

Cleaning · Disinfection · Drying
A systematic approach to the reprocessing
of laboratory glassware



Miele Professional – Never be satisfied with less!



Dear clients,

For four decades, Miele's close partnership with its clients and its exacting quality standards have been the driving force behind the development of reliable application-related solutions for the reprocessing of laboratory glassware.

The machine-based reprocessing of laboratory glassware is standardised and validated and can be automatically documented. These are decisive advantages compared with manual reprocessing.

Many different types of soiling and laboratory glassware in a wide range of shapes and sizes place great demands on machine-based reprocessing, demands which are met by our products with ease.

In future, too, we would like to continue to tackle these challenges and you can expect best results and trend-setting solutions to meet your application requirements.

Quality 'Made by Miele' and excellent service.

Never be satisfied with less!

Dr. Markus Miele
Managing Director of Miele & Cie. KG

Dr. Reinhard Zinkann
Miele Managing Director

A systematic approach to the reprocessing of laboratory glassware

A systematic approach – typically Miele

With washer-disinfectors, special reprocessing methods and accessories tailored to the specific needs of applications, Miele offers a comprehensive and systematic approach to the safe and thorough reprocessing of a wide range of laboratory glassware. Moving beyond standard solutions, Miele specialists work closely with laboratory staff to arrive at customised solutions to meet varied and specific needs.



The comprehensive benefits of Miele's systematic and holistic approach

Flexible and economical

- Washer-disinfectors with the capacity to meet all requirements
- Modular machine concept with basic features and optional extras
- Efficient single-chamber system for washing, rinsing, disinfecting and drying
- Tried-and-tested standard programmes, innovative special programmes and individual programme packages
- Electronic controls offering excellent user convenience



Competent and innovative

- Intensive R&D and close cooperation with hygiene experts, scientists and users
- Trend-setting process development and technical features
- In-house advisory services and blanket service coverage
- Qualification (Installation Qualification and Operation Qualification) of laboratory glassware cleaning systems
- Service contracts for peace of mind and trouble-free machine operation
- Attractive financing offers



Safety takes precedence

- Serial interface for process documentation and optical interface for servicing
- Automatic mobile unit recognition automatically assigns programmes to loads

Proof of high-level customer satisfaction is furnished by a recent survey conducted in 2011 by the independent 'Mercuri International' institute: 97% of customers stated that they would buy Miele Professional machines again!





Explanation of symbols

AE	Casing in stainless steel
AP	Drain pump
AV	Dump valve
BO	Boiler
D	Steam heating
D/EL	Steam/electric heating
EL	Electric heating
GS	Glass screen
KD	Service
PT	PROFITRONIC controls
TA	Drying unit

Exclusive to
MIELE

This logo highlights products with special features only available from Miele.

Contents

PG 8527 washer-disinfectors	Page 8
PG 8527 technical data	Page 20
Inserts and mobile units for laboratory glassware	Page 22
PG 7825 washer-disinfectors	Page 30
G 7825 technical data	Page 36
Inserts and mobile units for laboratory glassware	Page 38
Transport trolleys	Page 42
Softened water	Page 43
Process documentation options	Page 44
Service	Page 46
Qualification of cleaning systems	Page 47



Practice · Experience · Expertise Typically Miele



Manual versus machine-based reprocessing

Many laboratories have already experienced the benefits of the machine-based reprocessing of glassware. Machine-based reprocessing cuts down on work considerably, reduces staffing needs and diminishes costs.

One reason for this is a wish to avoid the risk of breakage and the potential hazards to laboratory staff that come with handling glassware. Glass breakage during manual cleaning can cause serious injuries. Infectious and toxic contaminations pose a health risk. Many detergents used in cleaning are highly caustic.

Automatic, machine-based processes are also more easily standardised, validated and documented. And reprocessing in an automatic machine-based system offers maximum protection to personnel.

The cleaning process must ensure that any contamination from previous use is completely removed before using the equipment again. Requirements vary widely from one laboratory to the next. The following aspects must be clearly defined:

1. Application

Applications subdivide into general areas (organic, inorganic or physical chemistry, biology, microbiology, hospital, pharmaceutical, food industry or cosmetic industry laboratories, etc.) or according to procedures (preparatory work, analysis, sampling). The type of application will also be an important factor in determining the type of machine and accessories as well as the cleaning process and cleaning agents required.

2. Laboratory equipment

Laboratory equipment needs to be classified according to the type, size and quantity of items requiring reprocessing. This information enables Miele to provide a detailed quotation for the right system to meet individual requirements.

3. Contamination

Knowledge of physical and chemical attributes of the types of contamination the machine will need to deal with are of particular importance in selecting the cleaning process and type of cleaning agent to use.

4. Disinfection

For certain applications, laboratory equipment has to be disinfected to contain the spread of bacteria.

5. Analytical methods

Methods of analysis used can be affected by certain contaminants in laboratory glassware. A knowledge of these factors is helpful in selecting the right detergents.

6. Analytical purity

Each laboratory has its own definition of the term 'analytically clean', depending on the specification, nature and repeatability of the analysis methods used. Built-in conductivity monitoring represents the ideal way to analyse glassware purity levels.

Miele and Duran. Two strong brands in the laboratory.



DURAN Group recommends Miele Professional

To guarantee the thorough, gentle and safe reprocessing of laboratory glassware, the DURAN Group recommends Miele lab washers: Miele quality 'Made in Germany' excels in terms of reliability and efficiency in everyday laboratory operations. Short cycle times and dependable results ensure that high-quality laboratory glassware is ready for use again in the shortest possible time. Gentle reprocessing also prolongs the useful life of DURAN® laboratory glassware.

Chemical properties are the key to retaining the value of high-quality laboratory glassware as durable materials combined with gentle cleaning processes minimise the risk of glass corrosion.

Thanks to such excellent chemical properties of DURAN® such as

- Hydrolytic resistance, Class 1 (ISO 719)
- Resistance to acids, Class 1 (DIN 12116)
- DURAN® glassware (Class 2 resistance to acids - ISO 695) is ideally suited to multiple cleaning operations and guarantees excellent durability.

At the same time, the superior physical properties of DURAN® glass makes it ideal for laboratory use.

- Uniform wall thickness throughout
- Results in greater mechanical stability and improved resistance to thermal cycling ($\Delta T=100\text{ K}$)
- Prevents tension in glass and the risk of cracking as a result of thermal cycling
- Benefits: Greater safety for staff, enhanced durability, value maintenance
- Retraceable back to raw materials
- Batch certifications can be downloaded on Internet

Miele and Duran. Two strong brands in the laboratory.



PG 8527

washer-disinfector

New value-added benefits in laboratory glassware reprocessing

Miele Professional has been setting milestones for decades in the field of efficient and safe machine-based reprocessing of laboratory glassware. And, once again, Miele is setting new standards with the PG 85 machine generation. When it comes to centrally or decentrally reprocessing large quantities of laboratory glassware, Miele's PG 8527 offers huge benefits: greater cleaning capacity, improved process security and better efficiency.



Miele quality – Made in Germany

For many decades now, Miele washer-disinfectors have represented an integral part of quality assurance in laboratories. Miele washer-disinfectors offer uncompromising quality and offer users maximum benefits in terms of hygiene, safety and economy.



Performance comparison Washer-disinfectors	Unit width/depth	Door	Cabinet Useable dimensions H/W/D Cabinet volumes	Capacity per cycle
PG 8527	1150/870 mm	Vertical door	675/650/800 mm 351 l	232 narrow-necked glasses or 232 pipettes
G 7825	900/750 mm	Bottom hinged door	683/541/610 mm 225 l	108 narrow-necked glasses or 104 pipettes

PerfectTouchControl – Simple, local-language controls

PerfectPure sensor – Residue-free rinsing



PG85 | PerfectTouchControl

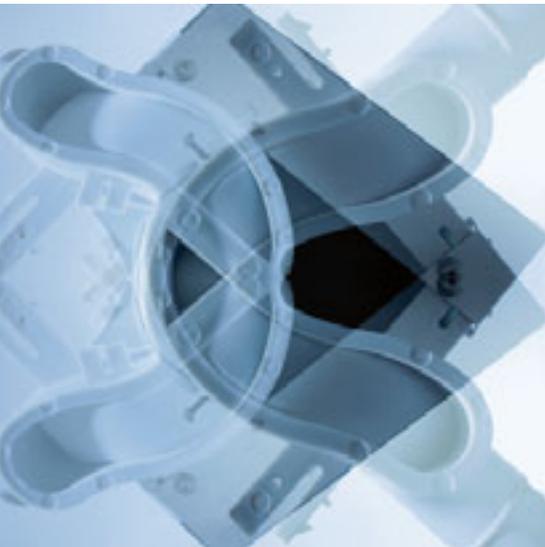
- **Optimum user convenience**
- **Reliable hygiene**
- **Perfect control**

Simple to use, easy to clean: washer-disinfectors from the PG 85 series feature a touch-sensitive display. This easy-to-use PerfectTouch display guarantees unique user convenience combined with superb hygiene. A fully flush, chemical-proof display screen makes for simple and effective wipe disinfection.

The controls are outlined on the glass surface and slight pressure is enough to activate functions and launch programmes, even when wearing protective gloves. The man-machine interface involves the use of only a very limited number of controls; all steps in the process appear in the display in the user's own language. Display texts, for example for the actual temperature, conductivity, countdown times and all other protocol data can be defined individually.

Exclusive to
MIELE

- Chemical-proof glass screen
- Innovative cleaning programmes
- Freely programmable controls



PG85 | PerfectPureSensor

- **Continuous conductivity monitoring**
- **Pure results for analytical chemistry**
- **Safe reprocessing**

Chemical residue and even the finest traces of deposits on laboratory glassware can impair the results of subsequent experiments, particularly in analytical chemistry and biology. On request, the PG 8527 can be fitted with Miele's new, patented PerfectPure conductivity monitor. The conductivity meter reliably detects the presence of minerals in the rinse water, such as the dissolved salts introduced with alkaline or acidic process chemicals, limiting them to a threshold level defined by the user. Residue is detected as a function of conductivity. Measuring and monitoring is achieved using a contact-free and hence maintenance-free system which is able to monitor conductivity conditions with exceptionally low tolerance levels in ranges from 5 – 40 $\mu\text{S}/\text{cm}$ and 40 $\mu\text{S}/\text{cm}$ – 100 mS/cm . Depending on setting options there is the possibility to control the programme cycle via the conductivity meter. For example, rinse cycles can be repeated until conductivity

drops below a specified value: in the event that the target conductivity reading specified by the user is not achieved in the final rinse cycle, further water intake cycles are automatically added. Monitoring results can be shown in the display and documented accordingly.

