

### **A Systematic Approach**

### Instrument Reprocessing In Dental Surgeries





### **Quality From Miele Professional**

In developing reprocessing solutions for dental surgeries, Miele Professional has attached great significance over the past 50 years to working closely with dentists and instrument manufacturers. A cooperation based on trust and spawning innovations that prove their value in everyday practice.

## **50**YEARS Medical Technology

#### Quality

Your patients rely on your professional skills, so why not in turn place your trust in Miele's quality! The combination of quality materials, perfect workmanship and sophisticated technology has earned Miele its exceptional reputation in the field of medical technology.

#### Performance

Machines from Miele Professional excel in terms of their efficiency and superior performance. A wide selection of accessories and processes reflecting everyday, practical needs leads to perfect results and high throughput, even in highly specialised applications. Miele provides a gentle reprocessing for a long instrument lifetime.

#### **Efficiency**

Miele machines thorough and fast and are also gentle on materials. Thanks to their high quality, they are also low-maintenance and durable, adding to the value of your investments. The sparing use of water and chemicals further contribute towards keeping operating costs at a minimal level.





### Miele Thermal Disinfectors Performance, Safety and Convenience

Miele thermal disinfectors enable the safe and reproducible cleaning and disinfection of dental instruments. This approach is particularly gentle on materials and is recommended by leading manufacturers such as KaVo and W&H for the reprocessing of transmission instruments.



#### **Greater Performance**

- An innovative heater pump enables both time savings and high standards of efficiency.
- Newly developed spray arms with a revised nozzle design and arrangement of jets ensure full spray coverage.
- An optimised water circuit and a significant increase in pump pressure at the injector nozzles guarantee the thorough and safe reprocessing of lumened instruments.
- 22 transmission or lumened instruments can now be reprocessed in a single cycle (transmission instrument capacity increased by 100% compared with previous series).



#### **Greater Safety**

- Multi-stage filtration system is highly efficient in removing particulate soil from water in circulation.
- Large-surface central filter in upper basket or load carrier guarantees optimum protection against the blockage of narrowlumened instruments and transmission instruments.
- Laser technology is used to weld the chamber sections to give a perfectly smooth, crevice-free finish offering no nooks or crannies where blood or soiling can accumulate.
- · Reprocessing excellence is afforded by closely monitoring spray pressure and the rotation of the spray arms in order to prevent any loss in circulation pressure or to immediately identify obstacles in the path of the spray arms.



#### **Greater Convenience**

- AutoClose: Gentle pressure against the door is sufficient for it to be drawn closed and locked automatically.
- EcoDry (with AutoOpen): The door of the PG 8581 automatically opens at the end of a programme. Hot, moisture-laden air is released when the temperature has dropped below 70°C, allowing the load to dry and cool down faster.
- DryPlus: Hot-air drying on the PG 8591 are ideal when dealing with narrow-lumened instruments. An upstream Class H13 HEPA filter ensures the reliable removal of particles.
- The filter is easily accessible via a hatch in the front plinth.
- Easy accessible salt container in the door

### Miele Thermal Disinfectors -At A Glance

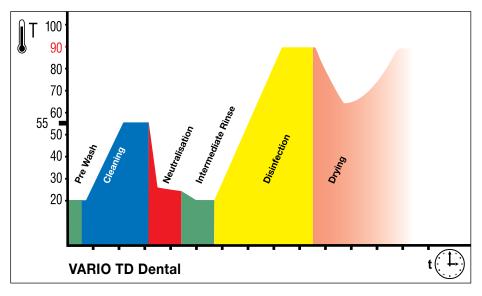


Thermal Disinfector	PG 8581	PG 8591
Width [mm]	600	600
Height, Depth [mm]	H 835 (820*), D 600	H 835 (820*), D 600
Duration / VarioTD** [mins.]	42	40
Weight (net)	74 kg	78 kg
Load Capacity		
Transmission Instruments	22	22
Saliva Extractors	22	22
Drying	EcoDry	DryPlus
Electrical Connection	3N AC 400 50Hz 16A	3N AC 400 50Hz 16A
Convertible To	AC 230V 50hz 30A	AC 230V 50hz 30A
Casing Options	White / Stainless Steel	Stainless Steel

