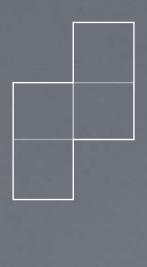
## Miele

The perfect fit.
Our SlimLine laboratory glasswashers

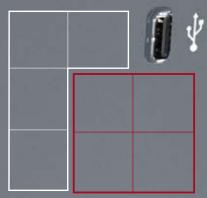
Miele Professional. Immer Besser.













## The perfect fit.

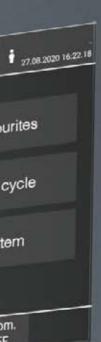
# Our SlimLine laboratory glasswashers

SlimLine laboratory glasswashers from the PLW 7111 series set new standards in performance and user-friendliness. An entirely redesigned washing system boasts considerably better performance compared with the previous model series and, thanks to a variable-speed pump, is able to adjust circulation pressure and water consumption to each load.

The high-quality colour touch display in combination with the innovative multi-colour chamber lighting makes for intuitive loading and excellent control over the entire process.

The new EasyLoad system is now also available on SlimLine models, simplifying loading and supporting users in correctly positioning their items of laboratory glassware. Thanks to the intelligent use of space by the EasyLoad system, the capacity for 100 ml bottles for instance has been increased by more than 50% compared with the previous series.

Miele 360PRO - Single-source supply.



## Smart, thorough and compact

The new generation of SlimLine laboratory glasswashers sports another round of improvements in terms of handling and the use of chamber space. The tried-and-tested SmartLoad system allows the use of up to three baskets on telescopic runners which can be flexibly positioned and connected to the water circuit at four different levels. This allows various combinations to accommodate a variety of different load heights.

This system has undergone further improvements, allowing all baskets to be used on any level. The differentiation between baskets which run on the door and ones on telescopic runners now no longer applies. Telescopic racks on all levels guarantee greater loading flexibility.

## Compact machine combined with large capacity

- Small footprint with a width of just 650 mm
- 3 levels with injector nozzles
- Also for carboys with a volume of up to 50 l
- 192 bottles (100 ml) or 108 bottles (250 ml) in a single cycle

#### Time and resource savings

- High-performance and intelligent pump system with variable-speed pump
- Maximum performance when needed
- Water conservation where possible
- Heated tank for short cycles<sup>1</sup>





#### Connectivity-ready

- Ready for connection to Miele Cloud Service (Miele MOVE)
- Direct access to machine and performance data
- Increased uptime through remote diagnostics

#### Intuitive and safe operation

- Intelligent controls with 7" colour touch display, optimised programmes and 20 vacant programme slots
- Simple and effective cleaning
- USB interface integrated in machine front
- Ready for connection to process documentation software





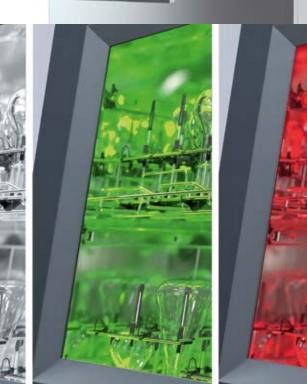


## Visual monitoring of chamber

- Process control thanks to full glass door
- Machine status easily identifiable thanks to 3-colour chamber lighting
- Automatic door lock

## Thorough and efficient cleaning processes

- Chamber, spray arms and tank filters made from high-grade, electro-polished stainless steel (DIN 1.4404/AISI 316L)
- Conductivity monitoring for high-level process quality<sup>1</sup>
- HEPA H14 fine filter for germ-free drying air<sup>1</sup>
- Integrated water softener<sup>1</sup>



