Instrument reprocessing in the dental office
Hygiene, safety and efficiency with system
System solution for safe and efficient instrument reprocessing

Miele offers a complete system for safe and efficient work in the dental office. The System4Dent includes all aspects of modern instrument reprocessing and is based on decades of experience.

The thermo-disinfectors are complimented perfectly with in-house process chemicals marketed under the name ProCare Dent. The new B-class steriliser with its patented hardware enables very short cycle times but still with safe sterilization methods.

New intelligent software solutions provide complete process documentation. And: the comprehensive service of the Miele factory customer service centre guarantees fast support in premium Miele quality throughout Germany.

The manual reprocessing method has many risks

Manual cleaning and disinfection of dental instruments requires a great deal of time and man hours. The method also conceals defect sources responsible for maintaining exposure time, dosing concentration and tool life. Many instruments – such as narrow hollow body instruments – are very difficult to prepare by hand. From an economic standpoint, the high consumption of water and cleaning and disinfecting agents results in excessive costs.

The advantages of machine reprocessing over manual reprocessing:

- Intensive cleaning as a prerequisite for effective sterilisation
- Simple hollow body cleaning of handpieces and aspirators
- Optimum material protection and preservation of the instruments' value
- Lower batch costs through lower consumption of water, energy and process chemicals
- Reliable results through automatic supervision of the programme parameters
- Machine instrument reprocessing recommended by RKI
- The safest form of instrument reprocessing also providing maximum safety during office inspection with respect to quality
1. **Washing/Disinfection**

Innovative thermo-disinfectors with individually customised equipment.  

Miele thermo-disinfectors provide flexible system solutions for machine cleaning and the thermal disinfection of medical instruments and equipment. These include units in different sizes for small and large dental offices. Individual applications, specially adapted programmes, process chemicals and efficient water treatment and drying ensure the thorough, efficient and material-friendly interior and exterior cleaning of instruments – these can be adapted to every application in the dental office.

2. **Sterilisation**

High-performance B-class steriliser for fast and safe reprocessing of all instruments.  

Simple to operate with very short cycle times and excellent drying results, the compact small steriliser from Miele ensures that sterilisation processes are both fast and safe. The integrated water treatment cycle and the service-friendly setup of the unit also increase the cost-effectiveness and efficiency of the instrument cycle in the dental office.

3. **Documentation**

Intelligent documentation software for traceable process sequences at any time.  

Complete process documentation, high degree of automation, fast and intuitive handling: The Miele documentation software for thermo-disinfectors and sterilisers supports effectiveness, time and cost saving work, and provides greater legal security through process protocols.

4. **Guarantees**

Advice, financing, service, and validation in premium quality from Miele.  

The Miele team of advisors and the comprehensive service network with Miele factory support centres for customers provide customised service, including a validation process backed by favourable service contracts and the arrangement of attractive financing options. Complete service from a single source – based on decades of system experience.
Miele provides interconnected units, accessories, process documentation and services from a single source under the name of System4Dent for the instrument cycle in the dental office.

Sanitary and safe use of the instruments on patients

Collection, disassembly, and optimum reprocessing

Inspection of the packaging, inspection of the process data with documented approval, labelling, and storage

Sterilisation, recording of the process data

Machine cleaning/disinfection and drying, recording of the process data

Inspection for cleanliness and function, inspection of the process data with documented approval, maintenance and repair, packaging if necessary
Sanitary room design options

The Miele System4Dent is carefully adapted and results in the optimum reprocessing of the instruments. This translates into excellent reprocessing results during everyday use and also uniformity in unit operation and ergonomics. The following example shows how this system solution can be implemented in dental offices with different space requirements.

Sanitary room with continuous worktop counter
With this arrangement the reprocessing is carried out along a continuous worktop counter. The unclean side consists of the sink and thermo-disinfector. Water treatment and cleaning chemicals are located in the sink base unit or in the Miele dosing media cabinet. A glass pane is used to separate the unclean side from the clean side with the small steriliser, process documentation and printer for sterile supplies labelling.

Sanitary room with L-shaped worktop counter
The L-shaped sanitary room provides additional freedom of movement and storage space. Through the angular construction method, the unclean side with the sink and the thermo-disinfector is located significantly farther away from the clean side with the small steriliser, documentation and label printer.

Sanitary room with 2 separate worktop counters
This is the ideal solution for dental offices with extra available space and several instrument processors. The unclean side with the sink and thermo-disinfector is physically separated from the clean side with the steriliser, documentation and label printer. Installation and storage cabinets on both sides create more work space and also lower the risk of a compounded contamination.
Washing/Disinfection

Thorough cleaning and disinfection is the basis for effective instrument reprocessing in the System4Dent. Miele offers the best solutions by providing different size units and equipment for both small and large dental offices.