Exclusive to
MIELE

- Maintenance-free conductivity monitoring

PerfectFlow sensor – Volumetric monitoring of dispensed quantities

PerfectSpeed sensor – Spray arm monitoring

PG85 PerfectFlowSensor

- **Continuous monitoring of dispensed volumes**
- **Precise results, user-defined tolerances**
- **Perfect dispensing control**

A decisive factor contributing to good reprocessing results is the precise volumetric control of dispensed chemicals. Miele's new PerfectFlow sensor using ultrasound technology offers considerably greater safety margins than conventional systems. The PerfectFlow sensor is a standard feature on the PG 8527 and guarantees a hitherto unparalleled degree of precision in controlling and monitoring volumetric flow, independent of viscosity and ambient temperatures. The monitoring system is fully independent of the dispensing system and can be adjusted and calibrated. Dispensing tolerances can be set individually by users; chemicals are dispensed efficiently and reliably, irrespec-

tive of the type of product or ambient conditions (continuous operation, fluctuating climatic conditions). Any deviation from the target quantities are safely detected and the reproducibility of validated processes guaranteed. An error message is issued or the programme is aborted if values are outside the tolerance range.



Exclusive to
MIELE

- Extremely precise
- Product- and temperature-independent dispensing control

PG85 PerfectSpeedSensor

- **Precisely monitored reprocessing**
- **Improved reproducibility of validated processes**
- **Perfect washing and disinfection results**

To guarantee perfect and safe cleaning and disinfection results, the rotational speed of the spray arms must be within defined limits. With the PerfectSpeed sensor, the precise speed of each individual spray arm is carefully monitored and documented – whether in the cabinet or on board baskets and mobile units. The spray arm monitoring feature uses a unit with multiple sensors located outside the cabinet to detect the passage of spray arms and to ensure that speeds are within range. Information shown in the display indicates whether the values are correct or whether the user must intervene on account, for example, of excessive foam slowing down spray arm rotation.

In the event of a deviation from target values, either an error message is issued or the programme is interrupted immediately to allow the user to deal with the cause of the fault, depending on system parameters. Deviations can also be recorded in the automatic process documentation. Spray arm sensing offers effective protection against spray arm blockages by items in the load and also provides information on pressure conditions in the machine and in mobile units and baskets. Spin speeds provide a valuable indication as to the reproducibility of validated processes, increasing safety margins in machine-based laboratory glassware reprocessing systems by a considerable degree.



Exclusive to
MIELE

- Spray arm monitoring on **all** levels
- Monitoring of spray arm speeds

PerfectHEPA drying – Pure drying air PerfectDoc – Gap-free documentation



PG85 | PerfectHepaDrying

- **Optimum drying results**
- **High level of air purity in chamber**
- **High standards of hygiene**

High hygiene standards and the use of innovative Miele technology also applies to the drying phase. The Class H 13 high-temperature HEPA filter, located directly upstream from the cabinet, prevents the admission of unwanted air-borne particles from room air. This ensures exceedingly high levels of air purity in the cabinet. Thanks to streamlined air ducting, PerfectHEPA drying also ensures excellent drying performance.



PG85 | PerfectDoc

- **Continuous process documentation**
- **Wide range of parameters documented**
- **Perfect process traceability**

The PG 8527 is fitted with a process documentation interface as a standard feature. The PerfectDoc module allows the machine to interface with process documentation software. This facilitates the recording of many process parameters, such as temperatures, as well as the documentation of entire process protocols, dispensed quantities, spray arm speeds and conductivity readings. Alternatively, a printer can be used for documentation purposes.

Exclusive to
MIELE

- **Wide range of parameters including temperature, dispenser volume, conductivity and spray arm rotation**

Standard machine features and specifications



Version

- PG 8527: Single-door model with vertical sliding door

Capacity per cycle

- 232 narrow-necked glasses or 232 pipettes

Design

- Stand-alone or installed in a row
- Side-by-side
- Width 1150 mm
- Modular approach with customised features to meet individual requirements
- Single-chamber system for washing, disinfection and drying
- Service-friendly design
- Heater elements outside wash chamber
- Low heat and sound emissions thanks to double insulation

Cleaning technology

- Hygienic freshwater system with fresh water intake for each programme stage
- Cleaning, disinfection and drying in a closed, single-cabinet system
- Hygienic stainless-steel wash cabinet with coved corners and sloping self-draining ceiling
- 2 spray arms in cabinet for thorough cleaning of laboratory glassware surfaces
- Spray arms with high water jet impact force
- Full water jet access, ensuring optimum results
- Thorough cleaning of lumens with injector system
- Direct docking of mobile units to water circuit

- 2 powerful circulation pumps
- Triple filtration with large surface filter, coarse filter and micro-fine filter
- Filter in inlet hoses
- Flowmeter to monitor water intake quantities
- 1 dump valve

Dispenser systems

- 2 bellows-type dispenser pumps for liquid detergent and neutralising agent

Miele PROFESSIONAL



Controls

- Freely programmable PROFITRONIC+ controls
- 64 programme slots
 - 16 standard washing and disinfection programmes
 - 17 service programmes
 - 31 vacant programme slots
- User interface with local-language display
- Display of programme selection and programming dialogs, programme sequence, temperature, countdown time, faults, operating hours.
- Compilation of new programmes using machine controls or using PC/laptop via optical interface

Interfaces

- 4 serial RS 232 interfaces for process documentation
- Optical interface for service and maintenance
- 1 Ethernet interface

Safety devices

- Electric door lock
- Programme continuation in event of power failure
- Peak-load negotiation
- Optical and acoustic signal at end of programme
- 2 sensors, one each for temperature control and monitoring
- Port for simple positioning of sensors in the wash cabinet for process validation
- Sensors in cabinet and a magnetic strip on the mobile units for automatic allocation of loads/inserts to programmes
- Volumetric dispensing control
- Spray arm sensing

Multiport

- For connection of printer and/or scanner

PG 8527 washer-disinfectors



Machine versions, additional modules

Basic unit

PG 8527	Equipment	Mat. no.	Art. no.
Electric	AE PT EL AV	6881680	62.8527.21
Steam/Electric	AE PT D/EL AV	6881690	62.8527.31

C.f. page 5 for explanation of symbols

Additional module PG 8527

	Mat. no.	Art. no.
Drain pump	6758120	69.2400.01
Stainless-steel grade – Cabinet AISI 316 L (DIN 1.4404)	6758160	69.2410.01
Boiler EL	6758220	69.2430.01
Boiler D/EL	6758270	69.2430.02
Glass door for PG 8527	6758320	69.2450.01
Built-in printer	6758340	69.2470.01
Scanner connection with scanner	7686510	69.2470.12
Conductivity module (information on P. 10)	6758400	69.2440.01
Dispenser pump – integrated (additional) ¹ – Please state purpose (cf. footnotes)	6758410	69.2460.01

Please note:

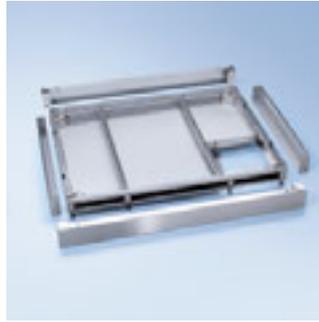
D/EL machine version can only be operated in combination with D/EL boiler

¹ Please specify whether for detergent, neutralising agent or chemical disinfectant.

Components/Accessories



- SBW**
Plinth/drip tray
- Frame with integrated stainless-steel floor tray
 - 2 cross-brackets for moving machine
 - Cut-outs for steam and plumbing connections, dump valve, dual drain valve and floor tray drain
 - H 100, W 1150, D 856 mm



- SBW/1**
Plinth/drip tray without cutouts
- For version with drain pump
 - Utilities such as water, electricity and steam must be fed from top
 - H 100, W 1150, D 856 mm



- SBWR**
Plinth/drip tray
- Roller plinth/floor tray
 - Castors allow machine to be pulled forward for servicing
 - PG 8527 with drain pump
 - Utility supply access through ceiling
 - H 100, W 1150, D 856 mm



- Integrated printer for process documentation**
- 8-needle printer and RS 232 serial interface
 - Paper format: 58 mm wide
 - Recording of following parameters during programme: date and Mach. no., Prog. no., prog. name, starting and finishing time, dispensing concentration, dispensing temperature and pumps 1-4, target temperature reached (wash/dry) with times, all faults (e.g. 'water inlet'), all incidents of manual intervention (start, stop, power outage)
 - For disinfection programmes: Meets process parameters with respect to temperature and holding time

Paper rolls available from Miele
Spares: Mat. no.: 4781470

Paper roll size:
Width 58 mm, Ø 50 mm,
Length 20 m

Accessories	Equipment	Mat. no.	Art. no.
SBW	Plinth/drip tray for PG 8527	6757850	69.2530.01
SBW/1	Plinth/drip tray for PG 8527		
	No cut-outs	6757860	69.2530.02
SBWR	Plinth/drip tray, on castors for PG 8527	5653140	69.3710.05
Printer	for process documentation	6758340	69.2470.01

Accessories



- TA/E**
Drying unit/electric
- Side-channel compressor
 - Drying of interior and exterior load surfaces
 - 2 pre-filters Class EU 4, filter rating > 95% (ASHRAE Standard 52 - 68)
 - Life cycle 200 h
 - 2 particulate HEPA filters, H13, filter rating > 99.95% DIN 1822 - 1998
 - Life cycle 1000 h
 - Voltage 3N AC 400 V 50 Hz
 - Heating 2 x 4 kW = 8 kW
 - Heavy-duty fan/side-channel compressor, life cycle above 10,000 h, 2 air circuits 1.8 kW
 - Total rated load: 10 kW
 - Air throughput approx. 250 m³/h
 - Temperature infinitely adjustable between 60 - 115°C
 - Time programmable from 1 - 240 mins.
 - Incl. fitting frame for installation on top of PG 8527/PG 8528
 - Panelling through to ceiling to be provided on site, cf. MAV 27/28