Model	Features:	Mat. no.
PG 8581 AW PD	White casing, 1 integrated dispenser pump, EcoDry	10138510
PG 8581 AE AD LD	Stainless-steel casing, 2 integrated dispenser pumps, AD water connection, EcoDry	10138520
PG 8591 AE AD	Stainless-steel casing, 1 integrated dispenser pump, AD water connection, DryPlus	10138530

<sup>\*</sup> without lid
\*\* Cleaning and thermal disinfection

### Controls, programmes, cycle times



#### Vario TD Dental

In the Vario TD Dental programme, precleaning commences at low temperatures to prevent the denaturation of blood residues. After an intensive main wash phase, thermal disinfection then takes place at temperatures in excess of 90°C which are maintained for 5 minutes. In order to protect surgical instruments, the final rinse is ideally performed with

demineralised water without any surfactant added. This programme is suitable for routine reprocessing according to DIN EN ISO 15883 for all thermally stable instruments. This approach is particularly gentle on materials and is recommended for the reprocessing of transmission instruments. Hot-air drying on the PG 8591 thermal disinfector ensures the thorough drying of hollowed instruments.

#### SPECIAL 93°C-10' min

The SPECIAL 93°C-10' min programme is used in the event of an outbreak of a notifiable disease.

According to the Robert Koch Institute, both processes ensure A and B range disinfection (fungicidal and bactericidal action and virus deactivation, including HBV and HIV.

PG 8581 AE AD LD*	Washing an	Washing and Disinfection				Drying (EcoDry)	
	Cycle time	Cycle time CW WW Energy			Cycle time	Energy	
	mins.	1	1	kWh	mins.	kWh	
Vario TD Dental	37	18.6	27.5	1.6	5	_	
Special 93°C-10' min	48	11.9	43.6	2.4	2	_	
Rinsing	4	10.0	_	0.01	_	_	

PG 8591 AE AD*	Washing and Disinfection					Drying (DryPlus)	
	Cycle time CW WW AD Energy					Cycle time	Energy
	mins.	I	I	I	kWh	mins.	kWh
Vario TD Dental	40	18.6	18.5	9.0	2.2	52	0.9
Special 93°C-10' min	51	11.9	29.6	14.0	3.0	79	1.4
Rinsing	4	10.0	_	_	0.01	_	_
Drying	-	_	_	-	_	40	0.7

<sup>\* 3</sup>NAC 400V 50HZ 16A

### Technical Data

Thermal disinfector	PG8581 AW / PG8581 AE	PG 8591 AE
Undercounter/freestanding unit with lid	•/•	•
Circulation pump [Qmax. I/min.]	500	500
Controls/Programmes		
TouchControl/6 programmes	• / •	•
AutoClose - Automatic door lock	• / •	•
Buzzer, acoustic signal at end of programme	• / •	•
Ethernet module/RS 232 module for process documentation	Optional	Optional
Water connections		
1 x cold water, 2.0–10 bar flow pressure (200–1000 kPa) (protection against backsiphoning according to EN 1717)	•/•	•
1 x cold water for steam condenser, 2.0–10 bar flow pressure (200–1000 kPa) (protection against backsiphoning according to EN 1717)	•/•	•
1 x demineralised water, 2.0–10 bar flow pressure (200–1000 kPa) (protection against backsiphoning according to EN 1717)	-/•	•
1 x hot water, 2.0–10 bar flow pressure (200–1000 kPa) (protection against backsiphoning according to EN 1717)	•/•	•
No. of inlet hoses, $\frac{1}{2}$ " with $\frac{3}{4}$ " threaded union, I = approx. 2.0 m	4	4
Drain pump Ø 22, Max. head height: 100 cm	•/•	•
WaterProof System (WPS)	•/•	•
Electrical connection		
3NAC 400V 50Hz 16A convertible to AC 230V 50Hz 30A; supply lead: approx. 2.0 m, 5 x 2.5 mm <sup>2</sup>	•/•	•
Heating [kW]	8.5	8.5
Circulation pump [kW]	0.8	0.8
Total rated load [kW]	9.3	9.3
Fuse rating [A]	3 x 16	3 x 16
Dispenser systems		
1 door dispenser for surfactant	•/•	•
1 door dispenser for powder detergent	• / –	-
Internal dispenser pump for liquid detergent	1/2	1
Connection options		
DOS K 85 or DOS K 85/1 liquid dispenser	1/-	1
Water softeners		
For hot and cold water, max 65°C	•/•	•
Steam condenser		
Aerosol	• / •	•
Drying unit/Radial fan		
Fan [kW]	_	0.3
Heater bank [kW]	_	2.2
Total rated load [kW]	_	2.5
Air throughput [m³/h]	_	47
Temperature selection in 1°C increments [°C]	_	50 – 115
Time selection in 1-minute increments [min]	_	0 – 120
Particulate filter/HEPA filter/filter rating (DIN EN 1822)/filter life	_	H 13/>99.95%/200 h
Dimensions/Weight		
External dimensions H/W/D (without lid H 820 mm) [mm]	835/600/600	835/600/600
Cabinet dimensions H/W/D [mm]: 522/536/top=518, bottom=523	522/536/top=518, bottom=523	522/536/top=518, bottom=523
Weight [kg]	74	78
Casing options		
Stainless steel (AE)	-/•	•
White (AW)	• / –	_