**Thermo-disinfector G 7831**
- Free-standing/built-in unit
- External cladding white or stainless steel
- Overall width only 45 cm H 850 (820*), W 450, D 600 mm
- 2 loading levels
- Normal household AC current connection
- Reprocessing per batch:
  - 10 hollow body instruments (up to 6 handpieces, 4 aspirators) and 16 instrument sets**

**Thermo-disinfector G 7881**
- Free-standing/built-in unit
- External cladding white or stainless steel
- Overall width 60 cm H 850 (820*), W 600, D 600 mm
- 2 loading levels
- Three-phase current connection for short programme cycles
- Integrated dispenser pump for liquid process chemicals (neutralising agent)
- Reprocessing per batch:
  - 26 hollow body instruments (up to 11 handpieces, 15 aspirators) and 25 instrument sets**

**Thermo-disinfector G 7891**
- Free-standing/built-in unit
- Exterior housing stainless steel
- Overall width only 60 cm H 850 (820*), W 600, D 600 mm
- 2 loading levels
- Three-phase current connection for short programme cycles
- Integrated dispenser pump for liquid process chemicals (neutralising agent)
- Drying Plus: integrated hot-air drying
- Reprocessing per batch:
  - 26 hollow body instruments (up to 11 handpieces, 15 aspirators) and 25 instrument sets**

* Built-in unit
** 1 instrument set consists of a tweezers, specula, and a probe

Technical data on page 28/29
Miele thermo-disinfectors –
in a class of its own
Uncompromising quality and great innovative power – Made in Germany – one of Miele’s biggest advantages. Miele thermo-disinfectors impress not only as integrated components in well-designed system solutions but (and even more so) through their high level of performance and technical workmanship as well.

Effectiveness and efficiency
Miele thermo-disinfectors have a large wash cabinet with 2 washing levels for sufficient capacity. The direct coupling of the top basket on the water circuit lowers the water consumption per wash cycle. A flow meter controls the water inflow and guarantees that the concentration of detergent is maintained.

- Optimised application of water and detergent media
- Connectivity for liquid detergent media-dispensing units for efficient and precision dosing

Integration and ergonomics
A series of design features guarantees the easy installation of the Miele thermo disinfectors even in sanitary rooms with limited available space. Thus all of the units can be installed with little effort as free-standing or as built-in units. The units are equipped with baskets, inserts, dispensers and other accessories depending on the needs of the respective customer.

- Free-standing unit, with integration capacity in the worktop counter
- Effective sound insulation for good noise reduction
- Ready for connection with electrical cable, drain pump, supply and drain hoses
- Wide range of accessories

Safety and documentation
The performance and workmanship of the Miele thermo-disinfectors is of course in compliance with all legal regulations and guidelines. This applies especially to the different options for documentation and validation of the reprocessing procedure.

- Certified medical products in conformity with the Medical Devices Directive (MDD)
- Reproducible results, verifiable procedure
- Extensive safety equipment in compliance with EN ISO 15883
- Interface and software for process documentation

Advisable
Miele thermo-disinfectors are recommended by well-known manufacturers such as KaVo and W&H for the reprocessing of handpieces.

- Tried-and-tested Miele quality, tested on 15,000 programme sequences
- Large wash cabinet with 2 wash levels for sufficient cleaning capacity.
- High-performance circulation pump with an output of 400l/min for best cleaning results
- Top basket with injector jets for internal cleaning of up to 26 hollow body instruments, 11 handpieces and 15 aspirators
- Thermo-disinfector G 7831 with an overall width of only 45 cm, ideal for small sanitary rooms or for low instrument use levels
- Thermo-disinfector G 7891 with only 60 cm overall width, 2 loading levels and integrated hot-air drying
- Largest selection of inserts and special inserts for reprocessing of all dentistry instruments
Miele thermo-disinfectors: quality, inside and out

High quality design
- Miele continuously emphasises robust and durable materials when designing the thermo-disinfectors. The results are long-lasting and very low maintenance units for everyday use.
- Double walled construction, insulated door for best noise reduction
- Wash cabinet and water circuit made of stainless steel
- Fabric-reinforced hoses

Cleaning technology
- Sanitary fresh water rinsing unit with water changing after every rinsing phase
- 2 spray arms (3rd spray arm on the top basket) for thorough surface cleaning of the instruments
- Optimum arrangement of the spray jets and adjustable spray arm speed
- Injection system for thorough hollow body cleaning
- Direct coupling of the top basket on the water circuit