- TA/D**
Drying unit/steam
- Side-channel compressor
 - Drying of interior and exterior load surfaces
 - 2 pre-filters Class EU 4, filter rating > 95% (ASHRAE Standard 52 - 68)
 - Life cycle 200 h
 - 2 particulate HEPA filters H13, filter rating > 99.95% DIN 1822 - 1998
 - Life cycle 1000 h
 - Heating steam-to-air heat exchanger (steam circuit stainless steel, air circuit aluminium)
 - Steam pressure 3.5 - 6 bar (350-600 kPa)
 - Steam quality: filtered saturated steam
 - Steam capacity (max.) 15 kg/h (machine and drying unit 50 kg/h)
 - Heavy-duty fan/side-channel compressor, life cycle above 10,000 h, 2 air circuits 1.8 kW
 - Total rated load: 1.8 kW
 - Air throughput approx. 250 m³/h
 - Temperature infinitely adjustable between 60 - 115°C
 - Time programmable from 1 - 240 mins.
 - Incl. fitting frame for installation on top of PG 8527
 - Panelling through to ceiling to be provided on site, cf. MAV 27/28



- DK 27/28**
Steam condenser/heat exchanger
- With water cooling (only dehumidified air should be introduced into air conditioning system)
 - Connection to on-site cooling circuit (no water consumption) or cold water connection (water consumption)
 - Max. water pressure: 8 bar
 - On-site installation
 - Reduction of air discharge temperature to approx. 30 - 35°C
 - Reduction in relative humidity to approx. 60 - 70%

- DK 27/28 WR**
PerfectEco heat-recovery steam condenser
- To preheat demineralised water in steam condenser
 - Water savings up to 130 l/cycle
 - On-site installation



- MAV 27/28**
Top-box panelling kit for TA/DK frame
- Service hatches, with lock, for both sides of diaphragm wall, stainless steel
 - Ventilation grille on the infeed side
 - H 760, W 1150, D 765 mm
 - Diaphragm wall panelling between the top of the top-box panelling and the ceiling must be provided on site
 - Incl. MAV top panel to cover top-box panelling

Accessories	Equipment	Mat. no.	Art. no.
TA/E	Drying unit/electric	6757710	69.2500.01
TA/D	Drying unit/steam	6757770	69.2500.02
DK 27/28	Steam condenser/heat exchanger	6757790	69.2510.01
DK 27/28 WR	Heat-recovery steam condenser*	9032080	69.2511.01
MAV 27/28	Top-box panelling installation kit	6757820	69.2520.01

* only for systems with boiler

Technical data

Washer-disinfector	PG 8527
Frontloading unit with vertical door	•
All-glass doors/cabinet lighting	o
Single/multiple installations	•
Freshwater system, max. temperature 93°C	•
Direct mobile unit docking for cleaning and drying of lumened instruments	•
2 circulation pumps [Qmax. l/min]	400/600*
Boiler for heating demineralised water	o
Controls/Programmes	
Profitronic+, 16 standard programmes	•
64 programme slots	•
Electric door lock	•
Peak-load negotiation	•
Process documentation network interface	•
Magnetic strip for automatic mobile unit recognition	•
Spray arm sensing	•
Conductivity metering	o
Remote service enabled	•
Water connections	
1 x cold water, 2 - 10 bar flow pressure (200 - 1000 kPa) (max. 4°dH)	•
1 x hot water, 2 - 10 bar flow pressure (200 - 1000 kPa) (max. 4°dH)	•
1 x demineralised water, 2 - 10 bar flow pressure (200 - 1000 kPa)	•
3 inlet hoses ½" with ¾" threaded union	•
Drain valve DN 50, odour trap to be fitted on site	•
2 drain pumps DN 22, odour trap to be provided on site	o
Electrical connection: Electrically heated	
3 N AC 400 V 50 Hz	•
Heating cabinet [kW]	18
Heating boiler [kW]	15
Circulation pump [kW]	0.7/1.2*
Total rated load without drying unit [kW]	20
Total rated load with drying unit [kW]	20
Fuse rating [A]	3 x 32
Electrical connection: Steam heating	
3 N AC 400 V 50 Hz	•
Circulation pump [kW]	0.7/1.2*
Total rated load without drying unit [kW]	2
Total rated load with steam-heated drying unit [kW]	2
Total rated load with electrically heated drying unit [kW]	10
Fuse rating [A]	3 x 16
Steam connection G ½" (DN 15)	•
Operating pressure 350 - 600 kPa (steam-heated drying unit)	•
Compressed air connection 600 - 1200 kPa	•
Electrical connection: Steam/Electrically heated (convertible)	
3 N AC 400 V 50 Hz	•
Heating cabinet [kW]	18
Heating boiler [kW]	15
Circulation pump [kW]	0.7/1.2*
Total rated load with electrically heated drying unit [kW]	20
Fuse rating [A]	3 x 32
Steam connection G ½" (DN 15)	•
Operating pressure 350 - 1000 kPa (electric drying unit)	•
Compressed air connection 600 - 1200 kPa	•

* Spray arms / direct docking

Technical data

Washer-disinfector	PG 8527
Dispenser systems	
2 bellows-type pumps for detergent and neutralising agent	•
2 x 10 l supply containers	•
Setting options for 4 x 10 l supply canisters	•
Volumetric dispensing control	•
Max. 3 additional dispenser pumps	o
Dimensions, weight	
External dimensions H incl. plinth tray [mm]	1660
External dimensions H incl. frame with drying unit [mm]	2420
External dimensions W/D [mm]	1150/870
Useable cabinet dimensions H/W/D [mm]	675/650/800
Overall cabinet dimensions H/W/D [mm]	860/685/800
Loading height above floor	850
Weight [kg]	408
Casing	
Stainless steel (AE)	•
Test certificates	
VDE, VDE-EMC, IP 20, MDD CE 0366	•
TA/E drying units, Electrically heated	
Voltage	3 N AC 400 V 50 Hz
Fan motor [kW]	1.8
Heater bank, depending on model [kW]	8
Total rated load, depending on model [kW]	10
Air throughput [m ³ /h]	approx. 250
Temperature selection in 1°C increments	60 - 115
Time selection in 1-minute increments	1 - 240
2 pre-filters EU 4, filter rating > 95%, filter life 200 h	•
2 particulate/HEPA filters H 13, filter rating > 99.95% (DIN 1822-1998), filter life 1000 h	•
TA/D drying units, steam option	
Steam pressure [bar]	3.5 - 6
Steam quality: filtered saturated steam	•
Steam capacity (max.): [kg/h] (machine and drying unit 50 kg/h)	15
Total rated load, depending on model [kW]	1.8
Air throughput [m ³ /h]	approx. 250
Temperature selection in 1°C increments	60 - 115
Time selection in 1-minute increments	1 - 240
2 pre-filters EU 4, filter rating > 95%, filter life 200 h	•
2 particulate/HEPA filters H 13, filter rating > 99.95% (DIN 1822-1998), filter life 1000 h	•

• = Standard, o = Optional

PG 8527

E 941 mobile unit with sample loads



E 941 mobile unit with drying connection (empty)

- For modules on 2 levels
- Depending on the size of the glassware, up to 2 modules can be accommodated on each level
- Water and drying air enters via a direct docking system and adapters.
- Load dimensions from bottom upwards
Level 1 (without top module):
H 609, W 558, D 352 mm
Level 1 (with top module):
H 317, W 558, D 352 mm
Level 2: H 245, W 558, D 352 mm
- Connection for hot-air drying
- Magnetic strip for automatic mobile unit recognition
- H 421, W 619, D 790 mm

Mat. no. 4812530
Art. no. 69.5941.01



Sample load E 941 mobile unit with drying connection

- Lower level: 2 x E 944/2 injector modules for narrow-necked glasses, 500 - 1000 ml
- Upper level: 2 x E 943/2 injector modules for narrow-necked glasses, 100 - 500 ml



Sample load E 941 mobile unit with drying connection

- Lower level: 2 x E 945/2 top insert frame with E 106 insert for wide-necked glasses or E 109 for beakers
- Upper level: 2 x E 943/2 injector modules for narrow-necked glasses, 100 - 500 ml



Sample load E 941 mobile unit with drying connection

- Lower level: 1 x E 943/2 injector module for narrow-necked glasses, 100 - 500 ml and 1 x E 942/3 injector module for pipettes, max. 580 mm
- Upper level: 2 x E 947/2 injector module, e.g. for centrifuge tubes

PG 8527

Modules for E 941 mobile unit



- E 942/3 injector module**
- For 116 pipettes up to 580 mm
 - Holder frame
 - Compartment size 16 x 16 mm
 - H 279, W 558, D 352 mm

Mat. no. 7459390
Art. no. 69.5942.04



- E 943/2 injector module**
- For narrow-necked glassware, 100 - 500 ml
 - 32 nozzles (E 351) 4 x 160 mm with clips (E 353)
 - H 190, W 558, D 352 mm

Mat. no. 7459400
Art. no. 69.5943.03



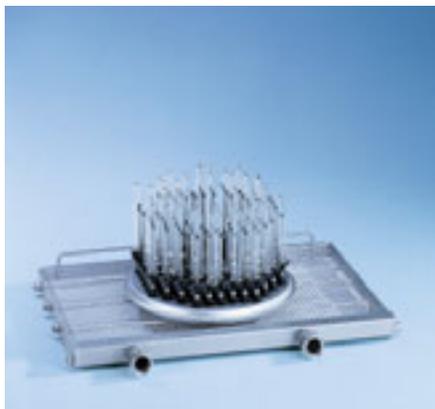
- E 944/2 injector module**
- For narrow-necked glassware, 500 - 1000 ml
 - 15 nozzles (E 352) 6 x 220 mm with clips (E 354)
 - H 250, W 558, D 352 mm