# **EasyLoad** — Fast loading and highly efficient use of chamber space



#### New holder rack

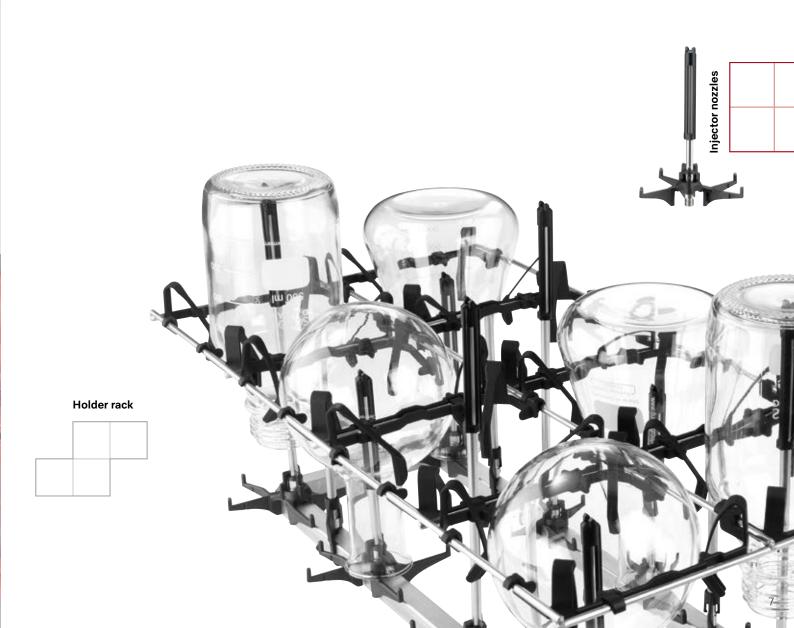
The new holder rack offers additional load stability. As and when required, it is placed on top of the injector module, providing a secure hold even to particularly large items of laboratory glassware in a vertical and protected position.

#### Thorough cleaning thanks to injector nozzles

Even if a nozzle tip rests against the base of a glass, the injector nozzles still guarantee thorough cleaning. The support surrounds the injector rail in the module or basket, preventing lateral movement of the load items without wasting valuable height.

## EasyLoad equates to efficiency and convenience

- An injector system for all common injector modules and many other load carriers enables the simple and flexible loading of a laboratory glasswasher
- Optimum use of available chamber height
- Particularly fast and simple arrangement of load items
- Thorough internal cleaning of glassware of all shapes and sizes
- Secure hold and exceptional protection of materials during a wash cycle
- Injector nozzles available in 3 diameters, 6 lengths
- Matching plastic holders and supports
- Injector modules with 8, 18 or 32 injectors
- Holder racks for 8, 18 or 32 injector positions





Increased capacity compared with previous PLW 6111

| 250 mi bottles | 84       | 108 + 2  | 9%       |       |
|----------------|----------|----------|----------|-------|
|                | PLW 6111 | PLW 7111 |          |       |
|                |          |          |          |       |
| 100 ml bottles | 126      |          | 192      | + 52% |
|                | PLW 6111 |          | PLW 7111 | -     |

## **SlimLine** laboratory glasswasher PLW 7111

### General

| SlimLine laboratory glasswasher                 | PLW 7111                          |                              |
|---|-----------------------------------|------------------------------|
| External dimensions [Width x Height x Depth mm] | 650, 1965, 702                    |                              |
| Chamber dimensions [Width x Height x Depth mm]  | 570, 717, 590                     |                              |
| Usable capacity [I]                             | 241                               |                              |
| Load concept                                    | Rack system with max. 3 baskets i | in 4 different positions     |
| Programmes                                      | 20 vacant programme slots         |                              |
| Programme selection                             | 7" colour touch display           |                              |
| Features  |                                   |                              |
| Single-door model                               | •                                 | Features (model-dependent)   |
| All-glass bottom-hinged door                    | •                                 | Electric heating             |
| 3-colour chamber lighting as status indicator   | <b>*</b>                          | Electric/steam heating       |
| Chamber material                                | 1.4404/316L                       | Pre-heating tank             |
| Dispenser pumps [qty]                           | 2                                 | Drain valve                  |
| Variable-speed pump                             | •                                 | Drain pump                   |
| Water connections                               | HW, CW, demineralised water       | Drying incl. HEPA H14 filter |
| Electrical connection 3N AC 400 V, 50 Hz        | <b>*</b>                          | Steam condenser              |
| Total rated load [kW]                           | 10.1                              | Water softener               |
| WiFi  | •                                 | Conductivity meter           |
| USB port  | <b>*</b>                          | Printer                      |
| Process chemical capacity                       | 3 x 5 l                           | Specifications for oil-based |
| Ethernet interface                              | •                                 | applications                 |
| Leakage sensor                                  | •                                 | Drain water cooling          |
|   |                                   | Demineralised water pump     |
| Load capacity                                   |                                   |                              |
| 100 ml laboratory bottles                       | 192                               | Optional modules             |
| 250 ml laboratory bottles                       | 108                               | Potential-free contacts      |
| 1000 ml laboratory bottles                      | 32                                | Additional dispenser pumps   |
| Pipettes  | 98                                |                              |

