111
- Machines from other manufacturers on request



# NetBox.2

## Process documentation system

The NetBox2 is a complete documentation system including pre-configured software. The system is connected via an interface to the lab washer and gathers relevant data from the current cycle. In normal mode, documentation is fully automatic without any intervention on the part of the user. This results in an increase in operational security as the NetBox.2 provides a good level of protection against user errors.

Once collated, process data remains in memory; the NetBox has the capacity to save up to 10,000 batch protocols. Later, data can be saved to a network or a storage device.

In network mode, the unit can be monitored and operated via a PC interface. A flat-screen monitor is also available as an optional extra to plot time/temperature curves. A further optional extra is a barcode scanner or RFID transponder to facilitate the fast and simple identification of loads. The user can also approve or lock batches, depending on process cycles.

### Effective process documentation system requirements

- Complete system with high level of process security, including pre-installed and configurable software
- Manipulation-safe
- Simple operation without knowledge of PCs
- Extremely simple installation
- Process visualisation
- Batch-related documentation
- Documented batch approval
- Optional long-term archiving as XML files
- Touch screen controls
- User interface
- Machine status monitor
- Archiving of cycle data
- Transfer of load/approval data to EuroSDS©
- Provision of load / approval data for external documentation systems
- Web interface

### System components

- NetBox2 with mouse/barcode scanner (wired) as well as cables for connection to lab washers

### Optional

- Flat screen for visualisation of process data and loads
- Barcode scanner (Bluetooth model) for optimum programme control and simple load data acquisition
- Transponder as alternative to barcode system
- Ethernet switch with 4 ports
- Network cable
- Memory extension for up to 100,000 cycles

### Commissioning

- The NetBox2 is connected by a Miele Service technician. An IT employee should be present to oversee integration into an on-site network.





## Process chemicals

### ProCare Lab

Miele Professional has designed a comprehensive and systematic approach to the thorough and effective reprocessing of laboratory glassware and utensils. Alongside lab washers and tailored programmes, this system also comprises process chemicals - a critical factor in both cleaning and disinfection. Geared meticulously to the requirements of individual programme phases, specially formulated detergents and neutralising agents guarantee thorough, fast and gentle process cycles.

# Quality from Miele Professional:

Process chemicals for the perfect reprocessing of laboratory glassware and equipment



ProCare Lab process chemicals are ideally suited to a multitude of applications, ensuring the trace-free removal of a wide range of soils in lab washers. At the same time, the process takes extreme care of loads. That is why Miele Professional is recommended by leading manufacturers of laboratory glassware.

The new ProCare Lab process chemicals have undergone extensive laboratory tests to ensure that they match the performance of high-performance lab washers from Miele Professional. Consequently, users profit highly from immaculate reprocessing for their analytical experiments, benefit from the value of their equipment being maintained and from fast glassware turnaround times.

A broad range of powder and liquid detergents is available to cover the various relevant applications. The packaging of the various products is colour-coded in order to reduce the risk of mix-ups. Even in the hustle and bustle of laboratory life, fast and error-free reprocessing is guaranteed.


**ProCare Lab 11 MA**

- Mildly alkaline detergent
- Powder
- Container size 10 kg


**ProCare Lab 11 AP**

- Alkaline detergent
- Powder
- Container size 10 kg


**ProCare Lab 10 MA**

- Alkaline detergent
- Liquid
- Container sizes 5 l, 10 l


**ProCare Lab 10 AP**

- Alkaline detergent
- Liquid
- Container sizes 5 l, 10 l


**ProCare Lab 10 AT**

- Alkaline detergent
- Liquid
- Container sizes 5 l, 10 l


**ProCare Lab 10 AO\***

- Alkaline detergent
- Liquid
- Container sizes: 5 l


**ProCare Lab 30 C**

- Acidic neutralising agent based on citric acid
- Liquid
- Container sizes 5 l, 10 l


**ProCare Lab 30 P**

- Acidic neutralising agent based on phosphoric acid
- Liquid
- Container sizes 5 l, 12 kg


**ProCare Lab Universal 61**

- Coarse special salt
- Container size 6 kg


**Canister key**

- Simplifies the opening of firmly tightened safety caps

\*Note: When using detergents with active chlorine, increased wear of organic materials such as plastics and elastomers in the lab washer is to be expected. A temperature of 75°C should therefore not be exceeded in main wash cycles when using detergents containing higher concentrations of chlorine. In order to prevent such wear and tear, Miele recommends that machines be serviced annually or after 1000 operating hours. A failure to perform regular maintenance may invalidate guarantee and warranty claims. Please contact Miele Service or request an offer for a maintenance contract.