Mat. no. 7459410
Art. no. 69.5944.03



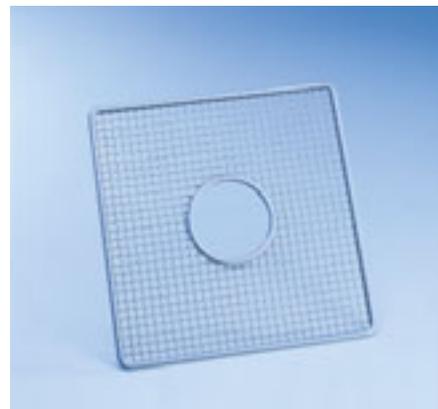
- E 945/2 modules**
- Carriage frame for inserts
 - H 55, W 558, D 352 mm

Mat. no. 7459420
Art. no. 69.5945.03



- E 947/2 injector module**
- 88 injector nozzles for centrifugal tubes, phials and fraction sampler tubes
 - 88 nozzles, Ø 2.5 x 110 mm
 - H 170, W 558, D 352 mm

Mat. no. 7459430
Art. no. 69.5947.03



- A 5 net cover**
- For insert E 947/2
 - H 8, W 280, D 280 mm

Mat. no. 5637190
Art. no. 69.5005.01

PG 8527

Mobile units with 2 - 5 levels



E 940 mobile unit with drying unit connection (empty)

- For narrow-necked glassware on 2 levels. (115 nozzles with clips)
- Lower level: 35 x nozzles (E 352) 6.0 x 220 mm with clips (E 354)
- Upper level: 80 x nozzles (E 351) 4.0 x 160 mm with clips (E 353)
- Connection for hot-air drying
- Magnetic strip for automatic mobile unit recognition
- H 565, W 640, D 790 mm

Mat. no. 4607630
Art. no. 69.5940.01



E 950/1 mobile unit with drying unit connection

- For narrow-necked glassware on 3 levels (232 nozzles)
- Levels 1 and 3: 80 x ID 90 nozzles each, (2.5 x 90 mm)
- Level 2: 72 x ID 90 nozzles (2.5 x 90 mm). Max. clearance on each level 148 mm
- Connection for hot-air drying
- Magnetic strip for automatic mobile unit recognition
- H 572, W 640, D 790 mm

Mat. no. 6696990
Art. no. 69.5950.02



E 957 mobile unit with drying unit connection

- For 1 - 12 large-volume laboratory glassware items (12 nozzles)
- Height-adjustable frame with 8 short and 6 long supports to adjust to diameter of glassware
- Max. height above star support: 615 mm
- Connection for hot-air drying
- Magnetic strip for automatic mobile unit recognition
- H 353, W 640, D 790 mm

Mat. no. 5746300
Art. no. 69.5957.01



E 975/2 mobile unit with drying connection (empty)

- For inserts on 2 levels
- Built-in spray arm
- Loading dimensions (from bottom):
Level 1: H 297, W 592, D 780 mm
Level 2: H 290, W 592, D 780 mm
- Connection for hot-air drying
- Magnetic strip for automatic mobile unit recognition
- H 427, W 640, D 790 mm

Mat. no. 7765790
Art. no. 69.5975.03



E 935/2 mobile unit with drying connection (empty)

- For inserts on 3 levels
- 2 built-in spray arms
- Loading dimensions (from bottom):
Level 1: H 202, W 585, D 780 mm
Level 2: H 202, W 595, D 780 mm
Level 3: H 132, W 595, D 780 mm
- Connection for hot-air drying
- Magnetic strip for automatic mobile unit recognition
- H 524, W 640, D 790 mm

Mat. no. 7765780
Art. no. 69.5935.03



E 900-4/2 mobile unit with drying connection (empty)

- For inserts on 4 levels
- 3 built-in spray arms
- Loading dimensions (from bottom)
Level 1: H 112.5, W 585, D 780 mm
Levels 2 and 3: H 112.5, W 595, D 780 mm
Level 4: H 114, W 595, D 780 mm
- Connection for hot-air drying
- Magnetic strip for automatic mobile unit recognition
- H 557, W 640, D 790 mm

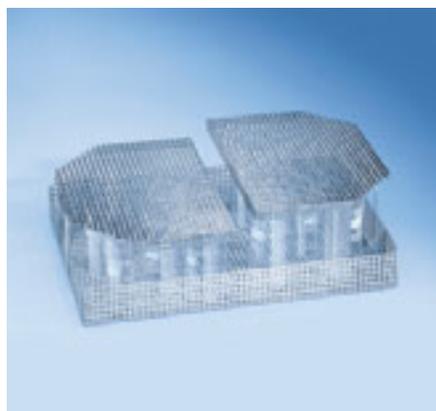
Mat. no. 7765740
Art. no. 69.5900.05



E 900-5/2 mobile unit with drying connection (empty)

- For inserts on 5 levels
- 4 built-in spray arms
- Loading dimensions (from bottom)
Level 1: H 80, W 585, D 780 mm
Levels 2 - 4: H 80, W 595, D 780 mm
Level 5: H 73, W 595, D 780 mm
- Connection for hot-air drying
- Magnetic strip for automatic mobile unit recognition
- H 605, W 640, D 790 mm

Mat. no. 7765760
Art. no. 69.5900.06

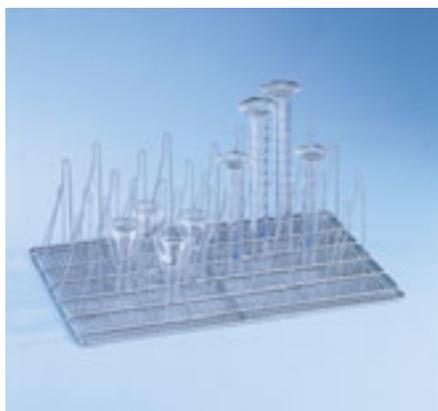


E 969 insert

- for various utensils
 - Perforated sheet-metal plate, 7 x 7 x 3 mm
 - For E 900-4/2, E 935/2, E 975/2 and E 941 with module 945
 - H 67/122, W 363, D 533 mm
- Mat. no. 5746240
Art. no. 69.5969.01

A 19 1/2 lid

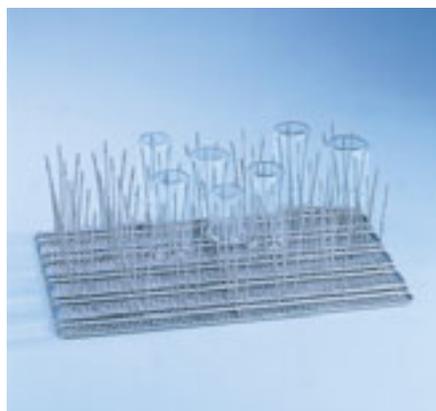
- For insert E 969
 - H 18, W 351, D 251 mm
- Mat. no. 5746210
Art. no. 69.7969.01



E 960/1 insert 1/2

- With 20 large and 26 small spring hooks
- For wide-necked Erlenmeyer flasks and measuring cylinders
- H 185, W 357, D 522 mm

Mat. no. 5892360
Art. no. 69.5960.02



E 963 insert 1/2

- With 33 x 3 holders for beakers, 250 ml
- H 155, W 357, D 522 mm

Mat. no. 5848300
Art. no. 69.5963.01



E 965 insert 1/2

- With 15 x 3 holders for beakers, 250 - 600 ml
- H 173, W 357, D 522 mm

Mat. no. 5848290
Art. no. 69.5965.01

PG 8527/G 7825 and inserts



E 103/1 1/4 insert

- For approx. 200 test tubes, max. **12 x 75 mm**
 - Subdivided into 6 compartments
 - Incl. A 13 cover
 - Mesh width 8 x 8 mm
 - H 102/122, W 200, D 320 mm
- Mat. no. 6907630
Art. no. 69.5103.02

E 104/1 1/4 insert

- As E 103, but for test tubes up to **12 x 105 mm**
 - Mesh width 8 x 8 mm
 - H 132/152, W 200, D 320 mm
- Mat. no. 6907640, Art. no. 69.5104.02



E 149 1/4 insert

- For 80 test tubes, **max. 16 x 105 mm**
- Incl. lid
- 80 compartments, 18 x 18 mm
- Base mesh size 8 x 8 mm

Mat. no. 3808800
Art. no. 69.5149.01

E 105/1 1/4 insert

- As E 103, but for test tubes up to **12 x 165 mm**
 - Mesh width 9 x 9 mm
 - H 192/212, W 200, D 320 mm
- Mat. no. 6907650
Art. no. 69.5105.02

E 139/1 1/4 insert

- As E 103, but for test tubes up to **12 x 200 mm**
 - Mesh width 9 x 9 mm
 - H 223/243, W 200, D 320 mm
- Mat. no. 6907660
Art. no. 69.5139.02



AK 12 1/2 insert

- For funnels, beakers, wide-necked glassware, etc.
- H 67/127, W 225, D 442 mm

Mat. no. 3830510
Art. no. 69.5012.01



A 13 cover

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

Mat. no. 3810200
Art. no. 69.7450.01



A 14 1/4 lid

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

Mat. no. 3981970
Art. no. 69.7450.02

Inserts



E 403 1/2 insert

- For 105 watch glasses, with 50 - 60 mm diameter
- 36 supports, distance between supports 9 mm
- H 35, W 200, D 445 mm

Mat. no.. 3830430
Art. no. 69.5403.01



E 402 1/2 insert

- For 44 watch glasses, with 80 - 125 mm diameter
- 23 supports, distance between supports 15 mm
- H 53, W 200, D 445 mm

Mat. no. 3830420
Art. no. 69.5402.01



E 136 1/1 insert

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

Mat. no. 3830280
Art. no. 69.5136.01

E 106 1/2 insert

- For wide-necked glassware, measuring beakers, etc.
- 10 spring hooks, H 175 mm
- 16 spring hooks, H 105 mm, Spacing approx. 60 mm
- H 186, W 195, D 430 mm

Mat. no. 3808310
Art. no. 69.5106.01

E 106/1 1/2 insert

- 26 small spring hooks, H 105 mm, spacing approx. 60 mm
- H 116, W 195, D 410 mm

Mat. no. 3808320
Art. no. 69.5106.02

E 106/2 1/2 insert

- 13 large spring hooks, H 175 mm, spacing approx. 85 mm
- H 186, W 180, D 420 mm

Mat. no. 3808330
Art. no. 69.5106.03



E 106 insert



E 111 insert

E 109 1/2 insert (not illustrated)

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

Mat. no. 3808360
Art. no. 69.5109.01

E 110 1/2 insert (not illustrated)