#### Model overview

| Type designation  | Mat. no. | Hea            | iting                 |                   |                       |                              |                   |                      | Fea                            | tures                                  |               |                           |                     |                     |                      |
|-------------------|----------|----------------|-----------------------|-------------------|-----------------------|------------------------------|-------------------|----------------------|--------------------------------|--|---------------|---------------------------|---------------------|---------------------|----------------------|
|                   |          | E.L<br>Electro | EL/S<br>Electro/Steam | DU<br>Drying Unit | SC<br>Steam Condenser | DPS (Standard)<br>Drain Pump | DV<br>Drain Valve | WS<br>Water Softener | TH (Elektro)<br>Tank Heated EL | TH (Steam/Electro)<br>Tank Heated EL/S | PR<br>Printer | CS<br>Conductivity Sensor | OR<br>Oil Resistant | DC<br>Drain Cooling | LS<br>Leakage Sensor |
| PLW 7111 [S-1001] | 11879730 | •              |                       | •                 | •                     | •                            | _                 | -                    | _                              | _                                      | -             | _                         | _                   | _                   | •                    |
| PLW 7111 [S-1002] | 11879740 | •              | _                     | •                 | •                     | •                            | _                 | •                    | _                              | _                                      | _             | -                         | •                   | _                   | •                    |
| PLW 7111 [S-1003] | 11879750 | •              | _                     | •                 | •                     | •                            | _                 | •                    | _                              | _                                      | _             | _                         | _                   | _                   | •                    |
| PLW 7111 [S-1004] | 11879760 | •              | _                     | •                 | •                     | •                            | _                 | •                    | _                              | _                                      | •             | •                         | _                   | _                   | •                    |

## Baskets for injector modules and inserts



#### **APLW 106**

#### Basket, for injector modules or inserts.

- For use on Levels 1 to 4
- Basket with two docking connections
- For loading up to 2 injector modules or inserts
- Connection automatically sealed when not in use
- Loading dimensions: Width 507 mm, depth with holding rail 439 mm, without holding rail 525 mm, height dependent on position on which basket is used and on other baskets in use
- H 151.3, W 559.3, D 621.2 mm

Mat. no. 11854610



#### ΔPIW/107

## Basket, height adjustable, for optimum loading of inserts.

- For use on Levels 2 to 4
- Open front
- For optimum loading of inserts
- With integrated spray arm
- Loading dimensions: Width 507 mm, depth 545 mm, height-adjustable +/- 30 mm, height dependent on position on which basket is used and on other baskets in use
- H 150.5, W 559.3, D 594.4 mm

Mat. no. 11854290



#### **APLW 152**

#### Baskets, for various inserts.

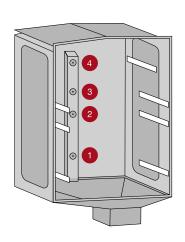
- For use on Level 1
- · Vertical clearance dependent on other baskets used
- Clearances: width 507 mm, depth 545 mm
- H 151, W 560, D 596 mm

Mat. no. 11854310

## Load dimensions and sample configurations

|         |          | ng with spray arm<br>levels) |          | ng with spray arm<br>2 levels) | with s   | xed loads<br>oray arm and<br>ozzles¹ (3 levels) |
|---------|----------|------------------------------|----------|--------------------------------|----------|---|
|         | Basket   | Load height<br>[mm]          | Basket   | Load height<br>[mm]            | Basket   | Load height<br>[mm]                             |
| Level 4 | APLW 107 | 158 ± 30                     | _        | 270 + 20                       | APLW 107 | 158 ± 30  |
| Level 3 | _        | 170 + 20                     | APLW 107 | 278 ± 30                       | _        | 244 + 30  |
| Level 2 | APLW 107 | 178 ± 30                     | _        | 254 + 20                       | APLW 106 | 244±30  |
| Level 1 | APLW 152 | 234                          | APLW 152 | 354 ± 30                       | APLW 106 | 210   |

|         |          | ing with injector<br>es <sup>1</sup> (3 levels) |          | cessing with<br>ozzles¹ (2 levels) | spray arm /            | cessing with<br>'injector nozzles <sup>1</sup><br>1 level) |   |
|---------|----------|---|----------|------------------------------------|------------------------|--|---|
|         | Basket   | Load height<br>[mm]                             | Basket   | Load height<br>[mm]                | Basket                 | Load height<br>[mm]  |   |
| Level 4 | APLW 106 | 224   | _        | 244                                | _                      |  |   |
| Level 3 | _        | 220   | APLW 106 | 344                                | 344                    | _  | _ |
| Level 2 | APLW 106 | 220   | _        | 330                                | _                      |  |   |
| Level 1 | _        | -   | _        | -                                  | APLW 152 /<br>APLW 106 | 690  |   |