| Product                    | Container size | Properties                                                                                     | Ingredients                                       | pH range               |
|----------------------------|----------------|------------------------------------------------------------------------------------------------|---------------------------------------------------|------------------------|
| <b>Main wash</b>           |                |                                                                                                |                                                   |                        |
| ● ProCare Lab 11 MA        | 10 kg          | Powder, mildly alkaline<br>Foam-retardant action<br>Free from: Oxidative agents                | Phosphates<br>Silicates<br>Tensides               | 11.7-11.9 <sup>1</sup> |
| ● ProCare Lab 11 AP        | 10 kg          | Powder, alkaline<br>Oxidative<br>Free from: Phosphates,                                        | Oxygen bleach<br>Tensides                         | 11.5-11.7 <sup>1</sup> |
| ● ProCare Lab 10 MA        | 5 l, 10 l      | Liquid, alkaline<br>Free from: Tensides and oxidative agents                                   | Alkali hydroxide<br>Phosphates<br>Silicates       | 11.6-11.8 <sup>2</sup> |
| ● ProCare Lab 10 AP        | 5 l, 10 l      | Liquid, alkaline<br>Free from: Tensides, Phosphates and oxidative agents                       | Alkali hydroxide<br>Polycarboxylates              | 12.5-12.7 <sup>2</sup> |
| ● ProCare Lab 10 AT        | 5 l, 10 l      | Liquid, alkaline<br>contains tensides<br>Free from: Phosphates, silicates and oxidative agents | Alkali hydroxide<br>Polycarboxylates<br>Tensides  | 12.2-12.5 <sup>2</sup> |
| ● ProCare Lab 10 AO*       | 5 l            | Liquid, alkaline<br>Oxidative<br>Free from: Tensides,                                          | Alkali hydroxide<br>Phosphates<br>Chlorine bleach | 11.8-12.1 <sup>2</sup> |
| <b>Neutralisation</b>      |                |                                                                                                |                                                   |                        |
| ● ProCare Lab 30 C         | 5 l, 10 l      | Liquid<br>Acidic (based on citric acid)<br>Free from: Tensides and phosphates                  | Citric acid                                       | 2.9 -2.5 <sup>3</sup>  |
| ● ProCare Lab 30 P         | 5 l, 12 kg     | Liquid<br>Acidic (based on phosphoric acid)<br>Free from: Tensides,                            | Phosphoric acid                                   | 2.2-1.9 <sup>4</sup>   |
| <b>Reactivating</b>        |                |                                                                                                |                                                   |                        |
| ● ProCare Lab Universal 61 | 6 kg           | Coarse special salt for reactivation of built-in water softener                                |                                                   |                        |

<sup>1</sup> pH value (determined using fully demineralised water at 20°C) 2 to 4 g/l

<sup>2</sup> pH value (determined using fully demineralised water at 20°C) 2 to 4 g/l

<sup>3</sup> pH value (determined using fully demineralised water at 20°C) 1 to 4 g/l

<sup>4</sup> pH value (determined using fully demineralised water at 20°C) 1 to 3 g/l