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

Mat. no. 3808390
Art. no. 69.5110.01

E 111 1/2 insert

- For 8 beakers, 600 to 1000 ml
- 8 x 3 supports
- H 205, W 230, D 460 mm

Mat. no. 3808420
Art. no. 69.5111.01

E 144 1/2 insert (not illustrated)

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

Mat. no. 3808710
Art. no. 69.5144.01

PG 8527/G 7825 and accessories

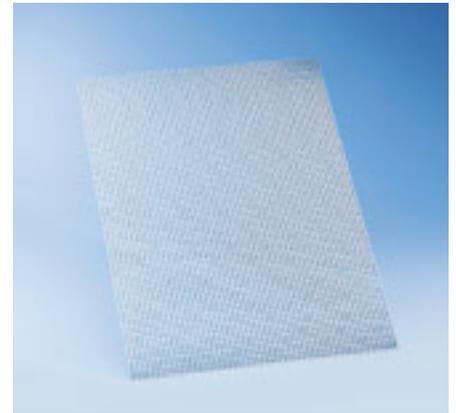


- A2 1/2 cover net** (illustration on left)
- 216 x 456 mm
 - Plastic-coated metal frame with plastic netting
 - For 1/2 inserts
- Mat. no. 3830460
Art. no. 69.5002.01

- A3 1/4 cover net** (illustration on right)
- 206 x 206 mm
 - Plastic-coated metal frame with plastic netting
 - For 1/4 inserts
- Mat. no. 3830470
Art. no. 69.5003.01



- A6 cover net 1/2**
- 215 x 445 mm
 - Stainless-steel with polypropylene mesh
- Mat. no. 7217650
Art. no. 69.5006.01



- A 9/1 Insert**
- Perforated plate
 - 7 x 7 mm perforations
 - 3 mm ridge
 - For E 935/2, E 975/2 and 901/2
 - H 1, W 773, D 573 mm

Mat. no. 6097010
Art. no. 69.5009.02



Further inserts for laboratory glassware in the brochure:
Perfection in laboratory glassware reprocessing (G 7883 – PG 8536)



- TK/1 Test Kit**
- Tests the presence of proteins and monitors cleaning results
 - Contents sufficient for 48 tests with code strips for reflectometer (reflectometer not provided)
 - Available via Spares

Mat. no. 6157330



E 336 injector sleeve MIBO

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

Mat. no. 3809390
Art. no. 69.7336.01



E 352 injector nozzle ①

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

Mat. no. 3809510
Art. no. 69.7352.01

E 351 injector nozzle ②

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

Mat. no. 3809500
Art. no. 69.7351.01

E 354 clip for nozzle ③

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

Mat. no. 3809540
Art. no. 69.7354.01

E 353 clip for nozzle ④

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

Mat. no. 3809530
Art. no. 69.7353.01

E 470 injector nozzle with clip ⑤

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

Mat. no. 5701580
Art. no. 69.5470.01



Injector nozzle with plastic support

Front row, from left:

ID 160 4 x 160 mm

Mat. no. 3810350
Art. no. 69.7160.01

ID 140 4 x 140 mm

Mat. no. 3810340
Art. no. 69.7140.01

ID 110 2.5 x 110 mm

Mat. no. 3810330
Art. no. 69.7110.01

ID 90 2.5 x 90 mm

Mat. no. 3810320
Art. no. 69.7090.01

Rear row, from left:

ID 240 6 x 240 mm

Mat. no. 3810400
Art. no. 69.7240.01

ID 220 6 x 220 mm

Mat. no. 3810390
Art. no. 69.7220.01

ID 200 6 x 200 mm

Mat. no. 3810380
Art. no. 69.7200.01

ID 180 4 x 180 mm

Mat. no. 3810360
Art. no. 69.7180.01



E 362 blanking screw

- M 8 x 1 thread, as blind stoppers to close connectors on mobile units

Mat. no. 3809630
Art. no. 69.7362.01

SD-B Injector nozzle for butyrometers (Not illustrated)

Mat. no. 3583540
Art. no. 69.7080.01



Washer-disinfector G 7825

The G 7825 series was designed with the requirements of larger laboratories in mind. With a width of only 900 mm, this machine is the ideal proposition in cases where space is at a premium.

Flexible solutions for the central and decentral reprocessing of laboratory glassware

Miele's G 7825 washer-disinfector offers a wide range of installation options, tailored individually to the needs of laboratories. This allows the machine to be installed both centrally in specialist departments dedicated to glassware reprocessing or decentrally in smaller laboratories, depending on the volume of glassware.

Wide range of standard functions and optional extras

Miele's modular approach to its G 7825 washer-disinfectors with a comprehensive set of standard features and the option of customisation by adding optional extras, offers a high degree of flexibility to meet specific on-site conditions and hygiene regimes. All machines are available with electric or steam heating and as a convertible steam/electric version. Miele washer-disinfectors feature highly sophisticated solid-state controls to control and monitor process parameters. These are a product of Miele's own in-house development and production expertise and are closely geared to the highly specific requirements of glassware reprocessing.

The sliding plinth/drip tray has proved to be a huge benefit to service technicians. To simplify handling laboratory glassware, Miele recommends the use of the MF/3 Miele transfer trolley.



Miele quality – Made in Germany

For many decades now, Miele washer-disinfectors have represented an integral part of quality assurance in laboratories. Miele washer-disinfectors offer uncompromising quality and provide users maximum benefits in terms of hygiene, safety and economy.

Performance comparison Washer-disinfectors	Unit width/depth	Door	Cabinet Useable dimensions H/W/D Cabinet volumes	Capacity per cycle
PG 8527	1150/870 mm	Vertical door	675/650/800 mm 351 l	232 narrow-necked glasses or 232 pipettes
G 7825	900/750 mm	Bottom hinged door	683/541/610 mm 225 l	108 narrow-necked glasses or 104 pipettes

Standard machine features and specifications



Version

- G 7825: Front-loading unit with single bottom-hinged door

Capacity per cycle

- 108 narrow-necked glasses or 104 pipettes

Design

- Stand-alone or installed in a row
- Side-by-side
- Width 900 mm
- Modular approach with customised features to meet individual requirements
- Single-chamber system for washing, disinfection and drying
- Service-friendly design
- Low heat and sound emissions thanks to double insulation

Cleaning technology

- Hygienic freshwater system with fresh water intake for each programme stage
- Cleaning, disinfection and drying in a closed, single-cabinet system
- 2 spray arms in cabinet for thorough cleaning of laboratory glassware surfaces
- Spray arms with high water jet impact force
- Full water jet access, ensuring optimum results
- Thorough cleaning of lumens with injector system
- Direct docking of mobile units to water circuit

- 2 powerful circulation pumps
- Triple filtration with large surface filter, coarse filter and micro-fine filter
- Filter in inlet hoses
- Flowmeter to monitor water intake quantities
- 1 dump valve

Dispenser systems

- 2 dispenser pumps for liquid detergent and neutralising agent



Controls

- Freely programmable controls PROFITRONIC
- 64 programme slots
 - 17 standard washing and disinfection programmes
 - 8 service programmes
 - 39 vacant programme slots
- User interface with local-language display
- Display of programme selection and programming dialogs, programme sequence, temperature, countdown time, faults, operating hours.
- Compilation of new programmes using machine controls or using PC/laptop via optical interface

Interfaces

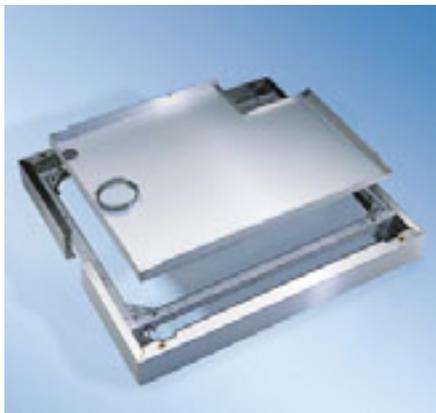
- Serial RS 232 interface for process documentation
- Optical interface for service and maintenance

Safety devices

- Electric door lock
- Programme recontinuation in event of power outage
- Peak-load negotiation
- Optical and acoustic signal at end of programme
- 2 sensors, one each for temperature control and monitoring
- Port for simple positioning of sensors in the wash cabinet for process validation
- Sensors in cabinet and a magnetic strip on the mobile units for automatic allocation of loads/inserts to programmes

Modular machine concept

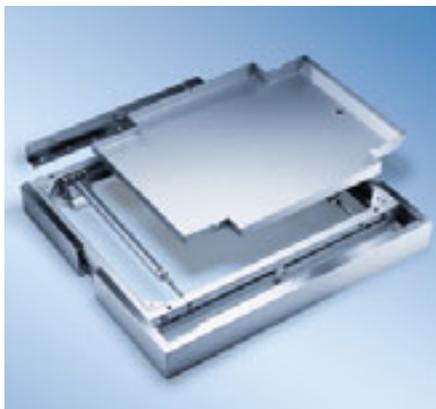
Optional extras



SBW/2

Plinth/drip tray

- Frame with integrated stainless-steel floor tray
- Cut-outs for steam and plumbing connections, drain valve, dual drain valve and drip tray drain
- A single floor tray can be provided on site for machines installed in a row.
- Plinth fascia (front and rear) with 8 mm recess, flush at sides
- H 100, W 900, D 734 mm



SBWR/2

Plinth/drip tray for G 7825

- Roller plinth/drip tray
- Castors allow machine to be pulled forward for servicing
- For G 7825 with drain pump
- Utility supply access through ceiling
- H 100, W 900, D 734 mm

PRT/1

Printer for process documentation

- 6-needle printer and RS 232 serial interface
- Paper format: 58 mm wide
- For installation on unclean side of G 7825 or clean side of G 7826
- Recording of following parameters during programme:
Date and Mach. no., Prog. no., prog. name, starting and finishing time, dispensing concentration, dispensing temperature and pumps 1 - 4, target temperature reached (wash/dry) with times, all faults (e.g. 'water inlet'), all incidents of manual intervention (start, stop, power failure)
- For disinfection programmes: meets process parameters with respect to temperature and holding time