Height of injector modules must also be considered. Height of A 300/x, A 301/x, A 302/x modules including nozzle support: 18 mm

## Injector module for bulky laboratory glassware

For use in APLW 106 basket



#### Injector module, ideal for large-volume laboratory glassware and carboys up to 50 I

- For use on Level 1Equipped with a special injector nozzle
- Equipped with a holding frame
- Max. bottle diameter: 380 mm
- Bottle height: 560 mm to 620 mm
- Bottle neck diameter: min. 30 mm internal, max. 80 mm external
- H 532, W 505, D 526 mm



## Injector modules for laboratory glassware



For use in APLW 106 basket

Select from a range of freely configurable or pre-configured injector modules.



#### A 300/2

## Injector module for optimum loading of laboratory glassware – can be equipped with 8 nozzles.

- Suitable for laboratory glassware incl. Erlenmeyer and round flasks
- Module without injector nozzles Configuration based on individual needs
- For up to 8 injector nozzles
- Particularly suitable for Ø 6 mm injectors, e.g. A 840 or A 841,
- other diameters possible depending on application
- Nozzle spacing 118 mm across width, 118 mm across depth
- H 72, W 133, D 479 mm

#### Mat. no. 11056800



#### A 300/3

## Injector module for optimum loading of laboratory glassware – equipped with 8 nozzles.

- Suitable for laboratory glassware, incl. Erlenmeyer and round flasks (250 - 1,000 ml).
- Equipped with four A 840 nozzles and four A 841 nozzles
- Nozzle spacing 118 mm across width, 118 mm across depth
- H 228, W 208, D 479 mm

#### Mat. no. 11116900



#### A 301/4

## Injector module for optimum loading of laboratory glassware – can be equipped with 18 nozzles.

- Suitable for laboratory glassware incl. Erlenmeyer and round flasks
- Module without injector nozzles Configuration based on individual needs
- For up to 18 injector nozzles
- Particularly suitable for Ø 4 mm injectors, e.g. A 842 or A 843,
  - other diameters possible depending on application
- Nozzle spacing 78 mm across width, 78 mm across depth
- H 72, W 173, D 479 mm

#### Mat. no. 11056810



#### Δ 301/

## Injector module for optimum loading of laboratory glassware – equipped with 18 nozzles.

- Suitable for laboratory glassware, incl. Erlenmeyer and round flasks (50 - 250 ml).
- Equipped with nine A 842 nozzles and nine A 843 nozzles
- Nozzle spacing 78 mm across width, 78 mm across depth
- H 203, W 232, D 493 mm

#### Mat. no. 11116950



#### A 302/2

## Injector module for optimum loading of laboratory glassware – can be equipped with 32 nozzles.

- Suitable for laboratory glassware incl. Erlenmeyer and round flasks
- Module without injector nozzles Configuration based on individual needs
- · For up to 32 injector nozzles
- Particularly suitable for Ø 2.5 mm injectors, e.g. A 844 or A 845, other diameters possible depending on application
- Nozzle spacing 60 mm across width, 57 mm across depth
- H 72, W 195, D 479 mm

#### Mat. no. 11056820



#### A 302/3

## Injector module for optimum loading of laboratory glassware – equipped with 32 nozzles.

- Suitable for laboratory glassware, incl. Erlenmeyer and round flasks (25 - 100 ml).
- Equipped with 16 A 844 nozzles and 16 A 845 nozzles
- Nozzle spacing 60 mm across width, 57 mm across depth
- H 143, W 238, D 479 mm

Mat. no. 11116960

For additional protection, stability and centring of load items, there is a matching holder rack for each injector module.



#### A 860

## Holder rack for A 300/2 and A 300/3 injector modules

• Arrangement: 2 x 4 compartments

Mat. no. 11056800

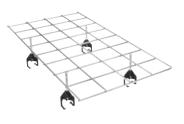


#### A 861

## Holder rack for A 301/4 and A 301/5 injector modules

Arrangement: 3 x 6 compartments

Mat. no. 11056810



#### A 862

## Holder rack for A 302/2 and A 302/3 injector modules

- Arrangement: 4 x 8 compartments
- Plastic-coated

## Injector nozzles for laboratory glassware



For use with EasyLoad injector modules

Select nozzles to configure injector modules. Sets are available with 1, 5, 10 or 20 nozzles.