Standard technical equipment
- Professional Monoblock water softener, regeneration within the cleaning programme with low salt consumption
- High-performance circulation pump with a circulation power of 400 l/min
- 4-fold-filter system with surface filter, coarse filter, course filter and micro-filter for the reliable filtering of dirt particles.
- Efficient steam condenser on heat exchanger basis (G 7831 and G 7881) or with spray mist technology (G 7891) to prevent steam from escaping into the room air
- Flow meter for monitoring the water intake volume
- Integrated dispenser pump for liquid media
- Connectivity for liquid detergent media-dispensing system
- Integrated dispensing control
- Hot-air drying for short process time (G 7891)

Interfaces
- Serial interface for process documentation
- Optical interface for customer service and servicing activities

Safety equipment
- Electrical door locking
- Programme failure protection
- Optical and acoustical signal at the end of the programme
- 2 sensors for control and monitoring of the process temperature
- Test port for easy positioning of the sensor in the wash cabinet during the course of a validation
- Safety equipment in compliance with EN ISO 15883
Miele offers a thermo-disinfector with integrated hot-air drying that has an overall width of only 60cm “Drying Plus”. The unit concept enables extensive instrument reprocessing with thorough cleaning, safe disinfection and very effective drying.

Even instruments with complex forms can be safely prepared with hot-air drying. An S-class H 12 HEPA-filter integrated in the unit guarantees the cleanliness of the air used for drying. The filter can be changed by the user by opening the service panel on the lower front side of the machine and replacing the filter.

The Miele thermo-disinfector G 7891 fulfils all requirements with excellent Miele quality – Made in Germany.

The benefits of the thermo-disinfector G 7891 with Drying Plus
- Low space requirement of only 60 cm
- Larger wash cabinet including integrated drying
- Effective drying within short time
- Drying time can be set in 5 minute intervals
- Faster drying process with hot air
- No time-consuming post-processing/drying of the instruments
- High material protection by reducing the risk of corrosion
- Optimal drying of plastic objects and improved drying of mesh tray systems
- Sanitary drying through HEPA-filtered air
- Dry instruments for safe sterilisation results
Control system, programmes, runtime

Fully electronic control system, high process reliability
The programmes and functions in the Miele thermo-disinfector are safely controlled and monitored by MULTITRONIC controller system. All Miele thermo-disinfectors have a serial interface that provides the option for documenting the entire process data via printout or with software.

High degree of operating convenience
All symbols on the fascia panel are self-explanatory and easy to read. The operating state is immediately visible via the indicator lamps. The programme runtime or the cleaning and disinfection temperature can be indicated on the screen by switching the 3-digit 7-segment display. Status and indicator lamps monitor and signal to the user if there are specific service or error messages.
<table>
<thead>
<tr>
<th>Units</th>
<th>Runtime</th>
<th>Consumption: cleanse/disinfect</th>
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<tr>
<td>Programmes</td>
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<tr>
<td></td>
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<td>[l]</td>
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<td>26.5</td>
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<tr>
<td>vario TD</td>
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<td>35.5</td>
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<tr>
<td>Universal A</td>
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<tr>
<td>A (available programme location)</td>
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<td></td>
</tr>
<tr>
<td>Rinse L</td>
<td>3</td>
<td>10.0</td>
</tr>
</tbody>
</table>

* Port: KW 15°C; 3 N AC 400 V, 9.7 Hz (the runtime is increased if connected to AC current)

CW = cold water, WW = warm water, = aqua distilled

Preliminary cleaning in the **vario TD** programme is carried out at low temperatures to ensure that blood residue does not denature. After an intensive main cleaning phase is carried out the thermal disinfection takes place at >90°C and a holding time of 5 minutes. For optimum protection of surgical instrument the final rinsing is carried out with deionised water without rinsing agents.

This programme is well suited for routine reprocessing in compliance with EN ISO 15883 for all thermo-stable instruments. The procedure is very easy on the materials and can also be recommended for the reprocessing of handpieces. The hot-air drying in the thermo-disinfector G 7891 ensures that the instruments are thoroughly dried on the outside.