Machine versions, components, accessories

DK 25/26

Steam condenser/heat exchanger

- For G 7825 with water cooling (only dehumidified air should be vented to air conditioning system)
- Connection to on-site cooling water circuit (no water consumption), max. pressure 8 bar
- Or cold water supply (water consumption)
- On-site installation
- Reduction of air discharge temperature to approx. 30 - 35°C
- Reduction in relative humidity to approx. 60 - 70%

MAV 25/26

Installation kit/Top-box panelling for steam condenser

- Service hatches, with lock, for both sides of diaphragm wall, stainless steel
- Ventilation grille on the infeed side
- Diaphragm wall panelling between the top of the top-box panelling and the ceiling must be provided on site
- H 430, W 900, D 750 mm

MVA installation kit – Floor anchors

- 4 feet, fittings, plugs
- Required when machine is installed without SBW/2

DOS 10/30 Integrated dispenser pump

- For surfactant or neutralising agent, 10 ml/30 secs.
- Complete with hoses and siphon (330mm) for 10 l canisters

DOS 60/30 Integrated dispenser pump

- For liquid disinfectant or detergent, 60 ml/30 secs.
- Complete with hoses and siphon (330mm) for 10 l canisters

G 7825	Equipment	Mat. no.	Art. no.
Electric	AE PT EL AV	5267200	62.7825.20
	AE TA PT EL AV	5277520	62.7825.21
	AE TA BO PT EL AV	5277530	62.7825.22
	AE TA PT EL AP	5544310	62.7825.24
	AE TA GS PT EL AP	5769820	62.7825.27
	AE TA BO PT EL AP	5430590	62.7825.25
Steam	AE BO PT D AV	5267170	62.7825.10
	AE TA BO PT D AP	5430620	62.7825.15
Accessories	Equipment	Mat. no.	Art. no.
SBW/2	Plinth/drip tray for G 7825	5238130	69.3710.02
SBWR/2	Plinth/drip tray, on castors for G 7825	5653130	69.3710.04
MVA	Top-box panelling kit for G 7825	5318010	69.2100.04
DK 25/26	Steam condenser/heat exchanger	6600620	69.2300.05
MAV 25/26	Top-box panelling kit for G 7825	6600590	69.2100.08
PRT/1	Printer for process documentation	5400800	69.2211.02
DOS 10/30	Retrofittable dispenser pump	5267410	69.2250.02
DOS 60/30	Retrofittable dispenser pump	5267420	69.2250.03

Chamber – ASI 316L (1.4404) grade stainless steel (optional)

C.f. page 4 for explanation of symbols

Technical data

Washer-disinfector	G 7825
Front-loading unit with bottom-hinged door	•
Barrier model with bottom-hinged doors	–
Single/multiple installations	•
Freshwater system, max. temperature 93°C	•
Direct mobile unit docking for cleaning and drying of lumened instruments	•
2 circulation pumps [Qmax. l/min]	300/400*
Controls/Programmes	
Profitronic, user programmable	•
64 programme slots	•
Electric door lock	•
Peak-load negotiation	•
Serial interface for process documentation	•
Magnetic strip for automatic mobile unit recognition	•
Remote service enabled	•
Water connections	
1 x cold water, 2 - 10bar flow pressure (200 - 1000 kPa) (max. 4°dH)	•
1 x hot water, 2 - 10bar flow pressure (200 - 1000 kPa) (max. 4°dH)	•
1 x demineralised water, 2 - 10bar flow pressure (200 - 1000 kPa)	•
3 inlet hoses ½" with ¾" threaded union	•
Drain valve DN 50, odour trap to be fitted on site	•
2 drain pumps DN 22, odour trap to be provided on site	0
Electrical connection: Electrically heated	
3 N AC 400 V 50 Hz	•
Heating [kW]	9.0
Circulation pump [kW]	0.3/0.7*
Total rated load without drying unit [kW]	10.0
Total rated load with electrically heated drying unit [kW]	10.0
Fuse rating [A]	3 x 16
Electrical connection: Steam heating	
3 N AC 400 V 50 Hz	•
Circulation pump [kW]	0.3/0.7*
Total rated load without drying unit [kW]	1.65
Total rated load with electrically heated drying unit [kW]	9.0
Fuse rating [A]	3 x 16
Steam connection G ½" (DN 15)	•
Operating pressure 250 - 1000 kPa on models with TA/E (electrically heated drying unit)	•
Operating pressure 600 - 800 kPa on models with TA/D (steam-heated drying unit)	•
Compressed air connection 600 - 1200 kPa	•
Electrical connection: Steam/Electrically heated (convertible)	
3 N AC 400 V 50 Hz	•
Heating [kW]	9.0
Circulation pump [kW]	0.3/0.7
Total rated load with electrically heated drying unit [kW]	10.0
Fuse rating [A]	3 x 16
Steam connection G ½" (DN 15)	•
Operating pressure 250 - 1000 kPa on models with TA/E (electrically heated drying unit)	•
Operating pressure 600 - 800 kPa on models with TA/D (steam-heated drying unit)	•
Compressed air connection 600 - 1200 kPa	•
* Machine spray arms / direct docking	

G 7825

E 741/1 mobile unit and modules for laboratory glassware



E 741/1 mobile unit with drying connection (empty)

- For modules on 1 - 4 levels
- Depending on the size of the glassware up to 3 modules can be accommodated.
- Water and drying air enters via a direct docking system and adapters.
- Clearance:
 - Level 1 to top edge: 605 mm
 - Level 2 to top edge: 405 mm
 - Level 3 to top edge: 267 mm
 - Level 4 to top edge: 197 mm
- Connection for hot-air drying
- Magnetic strip for automatic mobile unit recognition (excl. ML magnets)
- H 680, W 530, D 600 mm

Mat. no. 6070360
Art. no. 69.5741.02



E 742 module

- Module frame with spray arm
- H 112, W 492, D 496 mm

Mat. no. 5848320
Art. no. 69.5742.01



E 743 Injector module

- For narrow-necked glassware, 100 - 500 ml
- 36 nozzles (E 351) 4 x 160 mm with clips (E 353)
- H 190, W 492, D 496 mm

Mat. no. 5555250
Art. no. 69.5743.01



E 744 Injector module

- For narrow-necked glassware, 500 - 1000 ml
- 16 nozzles (E 352) 6 x 220 mm with clips (E 354)
- H 250, W 492, D 496 mm

Mat. no. 5555260
Art. no. 69.5744.01



E 752 Injector module

- For narrow-necked glassware, 100 - 1000 ml
- 12 nozzles (E 351) 4 x 160 mm with clips (E 353)
- 13 nozzles (E 352) 6 x 220 mm with clips (E 354)
- H 260, W 492, D 496 mm

Mat. no. 5647640
Art. no. 69.5752.01



E 755 Injector module

- For narrow-necked glassware, 25 - 100 ml
- 36 nozzles (E 470), 2.5 x 90 mm, with holders
- H 130, W 492, D 496 mm

Mat. no. 5701590
Art. no. 69.5755.01



E 745/1 injector module

- For 104 pipettes up to 540 mm
- Frame
- Compartment size 16 x 16 mm
- H 288, W 492, D 496 mm

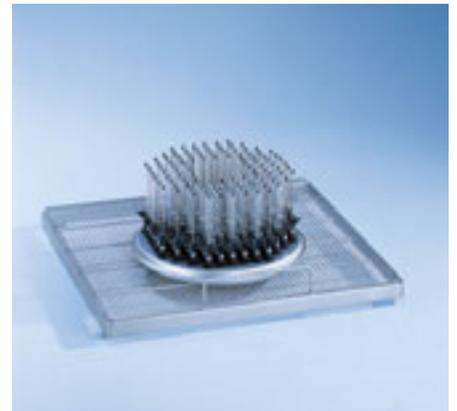
Mat. no. 6233580
Art. no. 69.5745.02



E 746 Injector module

- For 23 pipettes held diagonally
- For 10 pipettes up to 560 mm and
- 13 pipettes up to 490 mm
- Holders spaced 20 mm or 26 mm apart
- H 330, W 492, D 496 mm

Mat. no. 5555280
Art. no. 69.5746.01



E 747 Injector module

- 104 injector nozzles for centrifugal tubes, phials and test tubes, fraction sampler tubes
- 104 nozzles, Ø 2.5 x 110 mm
- H 168, W 492, D 496 mm

Mat. no. 5464630
Art. no. 69.5747.01

Sample load

E 741/1 with modules



Sample load E 741/1 mobile unit with drying connection

- With E 744 injector module for narrow-necked glassware, 500 - 1000 ml on Levels 1 and 3



Sample load E 741/1 mobile injector unit with drying connection

- With E 742 module frame and E 106 and E 109 inserts for wide-necked glassware, measuring beakers and glasses on Level 1
- With E 744 injector module for narrow-necked glassware, 500 - 1000 ml on Level 2



Sample load E 741/1 mobile injector unit with drying connection

- With E 743 injector module for narrow-necked glassware, 100 - 500 ml, on Levels 1, 2 and 4



Sample load E 741/1 mobile injector unit with drying connection

- With E 747 injector module for centrifuge tubes, etc. on Levels 1 and 4
- With E 743 injector module for narrow-necked glassware, 100 - 500 ml on Level 2

G 7825

Mobile units with 2 - 5 levels



E 757 mobile injector unit with drying unit connection

- For 1 - 6 large-volume laboratory glassware items (6 nozzles)
- Height-adjustable frame with 6 short and 4 long supports to adjust to diameter of glassware
- Max. height above star support: 610 mm
- Connection for hot-air drying
- Magnetic strip for automatic mobile unit recognition (excl. ML magnets)
- H 346, W 530, D 600 mm

Mat. no. 5746290
Art. no. 69.5757.01



E 775/1 mobile unit with drying connection (empty)

- For inserts on 2 levels
- Built-in spray arm
- Loading dimensions (from bottom)
Level 1: H 304, W 482, D 590 mm
Level 2: H 290, W 488, D 546 mm
- Connection for hot-air drying
- Magnetic strip for automatic mobile unit recognition (excl. ML magnets)
- H 400, W 530, D 600 mm

Mat. no. 7765730
Art. no. 69.5775.03



E 735/2 mobile unit with drying connection (empty)

- For inserts on 3 levels
- 2 built-in spray arms
- Loading dimensions (from bottom):
Level 1: H 203, W 482, D 590 mm
Level 2: H 203, W 488, D 546 mm
Level 3: H 133, W 488, D 546 mm
- Connection for hot-air drying
- Magnetic strip for automatic mobile unit recognition (excl. ML magnets)
- H 552, W 530, D 600 mm