# Accessories for the new generation PG 85 of thermal disinfectors



Innovative accessories have been developed to match the new PG 85 series of thermal disinfectors to make the reprocessing of instruments in dental practices even safer and simpler. Alongside new baskets and holders for lumened instruments, new dispenser modules, water pre-treatment products, cupboards and plinths have also been introduced.

#### **Advice**

For advice on the ideal features for your thermal disinfector, please contact your local sales representative or agent.

#### PG 8591 Sample Set-Up

1x A 105 upper basket/injector unit

2x A 800 central filter

1x A 151 lower basket/open front

3x A 803 holder for transmission instruments

1x A 804 cleaning brush\* (not pictured)

1x E 197 insert for micro-instruments

1x E 198 insert for 6 mesh trays/kidney dishes

1x E 337/1 insert for instruments in upright position

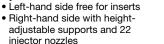
1x E 379 insert for various instruments

### PG 8581 & PG 8591 Baskets and Accessories



#### A 105 upper basket/ injector unit

- adjustable supports and 22 injector nozzles
- · Active drying of turbines, handpieces and contra-angles (for PG8591 with DryPlus)
- 5 x E 336 irrigation sleeves for e.g. saliva extractors, supplied in bag
- Injector rail for 2x A 800\* central filters
- Built-in spray arm
  H 202, W 528, D 528 mm



Built-in spray arm



#### A 102 upper basket/ open front

- Open front
- For various inserts
- Height-adjustable
- Vertical clearance 205 +/-30 mm
- H 206, W 528, D 527 mm



#### A 151 lower basket/ open front

- For various DIN mesh trays and
- Vertical clearance dependent on type of upper basket used
- H 88, W 529, D 522 mm



Adapter for use of AUF 1 and AUF 2 in combination with A 105





#### A 800 central filter

• For use in A 105 upper basket



#### A 804 cleaning brush

- For manual cleaning of A 800 central filter
- Spiral patterned
- Length 500mm (total), 100mm
- Brush fiber diameter 0.25mm
- Fiber material PA 6.6



#### A 803 holder for transmission instruments

- For connection of transmission instruments in A 105 upper basket in combination with A 800 central filter
- Suitable for hand-pieces and contra-angles/turbines

#### **UBS 3 conversion kit** (not illustrated)

- For load carriers without drying connection
- Order through spare parts
- Conversion by Service required

Baskets & Accessories	Mat. no.
A 105 upper basket/injector unit	9862390
A 102 upper basket	9862360
A 151 lower basket/open front	9862410
A 800 central filter (for use in A 105)	9960680
A 803 receptacle for transmission instruments (for use in A 105)	9863100
A 804 cleaning brush (for A 800)	9960720
A 801 adapter (AUF 1/2 with A 105)	9862940
UBS 3 conversion kit (Spare Part Item)	10131110