#### Injector nozzle Ø 6 x 130 mm

- For items with neck diameters of between 12 and 85 mm
- Diameter of cap at top: 11 mm

1 off

Mat. no. 11056100

#### A 840/1

5 off

Mat. no. 11112600

#### A 840/2

10 off

Mat. no. 11113160

#### A 840/3

20 off

Mat. no. 11113170



#### Injector nozzle Ø 4 x 185 mm

- · For items with neck diameters of between 10 and 70 mm
- Diameter of cap at top: 9 mm

Mat. no. 11056440

#### A 843/1

5 off

Mat. no. 11113720

#### A 843/2

10 off

Mat. no. 11113730

#### A 843/3

20 off

Mat. no. 11113760



#### Injector nozzle Ø 6 x 210 mm

- For items with neck diameters of between 12 and 85 mm
- Diameter of cap at top: 11 mm

1 off

Mat. no. 11056190

#### A 841/1

5 off

Mat. no. 11113130

#### A 841/2

Mat. no. 11113140

#### A 841/3

Mat. no. 11113150

Injector nozzle Ø 2.5 x 80 mm

• Diameter of cap at top: 5 mm

6 and 55 mm

Mat. no. 11056600

Mat. no. 11115470

Mat. no. 11115500

Mat. no. 11115520

A 844/1

A 844/2

A 844/3

20 off

10 off

5 off

· For items with neck diameters of between



#### Injector nozzle Ø 4 x 90 mm

- For items with neck diameters of between 10 and 70 mm
- Diameter of cap at top: 9 mm

1 off

Mat. no. 11056330

#### A 842/1

5 off

Mat. no. 11113590

#### A 842/2

10 off

Mat. no. 11113630

#### A 842/3

20 off

Mat. no. 11113670



#### Injector nozzle Ø 2.5 x 125 mm

- · For items with neck diameters of between 6 and 55 mm
- · Diameter of cap at top: 5 mm

1 off

Mat. no. 11056670

#### A 845/1

5 off

Mat. no. 11116120

#### A 845/2

10 off

Mat. no. 11116130

#### A 845/3

20 off

# **Injector modules** for pipettes, phials, measuring cylinders, viscosimeters and sedimentation cones



For use in APLW 106 basket



#### A 303

## Injector module, for optimum loading of up to 98 pipettes.

- Suitable for 98 measuring and full pipettes, for example
- Height of holder rack: 150 mm
- H 185, W 225, D 471 mm

#### Mat. no. 9862560



#### A 312

#### Injector module for reprocessing viscometers.

- Suitable for up to 8 viscometers
- Equipped with 8 x A 867 special nozzles
- Nozzle spacing 118 mm across width, 118 mm across depth
- H 395, W 164, D 475 mm

#### Mat. no. 11054470



#### A 846

## Injector nozzle, with support, for laboratory bottles and round flasks.

- For laboratory bottles, max. 10 l, and round flasks, max. 6 l
- Nozzle length: 127 mm, Nozzle length with holder:
  158 mm
- Nozzle diameter: 10 mm



#### A 30

## Injector module, for optimum loading of up to 98 pipettes.

- Suitable for 98 centrifuge tubes, phials, test tubes, for example
- H 130, W 222, D 471 mm

#### Mat. no. 9862570



#### **APLW 870**

## Set of injector nozzles, with supports, for cleaning sedimentation cones (Imhoff).

- Set consists of 4 special nozzles with holders
- Max. diameter 120 mm, max. height 470 mm
- For use with separately available A 300/2 injector module
- For use with separately available A 300/3 injector module
- H 290, W 125, D 125 mm

#### Mat. no. 12151110



#### A 847

## Injector nozzle, with support, for Erlenmeyer flasks.

- For Erlenmeyer flasks, max. 5 l
- Nozzle length: 127 mm
- Nozzle Ø: 10 mm, Support Ø: 142 mm

#### Mat. no. 11025600



#### A 306/1

## Injector module, ideal for large-volume laboratory glassware.

- Suitable for 4 x 1 2 I measuring cylinders, tall form
- Suitable for 2 x 1 2 I measuring cylinders, short and 2 tall
- · Plastic-coated contact surfaces
- Measuring cylinders even removable when module is in machine
- H 418, W 235, D 471 mm

#### Mat. no. 11035210



#### A 313

## Injector module for reprocessing large-volume laboratory glassware.

- Adapts to various types of laboratory glassware using A 846, A 847 and A 848 injector nozzles:
- Laboratory bottles, 2 I 10 I
- Round flasks, 21-61
- Erlenmeyer flasks, 2 I 5 I
- Measuring cylinders, 2 I 5 I
- Depending on the diameter, for 2 or 3 load items
- H 361, W 255, D 614 mm