Mat. no. 7765710
Art. no. 69.5735.03



E 701/2 mobile unit with drying connection (empty)

- For inserts on 4 levels
- 3 built-in spray arms
- Loading dimensions (from bottom)
Level 1: H 87, W 482, D 590 mm
Levels 2 and 3: H 87, W 488, D 546 mm
Level 4: H 223, W 488, D 546 mm
- Loading dimensions with E 702:
Level 4: H 87, W 488, D 546 mm
Level 5: H 81, W 488, D 546 mm
- Connection for hot-air drying
- Magnetic strip for automatic mobile unit recognition (excl. ML magnets)
- H 461, W 530, D 600 mm

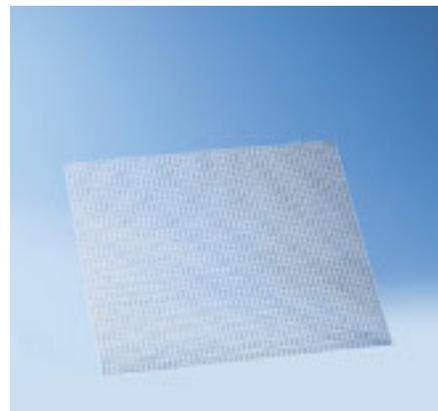
Mat. no. 7765700
Art. no. 69.5701.03



E 702 top module for E 701/1

- Level 5 for 2 additional mesh trays
- H 160, W 530, D 560 mm

Mat. no. 5221490
Art. no. 69.5702.01



A 7/1 Insert

- Perforated plate
- 7 x 7 mm perforations
- 3 mm ridge
- For E 775/1, E 735/2 and E 701/2
- H 1, W 543, D 473 mm

Mat. no. 6097000
Art. no. 69.5007.02

Transport trolleys



MF/3 for G 7825

- Trolley to simplify the handling of mobile injector units
- Footswitch-operated height-adjustment mechanism
- 4 lockable wheels
- H 1182, W 660, D 807 mm, +/- 100 mm
- Docking height 751 mm, +/- 100 mm

Mat. no. 6392900

Art. no. 69.2001.07



MF 27/28-1 for PG 8527

- 4 lockable wheels, Ø 100 mm,
- Both ends can dock onto machine, tables, pass-through hatch or conveyors.
- Docking height 850, -100, + 150 mm
- H 1050, W 740, D 930 mm
- With removable drip tray
H 70, W 603, D 866 mm

Mat. no. 7397640

Art. no. 69.2001.11

AquaSoft system



PG 8597 Aqua Soft system, twin-tank water softener

- For continuous supply of softened water for max. supply hardness of approx. 40°dH (7.2 mmol/l)
- H 570, W 360, D 360 mm
- Weight (excl. salt) approx. 30 kg
- Freestanding unit on castors. Filled from top.
- Plastic casing
- Performance: Constant supply 19 l/min, max. delivery 30 l/min
- Demand-controlled twin-tank system
- Does not require power supply
- Equipped with 2 x 4.5 l resin-filled canisters and 1 container for 20 kg of salt
- Water connection
 - 2 pressure hoses, approx. 1.5 m, 3/4"-threaded union
 - 1 x cold or hot water connection, max. 70°C min. 1 bar intake flow pressure to system, max. static pressure 8 bar
 - 2.5 bar minimum flow pressure on machines without water softener
 - 3.5 bar min. flow pressure on machines with softener
 - 1 x connection from system to machine
 - 2 drainage hoses, approx. 1.5 m (DN 8 for reactivation water and overflow, odour trap and non-return valve to be provided on site)
- Water consumption 19 l/reactivation cycle

Process documentation options in the laboratory



Process documentation principles

The documentation of process data represents an integral part of quality assurance. Washing and disinfection is performed using validatable processes, whereby validation includes the need for documentation. Proof that a validated process can be replicated with each batch is best achieved by recording and documenting the most important programme parameters. To facilitate process documentation on a PC, Miele has cooperated with IBH Data Technology GmbH in designing the NetBox documentation system, tailored to the needs of Miele washer-disinfectors. NetBox is a proprietary and comprehensive system consisting of both hard- and software. It allows process protocols from up to 4 washer-disinfectors to be processed and archived.

Effective process documentation system requirements

- Comprehensive system with high level of process security, including pre-installed and configurable software
- Tamper-proof
- Simple operation without knowledge of PCs
- Simple installation
- Process visualisation
- Batch-related documentation
- Load data acquisition
- Documented batch approval
- Long-term archiving

System components

- NetBox with keypad and mouse plus cables for connection to washer-disinfectors

Optional:

- Flat screen for process visualisation and load data capture
- Barcode scanner (with connection lead or wireless using Bluetooth technology) to simplify machine operation and load data capture
- RFID transponder as alternative to barcode system
- Network cable if documentation is to be installed in a network

Load assignment, data storage and archiving

NetBox protocols: Safe and convenient

The NetBox is a complete documentation system including pre-configured software. The system is connected via an interface to the washer-disinfector. The NetBox collects all relevant process data during washing and disinfection programmes. In standard mode, the unit harvests data fully automatically without any involvement on the part of the user. This means maximum operating safety as the NetBox provides considerable protection against operating errors. Once collated, process data remains in memory; the NetBox has the capacity to save up to 1000 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. This also helps visualise the data contained in the wash protocol. 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.

As soon as data is received from a washer-disinfector, a batch number is automatically allocated and a report generated.

Depending on the machines, protocols can contain the following parameters:

- Batch no., date and Mach. no.
- Programme designation
- Programme starting and ending time and times of individual programme blocks
- Dispenser pump (ID no.), chemical concentration, temperature and times
- Target temperature reached
- Disinfection temperature and holding time
- Faults (e.g. water inlet)
- Manual intervention and outages (e.g. programme aborted, power failure)

On washer-disinfectors with Profitronic controls, the intervals at which the time/temperature profile is plotted (e.g. every 5 secs.) can be defined by the user.

Clip with barcode attached to inserts



Protocol administration

At the end of a programme, a batch protocol is added to the protocol database. All protocols can be called up at any time to check protocol parameters such as Batch no., Mach. no., user, etc. Data records are write-protected and cannot be modified. All persons authorised to access the process documentation programme are recorded in master records as authorised users. Access can also be password-protected. An access code determines the access rights of a user on the system.

Scanning of barcode



Evaluations

NetBox represents an integrated approach to statistical programme evaluations. Saved data can also be made available to other programmes for further processing and evaluation.

A key advantage of the NetBox in comparison to PC-based systems is the operational safety factor. NetBox process documentation also simplifies installation and operation, requires a minimum of space, is ventilator-free and low-cost.

Scanning of staff barcode after batch approval



The process documentation software is optionally available as a software-only solution for installation on a Windows PC.

Service in highest Miele quality - guaranteed!



Comprehensive service package from one single source

Miele Sales and Service provide all services from a single source in Miele's excellent quality.

Our specialists are on hand right from the outset to advise you on the most suitable system solution tailored to your specific needs. After installation and commissioning on site by our highly skilled Miele technicians, you can benefit from our available comprehensive service:

- Qualification of cleaning systems: Miele's tailored service package covers Installation and Operation Qualification (IQ/OQ). Further details on Miele's offer of IQ/OQ are on Page 47.
- High-quality service with short response times and blanket service coverage provided by specialised Miele product service engineers (e.g. over 150 technicians in Germany alone)
- 90% of service calls result in first-time fixes
- Reliable spares service: key genuine spares available for 15 years after discontinuation of series production
- Individual service contracts: Miele's

inspection and maintenance contracts ensure that Miele machines are inspected and maintained at regular intervals by specially trained Miele after-sales service engineers. This reliably prevents unwanted downtimes. Depending on individual requirements, various service options are available from, for example, inspection and maintenance contracts to a full-maintenance contract which includes all services performed during maintenance and repair work - full cost control.

Exclusive to
MIELE

It is not without reason that Miele's after-sales service operation has been acclaimed for many years in succession for its excellence (in an annual survey performed by ServiceBarometer AG, Munich).



Miele Remote Service

Investing in a safe future. A Remote Service Assistant module, developed by Miele, allows service engineers to establish remote contact with Miele washer-disinfectors to diagnose faults and decide on the necessary remedial action. This technology can be used both to update controls and for remote trouble-shooting.

Remote  Service

Miele Service Pack: Qualification of cleaning systems

In the pharmaceutical, food-processing and cosmetics industries, all cleaning systems used in production, quality assurance and R&D must be 'qualified'.

Qualification involves the following: Design Qualification (DQ), Installation Qualification (IQ), Operation Qualification (OQ), Performance Qualification (PQ) and, in some cases, process validation. In all cases, responsibility for implementing the necessary measures lies with the equipment operator. Miele's in-house after-sales service operation, though, can provide support by assuming some of the duties incumbent on the operator. Miele's tailored service package covers Installation and Operation Qualification (IQ/OQ).

Installation Qualification (IQ)

The objective of Installation Qualification is to verify that the cleaning system and its installation comply with the operator's and manufacturer's requirements. During the IQ inspection, Miele service engineers document, check and assess the following: compliance of shipment with original order, unit configuration and condition, installation and connection to on-site utilities and the calibration of certain measuring systems.

Implementation

Before IQ/OQ can be performed by Miele's in-house service engineers, the necessary documentation must be compiled, checked and approved by the operator for use during the inspection. Miele service technicians will then perform qualification on the basis of this documentation. All the necessary calibrated and certified test apparatus is provided by Miele.

Operation Qualification (OQ)

The objective of Operation Qualification is to furnish proof that the cleaning system meets the requirements of the operator and equipment manufacturer when installed and connected. Operation Qualification documentation, inspections and evaluation cover functions with a relevance to safety and operation, process-related messages and warnings, and programme sequence.

Training of service engineers

Miele's own service engineers are given training covering all aspects of machine technology (installation, programming, repair and maintenance) in regular refresher courses. This is complemented by specialised training on the qualification of Miele cleaning systems used in industrial and laboratory operations. Theory and practice are not confined to washer-disinfectors either: they also cover all peripheral units likely to be encountered in industrial applications (for example Miele's AquaPurificator to produce demineralised water, dispensing systems and accessories such as mobile injector units and inserts).