#### E 197 insert 1/6 mesh tray

- Can securely hold up to 18 micro-instruments
- Wire mesh size: Base 3 mm, sides 1.7 mm, lid 8 mm
- Can be processed directly in an autoclave at 121°C/134°C
- H 42, W 150, D 225 mm



#### E 363 insert 1/6 mesh tray

- Mesh size 1 mm, with lid
- Without receptacles for instruments
- H 55, W 150, D 225 mm



#### E 198 insert 1/2

- For 6 mesh trays/kidney dishes
- 7 holders (6 compartments) H 160, spacing 66.5 mm
- H 160, W 180, D 495 mm



#### E 807 insert

- For 3 mesh trays/kidney dishes
- 4 holders (3 compartments)
- H 165, spacing 68 mm
   H 144, W 140, D 290 mm



#### E 802/1 insert

- For instruments in upright position
- 3 plastic receptacles 8 compartments, approx. 30 x 28 mm 8 compartments, approx. 16 x 28 mm 15 compartments,
- approx. 16 x 20 mm • H 113, W 163, D 295 mm



#### E 337/1 insert 2/5

- For instruments in upright position
- 4 plastic receptacles
   12 compartments,
   approx. 22 x 28 mm
   4 compartments,
   approx. 25 x 28 mm
   48 compartments,
   approx. 13 x 14 mm
- approx. 13 x 14 mm • H 113, W 173, D 445 mm

Insert	PG 8581	PG 8591	Upper basket	Lower basket	Mat. no.
E 197	•	•	•	•	7984090
E 363	•	•	•	•	3149790
E 198	•	•		•	7984040
E 807	•	•	•	•	7984220
E 802/1	•	•	•	•	7984170
E 337/1	•	•	•	•	3080720



#### E 130 insert 1/2

- For 10 trays
- 11 holders (10 compartments) H 170, spacing 35 mm
  • H 180, W 180, D 445 mm



#### E 523 insert 1/2

- For mesh trays
- 7 holders (6 compartments) H 145, spacing 50 mm
  • H 151, W 220, D 450 mm



#### E 339/1 insert 3/5

- For 13 tray bases/trays
- 14 holders (13 compartments) W 295, spacing 37 mm
  • Max. tray size 290 x 20 mm
  • H 115, W 305, D 498 mm



#### E 378 insert 1/1 mesh tray

- Wire mesh,
- 1.7 mm mesh size
- 2 handles
- H 80 + 30, W 460, D 460 mm



#### E 379 insert 1/2 mesh tray

- Wire mesh,
- 1.7 mm mesh size
- 2 handles
- H 80 + 30, W 180, D 445 mm



#### E 806/1 insert

- For 8 tray bases/trays
- 9 holders (8 compartments)
- Max. tray size 290 x 30 mm H 114, W 305, D 348 mm

E 130 • •			
E 130		•	2648950
E 523 • •		•	5649700
E 339/1 • •		•	9233840
E 378 • •		•	3203530
E 379 • •	•	•	3203500
E 806/1 • •		•	9013220



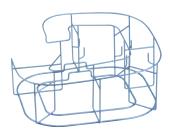
#### E 430/1 insert 1/3 mesh tray

- For micro-instruments
- Wire mesh, mesh size 5 mm
- H 40, W 150, D 445 mm



#### E 441/1 insert 1/4

- Mesh tray for micro-instruments
- Mesh size 1.7 mm, closed sides, stackable
- Internal divisions with 6 adjustable supports provide the ideal storage for instruments.
- Can be processed directly in an autoclave at 121°C/134°C
- H 60, W 183, D 284 mm



#### E 413 insert 1/1

- For A 105 upper basket (adapters no included)
- 6 Sirona aspiration tubes
- H 205, W 390, D 450 mm



#### E 520 insert

- For 18 root canal instruments
- Can be processed directly in an autoclave at 121°C/134°C
- H 45, W 75, D 30 mm



#### E 147/1 insert 1/2

- For 10-12 mouth rinse beakers, max. Ø 80 mm
- Plastic-coated
- H 155, W 220, D 455 mm