| Product                    | Main applications                                                                                                                                                                                     | Contamination                                                                                      | Material compatibility                                                                                                                                                                                                                                                                                                                                             |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Main wash</b>           |                                                                                                                                                                                                       |                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                    |
| ● ProCare Lab 11 MA        | Medical, biological and chemical laboratories                                                                                                                                                         | Blood, protein, food residue                                                                       | <b>Suitable for:</b><br>Stainless-steel, laboratory glassware, ceramics, plastics** (PE, PP, PVDF, PTFE)<br><b>Conditionally suitable for:</b><br>Non-anodised aluminium and non-ferrous metals (preliminary checks required)<br><b>Not suitable for:</b><br>Anodised aluminium                                                                                    |
| ● ProCare Lab 11 AP        | Water laboratories, serological institutes, laboratories in phosphate industry                                                                                                                        | Inorganic and organic soils                                                                        | <b>Suitable for:</b><br>Stainless-steel, laboratory glassware, ceramics, plastics** (PE, PP, PVDF, PTFE)<br><b>Not suitable for:</b><br>Light alloys and non-ferrous metals, aluminium, anodised aluminium                                                                                                                                                         |
| ● ProCare Lab 10 MA        | Medical, biological and chemical laboratories                                                                                                                                                         | Blood, protein, Nutrient residues                                                                  | <b>Suitable for:</b><br>Stainless-steel, laboratory glassware, ceramics, plastics** (PE, PP, PVDF, PTFE)<br><b>Conditionally suitable for:</b><br>Non-anodised aluminium and non-ferrous metals (preliminary checks required)<br><b>Not suitable for:</b><br>Anodised aluminium                                                                                    |
| ● ProCare Lab 10 AP        | Medical, biological, micro-biological and chemical laboratories, water laboratories, phosphate industry, laboratories in food processing, cosmetics, pharmaceutical, mineral oil and other industries | Stubborn or dried-on residues                                                                      | <b>Suitable for:</b><br>Stainless-steel, laboratory glassware, ceramics, plastics** (PE, PP, PVDF, PTFE)<br><b>Not suitable for:</b><br>Light alloys and non-ferrous metals, aluminium, anodised aluminium                                                                                                                                                         |
| ● ProCare Lab 10 AT        | Laboratories in food, cosmetics, pharmaceutical, mineral oils and other industries                                                                                                                    | Stubborn residues such as oils, greases, paraffins, resins, organic dyes                           | <b>Suitable for:</b><br>Stainless-steel, laboratory glassware, ceramics, plastics** (PE, PP, PVDF, PTFE)<br><b>Not suitable for:</b><br>Light alloys and non-ferrous metals, aluminium, anodised aluminium                                                                                                                                                         |
| ● ProCare Lab 10 AO*       | Micro-biological, virological, nuclear medical laboratories, food industry, paints and coatings                                                                                                       | Nutrient residues, blood, protein, radioactive contamination, residues of tissue and cell cultures | <b>Suitable for:</b><br>Stainless-steel, laboratory glassware, ceramics, plastics** (PE, PP, PVDF, PTFE)<br><b>Not suitable for:</b><br>Light alloys and non-ferrous metals, aluminium, anodised aluminium                                                                                                                                                         |
| <b>Neutralisation</b>      |                                                                                                                                                                                                       |                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                    |
| ● ProCare Lab 30 C         | Medical, biological, micro-biological and chemical laboratories, water laboratories, phosphate industry, laboratories in food processing, cosmetics, pharmaceutical, mineral oil and other industries | Residues soluble in acids                                                                          | <b>Suitable for:</b><br>Stainless steel, laboratory glassware, ceramics, plastics*** (PE, PP, PVDF, PTFE); additionally suitable for the neutralisation of non-anodised aluminium<br><b>Not suitable for:</b><br>Alloys and non-ferrous metals, chrome- and nickel-plated parts, anodised aluminium; not suitable for acidic pre-washing of non-anodised aluminium |
| ● ProCare Lab 30 P         | Medical, biological, micro-biological and chemical laboratories, laboratories in the food, cosmetics, pharmaceutical, mineral oil and other industries                                                | Removes limescale and other soils soluble in acids                                                 | <b>Suitable for:</b><br>Stainless-steel, laboratory glassware, ceramics, plastics*** (PE, PP, PVDF, PTFE)<br><b>Not suitable for:</b><br>Light alloys and non-ferrous metals, chrome- and nickel-plated parts, anodised aluminium, aluminium                                                                                                                       |
| <b>Reactivating</b>        |                                                                                                                                                                                                       |                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                    |
| ● ProCare Lab Universal 61 | ProCare Universal 61 prevents scaling and protects loads                                                                                                                                              |                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                    |

\*Note: When using detergents with active chlorine, increased wear of organic materials such as plastics and elastomers in the lab washer is to be expected. A temperature of 75°C should therefore not be exceeded in main wash cycles when using detergents containing higher concentrations of chlorine. In order to prevent such wear and tear, Miele recommends that machines be serviced annually or after 1000 operating hours. A failure to perform regular maintenance may invalidate guarantee and warranty claims. Please contact Miele Service or request an offer for a maintenance contract.

\*\* Plastics suitable for alkaline machine-based wash according to manufacturer.

\*\*\* Plastics suitable for acidic machine-based wash according to manufacturer



**Miele**  
PROFESSIONAL

# Service excellence

Support is always available to you.

Miele Professional is synonymous with exceptional quality – not least when it comes to service. Blanket service coverage enables a response within 24 hours. And, thanks to on-board spares, first service visits result in around 90% first-time fixes. Miele's own service operation has repeatedly been awarded top marks for its service excellence.