Training of operatives and the documentation of such measures is also carried out during Operation Qualification. This constitutes a comprehensive package comprising IQ/OQ paperwork, the services of highly skilled and qualified service engineers and the use of calibrated, certified test apparatus.

Miele & Cie. KG
Carl-Miele-Straße 29, D-33332 Gütersloh
P.O. box, D-33325 Gütersloh

www.miele-professional.com
info@miele.de

Miele worldwide:

AUSTRALIA
Miele Australia Pty. Ltd.
1 Gilbert Park Drive
Knoxfield, VIC, 3180
Tel. +613 97 64 71 30
Telefax +613 97 64 71 49

AUSTRIA
Miele Gesellschaft mbH.
Mielestraße 1
5071 Wals/Salzburg
Tel. +43 50 800-81 481
Telefax +43 50 800-81 429

BELGIUM
N.V. Miele S.A.
z.5 Mollem 480
Hof te Bollebeeklaan 9
1730 Mollem
Tel. +32 2451 14 11
Telefax +32 2451 14 14

CANADA
Miele Limited
161 Four Valley Drive
Vaughan, ON L4K 4V8
Tel. +1 905 660-9936
Telefax +1 904 532-2290

CHILE
Miele Ltda.
Nueva Costanera 4055
Vitacura
Santiago de Chile
Tel. +56 2 95700-00
Telefax +56 2 95700-79

CHINA
Miele China Beijing Office
3F South Tower, Kerry Center
No 1 Guang Hua Road
ChaoYang District
100020 Beijing PRC
Tel. +86 10 5783 2688
Telefax +86 10 5783 2600

Miele (Shanghai) Trading Ltd.
1-3 Floor, No. 82 Shi Men Yi Road,
Jing An District
200040 Shanghai PRC
Tel. +86 21 6135 3559
Telefax +86 21 6135 3993

CROATIA
Miele trgovina i servis d.o.o.
Buzinski prilaz 32
10000 Zagreb
Tel. +385/1/66 89 000
Telefax +385/1/66 89 090

CZECH REPUBLIC
Miele spol. s.r.o.
Holandská 4
63900 Brno
Tel. +420 5 4 35 53-1 11
Telefax +420 5 4 35 53-1 19

DENMARK
Miele A/S
2600 Glostrup, Erhvervsvej 2
Tel. +45 43 27 11 00
Tel. Salg/Professional
+45 43 27 15 00
Tel. Jylland +45 97 12 70 66
Telefax hovednr. +45 43 27 11 09
Telefax Salg/Professional
+45 43 27 15 09

ESTONIA
Miele OÜ
Tornimäe 5
10145 Tallinn
Tel. +372 6 55 68 11

FINLAND
Miele Oy
Porttikaari 6
01200 Vantaa
Tel. +3589 87 59 70
Telefax +3589 87 59 72 99

FRANCE
Miele S.A.S.
9 avenue Albert Einstein
93151-Le Blanc-Mesnil (Paris)
Tel. +33(0)1/49 39 34 44
Telefax +33(0)1/49 39 44 38

GERMANY
Miele & Cie. KG
Carl-Miele-Straße 29
33332 Gütersloh
Tel. 0 180 220 21 21 (6 ct)*
Telefax 0 800 225 57 55
*Only in Germany

GREAT BRITAIN
Miele Co. Ltd.
Fairacres
Marcham Road, Abingdon
Oxon OX14 1TW
Tel. 0845 330 3618
Telefax 01235 405636

GREECE
Miele Hellas E.P.E.
Mesogion 257
154 51 N. Psychiko-Athens
Tel. national 01/10 6 79 44 44
international 00 30/2/10 6 79 44 44
Telefax 01/10 6 79 42 09
international 00 30/2/10 6 79 42 09

HUNGARY
Miele Kft.
Alsó Törökútvész út 2.
1022 Budapest
Tel. +36 1 8806-400
Telefax +36 1 8006-402

HONG KONG
Miele (Hong Kong) Ltd.
41/F - 4101, Manhattan Place
23 Wang Tai Road,
Kowloon Bay
Tel. +852/2610 1331
Telefax +852/2610 1013

INDIA
Miele India Pvt. Ltd.
Ground Floor,
Copia Corporate Suites,
Plot No. 9, Jasola,
New Delhi - 110025
Tel. +91 (0)11 469000-00
Telefax +91 (0)11 469000-01

IRELAND
Miele Ireland Ltd.
2024 Bianconi Avenue
Citywest Business Campus
Dublin 24
Tel. +3531 461 07 10
Telefax +3531 461 07-97

ITALY
Miele Italia S.r.l.
Strada di Circonvallazione, 27
39057 S. Michele-Appiano (BZ)
Tel. +39 04 71/66 61 11
Telefax +39 04 71/66 63 50

JAPAN
Miele Japan Corp.
Meguro Yamate Place 9F
2-10-11 Meguro
Meguro-ku, Tokyo
153-0063 Japan
Tel. +81(3)5740-0034
Telefax +81(3)5740-0035

KAZAKHSTAN
Miele LLP
Building 1B (office 602)
Al-Farabi Pr. 13
050059 Almaty
Tel. +7 727 3111141
Telefax +7 727 3111042

KOREA
Miele Korea Limited
Miele House 8 fl.,
607-10 Yeoksam-dong
Gangnam-gu
Seoul 135-080
Tel. +82 2 3451 9353
Telefax +82 2 3451 9399

LATVIA
Miele SIA
Zaubes Str. 9A-38
1013 Riga
Tel. +371 67889877
Telefax +371 67889879

LITHUANIA
Miele Appliances UAB
S. Zukausko g. 2/3-116
08240 Vilnius
Tel. +370 52487529
Telefax +370 52487529

LUXEMBOURG
Miele s.à r.l.
20, Rue Christophe Plantin
2339 Luxembourg
Tel. +352/4 97 11-25
Telefax +352/4 97 11-39

MALAYSIA
Miele Sdn Bhd
Suite 12-2, Level 12
Menara Kencana Petroleum
Solaris Dutamas
No. 1, Jalan Dutamas 1
Kuala Lumpur 50480
Tel. +603 6205 3899
Telefax +603 6205 3998

MEXICO
Miele S.A. de C.V.
Av. Santa Fé 170
German Centre 0-4-2
Col. Lomas de Santa Fé
C.P. 01210 México, D.F.
Tel. +52/55 85 03 98 70
Telefax +52/55 85 03 98 74

NETHERLANDS
Miele Nederland B.V.
De Limiet 2
4131 NR Vianen
Tel. +31 3 47/37 88 83
Telefax +31 3 47/37 84 29

NEW ZEALAND
Miele New Zealand Ltd.
Unit L, 10-20 Sylvia Park Road
Mt. Wellington, 1060 Auckland
Tel. +64 9573 1269
Telefax +64 9573 1268

NORWAY
Miele AS
Løxaveien 13
1351 Rud
Tel. +47/67 17 31 00
Telefax +47/67 17 31 10

POLAND
Miele Sp. z. o. o.
ul. Gotarda 9
02-683 Warszawa
Tel. +48 22/5 48 40 00
Telefax +48 22/5 48 40 10

PORTUGAL
Miele Portuguesa, Lda.
Av. do Forte, 5
2790-073 Camaxide
Tel. +351/21/42 48-100
Telefax +351/21/42 48-109

ROMANIA
Miele Appliances SRL
Intrarea Narciselor 8
Otopeni
Jud. Ilfov
Tel. +40 21 3520777
Telefax +40 21 3520776

RUSSIA
000 Miele CIS
Leningradsky Prospekt, 31A, bld. 1
125284 Moscow
Tel. +7 495 745-8992
Telefax +7 495 745-8680

SERBIA
Miele d.o.o. Beograd
Balkanska 2
Beograd - Stari Grad 11000
Tel. +381 11 2055060
Telefax +381 11 2055065

SINGAPORE
Miele Pte. Ltd.
163 Penang Road
#04-02/03 Winsland House II
Singapore 238463
Tel. +65/67 35 11 91
Telefax +65/67 35 11 61

SLOVAKIA
Miele s. r. o.
Plynárenská 1
82109 Bratislava
Tel. +421/2/58 10 31 11
Telefax +421/2/58 10 31 19

SLOVENIA
Miele d.o.o.
Brncičeva ulica 41 g
1231 Ljubljana - Črnuče
Tel. +386 1563 44-80
Telefax +386 1563 44-90

SOUTH AFRICA
Miele (Pty) Ltd.
63 Peter Place
Bryanston 2194
Tel. +27(0)11/875-9000
Telefax +27(0)11/875-9035

SPAIN
Miele S.A.U.
Carretera de Fuencarral, 20
28108 Alcobendas (Madrid)
Tel. +34/91/6 23 20 00
Telefax +34/91/6 62 02 66

SWEDEN
Miele AB
Industrivägen 20
Box 1397
171 27 Solna
Tel. +46 85 62 29-000
Telefax +46 85 62 29-209

SWITZERLAND
Miele AG
Limmatstr. 4
8957 Spreitenbach
Tel. +4156 4 17 20 00
Telefax +4156 4 17-24 69

TURKEY
Miele Elektrikli Aletler
Diş. Tic. ve Paz. Ltd. Şti.
Güvercin Sokak No. 10
34330 Levent-Istanbul
Tel. +90/2 12/3 86-08 00
Telefax +90/2 12/3 25 84 49

UKRAINE
Miele LLC
Zhylyanskaya Str. 48, 50 A
01033 Kiev
Tel. +38 044 4960300
Telefax +38 044 4942285

UNITED ARAB EMIRATES
Miele Appliances Ltd.
Gold & Diamond Park
Sheikh Zayed Road
Building No. 6,
Offices No. 219
Dubai
Tel. +971 4 3418444
Telefax +971 4 3418852

USA
Miele, Inc.
9 Independence Way
Princeton, NJ 08540
Tel. 001-800/843 72 31
Telefax 001-609/419 42 41

OTHER COUNTRIES:
Sales International
Miele & Cie. KG
Carl-Miele-Straße 29
33332 Gütersloh
Tel. +49(0)52 41-89 15 07
Telefax +49(0)52 41-89 15 00