#### E 801/1 insert

- For 8 mouth rinse beakers, max. Ø 75 mm
- Plastic-coated
- H 155, W 200, D 320 mm



#### E 521/2 insert

- For 7 extraction or orthopaedic molar forceps
- Compartment size 21 x 80 mm
- H 135, W 100, D 189 mm



#### E 522/1 insert

- 9 holders for dental impression plates • H 140, W 100, D 190 mm

Insert	PG 8581	PG 8591	Upper basket	Lower basket	Mat. no.
E 430/1	•	•	•	•	6643200
E 441/1	•	•	•	•	5988240
E 413	•	•	•		3810180
E 520	•	•	•	•	5409080
E 147/1	•	•	•	•	4746620
E 801/1	•	•	•	•	5673820
E 521/2	•	•	•	•	7476430
E 522/1	•	•	•	•	6697010



#### E 473/1 insert

- Mesh basket with lid for small parts
- For hooking onto mesh trays
- H 85, W 60, D 60 mm



#### E 491 insert

- Insert for rotating instruments
- For 18 turbine shafts
- For 30 contra-angles
- H 53, W 70, D 120 mm

Leading manufacturers recommend the reprocessing of transmission instruments in Miele thermal disinfectors.





Insert	PG 8581	PG 8591	Upper basket	Lower basket	Mat. no.
E 473/1	•	•	•	•	5341570
E 491	•	•	•	•	7600210

### PG 8581 & PG 8591 Plinths



#### UG 30-60/60-85 plinth

- For use on PG 8581 and PG 8591
- Stainless-steel plinth, bolted to machine
- H 300, W 600, D 600 mm



#### UG 30-90/60-85 plinth

- For use with PG 8581 and PG 8591 in combination with PG 8596 dispenser housing unit
- Stainless-steel plinth, bolted to machine
- H 300, W 900, D 600 mm

### PG 8581 & PG 8591 Dispensing Accessories



#### PG 8596 Dispenser Housing Unit

Housing unit for process chemicals and dispenser modules

- H 835 (820) without lid, W 300, D 600 mm
- Compatible with PG 8581, PG 8591
- Freestanding unit, or can be built under
- Unit with removable door
- Outer panelling available in stainless steel or white
- Interior dimensions:
   H 690 / 380 / 285 mm
   (top drawer removed / lower / upper drawer), W 250 mm, D 555 / 425 mm
   (without / with drip tray and dispenser modules)

#### 2 levels:

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

Canister sizes (L x W x H)
Accommodates a total of 6 x 5 I canisters (L 245 x W 145 x H 225 mm\*).
Lower drawer offers space for larger canisters:

2 x 10 l, 140 x 193 x 307 mm

2 x 10 l, 223 x 203 x 321 mm

2 x 10 l, 229 x 193 x 323 mm

2 x 10 l, 194 x 204 x 353 mm

1 x 20 l, 289 x 233 x 396 mm

1 x 25 l, 288 x 234 x 456 mm

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



#### DOS K 85/1 Dispenser Module

- For liquid products such as alkaline detergents, chemical disinfectants and neutralisers
- Peristaltic pump, adjustable via machine's electronic controls
- Integrated dispenser monitoring function ensuring high level of process security in compliance with EN ISO 15883
- Short siphon (200 mm) for 5 I canister, incl. level fill monitoring
- Length of connection cable: 3.00 m
- Length of suction hose: 1.80 m



#### **DOS K 85 Dispenser Module**

- For liquid products such as alkaline detergents, chemical disinfectants and neutralisers
- Peristaltic pump, adjustable via machine's electronic controls
- Integrated dispenser monitoring function ensuring high level of process security in compliance with EN ISO 15883
- Long siphon (300 mm) for 5 I and 10 I canisters
- Optional Conversion kit available: Part no. 5458034, for siphon (10-30 I containers) available from Spares Parts\*

\*Please contact your sales representative or local agent.