# Service excellence

## Maintenance and service contracts



### Comprehensive service from the very start

Even before a machine is installed, Miele's sales force is available to provide dentists with in-depth advice. Experienced experts assist in selecting the most suitable machines and configurations to suit individual needs. On request, feasibility calculations can be provided, along with tailored financing packages.

Miele also offers a series of process checks performed at various times throughout a machine's life cycle. Specially trained medical product technicians carry out process tests in accordance with legal and standards requirements as well as country-specific recommendations.

### Miele service contracts

#### Preventative maintenance

- Inspection
- Maintenance
- incl. high-mortality parts

#### Full-service maintenance contract

- Inspection
- Maintenance
- incl. repairs

### Machine qualification

#### IQ / OQ

- Installation Qualification
- Operation Qualification

#### Annual maintenance/calibration

- Maintenance
- Calibration of measuring systems

### Service to meet professional expectations

Highly qualified service engineers oversee the delivery and commissioning of machines and are available to perform various routine checks during the course of the machine's life time. This prevents faults occurring in the first place and offers an opportunity to optimise operating parameters on an ongoing basis. A further advantage: Regular checks and maintenance safeguards investments.

- First-class service with a network of technicians assigned to medical products and lab washers (over 220 in Germany alone)
- Short response times and on-site servicing within 24 hours
- 90% of service calls result in first-time fixes
- Reliable spares service, key functional parts available for 15 years after series production ceases.

### Customised service contracts and inspections

Miele Professional offers laboratories of all sizes tailored service contracts. In honouring these contracts, Miele service engineers regularly assess and evaluate the condition of machines. Depending on the contract concluded, this comprises an analysis of functionality and safety with respect to all key components, including replacement as and when necessary. Scheduled inspection and maintenance prevents breakdowns from happening in the first place, increases the life expectancy of machines and contributes towards safeguarding investments. This offer from Miele Service includes a whole range of performance and process checks which are performed at various points throughout the life of products.





# Miele Professional

Top-notch quality and service

Decades of experience, an unerring pursuit of quality and the power of innovation means that Miele sets the benchmark. High-performance lab washers from Miele Professional are recommended by leading manufacturers of laboratory glassware. In combination with accessories specific to models and applications, machines from Miele Professional facilitate the fast and simple reprocessing of all types of glassware.

## Performance

- Thorough yet gentle reprocessing with dependable results
- Process control perfectly matches machines and laboratory glassware
- All-in system from one single supplier consisting of perfectly matching components (machines, chemicals, software, service)

## Quality and economic operation

- Highest-quality materials and workmanship
- Superior product longevity and reduced need for maintenance
- Short cycle times and sparing use of resources

## Safety and convenience

- Ergonomic controls simplify everyday laboratory work
- Convenient navigation avoids mistakes on the part of the user
- Large-scale, easy-to-read text display
- Fully automatic protocolling and documentation of reprocessing

## Service

- Excellent Miele in-house service operation offering blanket coverage.
- Comprehensive advisory services covering planning, requirement assessment and financing.
- Customised service contracts guaranteeing functional safety and preserving values.

**55** Laboratory  
**YEARS** Technology

Miele & Cie. KG, Gütersloh  
[www.miele-professional.com](http://www.miele-professional.com)

## **Immer besser**

Since 1899, Miele - a family-run company - has subscribed to a clear corporate philosophy condensed into the two words 'Forever better'. This overarching claim is the foundation of Miele's proverbial quality and sustainability and the power of innovation of a brand 'Made in Germany'. A brand promise which gives commercial users the certainty of having chosen the right product.

## **Award-winning**

Uncompromising product reliability and service dependability is the reason why customers have repeatedly voted Miele the best and most trustworthy brand. Coveted awards such as the MX Award, the iF and reddot Design Awards and the German Sustainability Prize confirm the distinguished position Miele enjoys with respect to design, quality management and the sparing use of resources.

## **Proficient**

Miele Professional has been developing and manufacturing a broad range of high-quality laundry machines, dishwashers, washer-disinfectors and sterilisers for decades. Carefully selected accessories, comprehensive advisory services, and a Miele service operation which guarantees fast response times ensure that machines perform to perfection and offer the ultimate in capacity and efficiency.

## **Miele Professional on the web**

- For detailed information on technical data, features and accessories
- Brochures on all product groups and applications available as downloads
- Detailed information, instructions and product presentations on Miele Professional's YouTube channel