#### Mat. no. 11055970



#### A 848

## Injector nozzle, with support, for measuring cylinders.

- For measuring flasks, max. 5 l
- Nozzle length: 350 mm
- Nozzle Ø: 10 mm, Support Ø: 142 mm

## Inserts and other components

For use in APLW 107 and APLW 152 baskets







A 321

E 103/1, E 104/1, E 105/1, E 139/1

E 106

| Article        | Description   | Mat. no. |
|----------------|---|----------|
| Inserts for te | st tubes, funnels, beakers, wide-necked glassware, measuring cylinders                    |          |
| A 13           | Lid to secure sensitive load items, replacement for use on E 103, E 104, E 105 and E 139. | 03810200 |
| A 14/1         | Lid, for securing delicate load items for AK 12/1.  | 11131560 |
| A 321          | Insert, for various utensils  | 11309380 |
| A 322          | Lid, for securing delicate load items, for A 321.   | 11874380 |
| AK 12/1        | Insert, for various utensils  | 11131690 |
| E 149          | Insert, for max. 80 test tubes, 16 x 105 mm.  | 03808800 |
| E 103/1        | Insert, for test tubes, 12 x 75 mm.   | 06907630 |
| E 104/1        | Insert, for test tubes, 12 x 105 mm.  | 06907640 |
| E 105/1        | Insert, for test tubes, 12 x 165 mm.  | 06907650 |
| E 139/1        | Insert, for test tubes, 12 x 200 mm.  | 06907660 |
| APLW 040       | Insert, for test tubes, height 100 mm.  | 11105000 |
| APLW 041       | Insert, for test tubes, height 130 mm.  | 11105010 |
| APLW 042       | Insert, for test tubes, height 200 mm.  | 11105020 |
| APLW 043       | Lid for APLW 040 – 042 inserts.   | 11105030 |
| APLW 044       | Separator net, for dividing base in APLW 040, APLW 041 and APLW 042.                      | 11105040 |
| E 106          | Insert, for wide-necked glassware, measuring cylinders, etc.                              | 03808310 |
| E 106/1        | Insert, for wide-necked glassware, measuring cylinders, etc.                              | 03808320 |
| E 106/2        | Insert, for wide-necked glassware, measuring cylinders, etc.                              | 03808330 |
| APLW 038       | Insert, for wide-necked Erlenmeyer flasks and measuring cylinders.                        | 11104980 |
| E 109          | Insert, for beakers, max. 250 ml.   | 03808360 |
| E 110          | Insert, for beakers, max. 250 – 600 ml.   | 03808390 |
| E 111          | Insert, for beakers, max. 600 – 1,000 ml.   | 03808420 |
| E 144          | Insert, for max. 18 beakers, max. 250 ml.   | 03808710 |

| Article        | Description  | Mat. no. |
|----------------|--|----------|
| Inserts for Pe | tri dishes, watch glasses, microtitre plates, etc.                               |          |
| E 118          | Insert, for half petri dishes.   | 03830270 |
| E 402          | Insert, for max. 44 watch glasses.   | 03830420 |
| E 494          | Insert, for 5 microtitre plates.   | 06570920 |
| E 136          | Insert, for 56 half petri dishes.  | 03830280 |
| E 403          | Insert, for max. 105 watch glasses.  | 03830430 |
| E 137          | Insert, for 56 half petri dishes.  | 03830290 |
| APLW 039       | Insert, for half petri dishes.   | 11104990 |
| E 134          | Insert, for 210 slides.  | 03808600 |
| Further comp   | ponents  | •        |
| A 2            | Cover net, for securing delicate load items.                                     | 03830460 |
| А3             | Cover net, for securing light-weight items in inserts.                           | 03830470 |
| A 11/2         | Insert, for gentle cleaning of delicate load items by softening the spray jet.   | 11239130 |
| A 320          | Insert, for gentle cleaning of delicate load items by softening the spray jet.   | 11295510 |
| A 838          | Tool set, for adjusting basket heights and installing/removing injector nozzles. | 11054290 |
| E 336          | Irrigation sleeve, for pipettes/MIS instruments in injector units.               | 03809390 |
| SD-B           | Injector nozzle for butyrometers   | 03583540 |
| E 362          | Blind stopper, for sealing connections on load carriers.                         | 03809630 |