Designation	Mat. no.
PG 8596 D AW DOS housing unit (White outer panel)	10087330
PG 8596 D AE DOS housing unit (Stainless steel outer panel)	10087340
DOS K 85/1 (for 5 I canister)	9961080
DOS K 85 (for 5 I - 10 I canisters)	9961070

### PG 8581 & PG 8591 Communication Modules and Printer



### Ethernet module XKM 3000 L Med

- Communication module for connection to Segosoft Miele Edition or other process documentation software
- Ring buffer for up to 30 process protocols and 2 graphic protocols
- No additional components needed for direct or network connection
- Supports DHCP (Dynamic Host Configuration Protocol) facilitating automatic selection of network parameters
- Pre-configured for use of Remote Vision, enabling machine to automatically report faults
- Transmission rate: 10/100 Mbit/s
- Supplied cable length: 1.5 m
- Cable extension using network cable and coupling is possible (sold separately)



#### Serial module XKM RS232 10 Med

- Standard communication module for connection to Segosoft Miele Edition USB kit or Bixolon protocol printer
- Ring buffer for up to 25 process protocols
- Adapts protocol length between short and long to customer requirements
- Transmission rate: max. 38 kBits
- Supply cable length: 1.5 m
- 15 m cable extension available (sold separately)



#### PRT100 Bixolon protocol printer

- Printer for printing process protocols
- Ink-jet printer with indelible ink
- Compatible with Miele thermal disinfectors (with XKM 3000 L Med Ethernet Module)

Description	Mat. no.
Ethernet module XKM 3000 L Med	9902230
Serial module XKM RS232 10 Med	9960330
Bixolon Protocol Printer	99500582



## Service excellence – Functional safety and preservation of values

System4Dent is nicely rounded off by a broad range of advisory services and strong on-site after-sales service. It is not without reason that Miele's after-sales service operation has been acclaimed for many years in succession for its service excellence.



#### Comprehensive service from the very start

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

Miele also offers a series of process checks performed by highly qualified Miele medical product engineers in accordance with the relevant legislation and standards as well as national guidelines and good-practice recommendations: Process validation is carried out by engineers who are specialised in medical devices, in accordance with legal requirements and national guidelines and recommendations.

#### Miele service contracts

#### Inspection contract

Inspection

#### **Maintenance contract**

- Inspection
- Maintenance

### Full-service maintenance contract

- Inspection
- Maintenance
- Repairs

#### **Machine qualification**

#### **Initial validation**

- Installation qualification
- Operation qualification
- Performance qualification

#### Revalidation

 Renewed performance qualification

#### **Performance inspections**

 Performance qualification according to risk analysis

#### Service to meet professional expectations

Highly qualified medical device engineers support customers with the installation and commissioning of their machines and perform routine tests during use. This pre-emptively avoids downtimes and helps optimise operating parameters. And, not least, regular checks and maintenance preserves the value of machines.

- Quality service through blanket network of medical device engineers
- Short response times and on-site servicing
- 90% of service calls result in first-time fixes
- Reliable spares service, key functional parts available for 15 years after series production ceases.

#### **Customised service contracts and inspections**

Miele Professional offers a series of tailored service contracts to suit individual needs. During the term of the contract, machines are regularly inspected by Miele's own specialised service technicians. Depending on the type of contract, this includes a functional and safety analysis covering all key components and the replacement of parts. Scheduled inspections and maintenance appointments prevent breakdowns, extend the working life of machines and contribute towards safeguarding investments.

### Miele Professional – Quality and service for professionals

Decades of experience, an unerring pursuit of quality and the power of innovation means that Miele sets the benchmark. High-performance thermal disinfectors from Miele Professional are already recommended by several leading manufacturers for the reprocessing of their instruments.

#### Capacity

- Thorough yet gentle reprocessing with dependable results
- Processes engineered to reflect the needs of both machines and instruments

#### Quality and economic operation

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

#### Safety and convenience

- Ergonomic controls for stress-free everyday use
- Convenient navigation avoids mistakes on the part of the user
- Large, easily surveyed display using plain text
- Fully automatic protocolling and documentation of reprocessing

#### **Service**

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







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#### Forever Better

Miele has remained true to its corporate philosophy since 1899. 'Immer besser', two words which represent the bedrock of Miele's high quality standards, providing clients with the security of knowing that they have chosen the right product.