The **SPECIAL 93°C-10’** programme is applied if so directed in conjunction with epidemic law pursuant to § 18 Infektionsschutzgesetz (IfSG) [Protection against Infection Law]. According to the Robert-Koch-Institute both of the procedures cover the A and B range with fungicidal, bactericidal and virus-inactivating effects including HBV and HIV.
Top and bottom baskets for the thermo-disinfector G 7831
Sample loading

O 801/2 top basket/injector
• Front and rear halves for placing inserts, loading height 200 mm
• Centre axis with support grid for hollow body/instruments, e.g. aspirators and 6 supports (ON 2) for handpieces, 10 silicone supports and 10 jets Ø 4.0 mm, L 30 mm, loading height 175 mm
• Built-in spray arm
• H 267, W 381, D 475 mm

O 800/1 top basket/open-sided basket
• For placing inserts
• Loading height 200 mm
• Built-in spray arm
• H 270, W 381, D 475 mm

U 800 bottom basket/open-sided basket
• For placing inserts
• Loading dimensions W 325, D 485 mm
• Loading height for combination with top basket
• O 800/1 approx. 295 mm
• O 801/2 approx. 270 mm
• H 62, W 385, D 505 mm

Sample loading with
• O 801/2 top basket/injector with 10 injection jets for aspirators and up to 6 handpieces.
• E 521/2 insert for 7 orthodontic forceps
• E 802 insert for upright position of instruments

• U 800 bottom basket
• E 379 mesh basket for instruments
• E 800 insert for 3 mesh trays E 146
• E 146 mesh tray for instruments
Top and bottom baskets for thermo-disinfector G 7881 and G 7891

Sample loading with
- O 177/1 top basket/injector with 26 injection jets for aspirators and up to 11 handpieces
- E 522/1 insert for 9 dental impression plates
- E 521/2 insert for 7 orthodontic forceps
- E 146 mesh tray for instruments
- E 337 insert for upright position of instruments
- U 874/1 bottom basket
- E 339 insert for 16 trays
- E 379 mesh basket for instruments

O 177/1 top basket/injector
- Right side for the placement of inserts
- Left side with height adjustable support grid for hollow body/instruments, e.g. aspirators and 11 supports (ON 1) for handpieces, 26 silicone supports and 26 jets Ø 4.0 mm, L 30 mm, 7 funnels, enclosed separately
- Built-in spray arm
- Loading height 230/205 mm
- Height-adjustable + 20/+ 40 mm
- H 263, W 498, D 455 mm

O 190/2 top basket/open-sided basket
- For placing inserts
- Loading height 215 mm
- Height-adjustable +/- 20 mm
- Built-in spray arm
- H 265, W 531, D 475 mm

U 874/1 bottom basket/open-sided basket
- For placing inserts
- Loading height for combination with top basket:
  - O 177/1 approx. 220 mm – 20/- 40 mm
  - O 190/1 approx. 220 mm +/- 20 mm
- Loading dimensions: 495 x 502 mm
- H 50, W 534, D 515 mm

Powder dosing not available

Reprocessing on 2 levels for adequate loading capacity
Inserts

E 146 insert 1/6 mesh tray
Can be inserted in the G 7831/G 7881 and G 7891, O+U
- For placing instruments
- Wire netting with the following mesh sizes:
  base 3 mm, sides 1.7 mm, lid 8 mm
- 2 swivelling carrying handles
- H 55, W 150, D 225 mm

E 363 insert 1/6 mesh tray
- Like E 146, however 1 mm mesh size without carrying handle

E 328 insertion bar
- For mesh trays E 146 and E 363
- For placement of instruments when mesh trays are in upright position

E 131/1 insert 1/2
Can be inserted in the G 7881/G 7891, U
- For 5 mesh trays/ kidney dishes
- 6 holders (5 compartments)
- H 160, clearance 80 mm
- H 168, W 180, D 495 mm

E 800 insert
Insertable in the G 7831, O+U
- For 3 mesh trays/ kidney dishes
- 4 holders (3 compartments)
- H 165, clearance 68 mm
- H 165, W 140, D 290 mm

E 523 insert 1/2
Can be inserted in the G 7831, G 7881/ G 7891, U
- For mesh trays
- 7 holders (6 compartments)
- H 145, clearance 50 mm
- H 150, W 220, D 450 mm
**E 379 insert 1/2 mesh basket**
Can be inserted in the G 7881, O+U/G 7891, O+U
- Wire netting with 1.7 mm mesh size
- 2 carrying handles
- H 80 + 30, W 180, D 445 mm

**E 378 insert 1/1 mesh basket**
Can be inserted in the G 7881/G 7891, U
- Wire netting with 1.7 mm mesh size
- 2 carrying handles
- H 80 + 30, W 460, D 460 mm

**E 337 insert 2/5**
Can be inserted in the G 7881/G 7891, O+U
- For instruments arranged in upright position
- 18 compartments approx. 47 x 51 mm
- 75 compartments 14 x 14 mm
- 1 centre drip tray
- H 145, W 175, D 445 mm

**E 802 insert**
Can be inserted in the G 7831/G 7881 and G 7891, O+U
- For instruments arranged in upright position
- 4 compartments 47 x 51 mm
- 4 compartments 47 x 40 mm
- 2 compartments 42 x 51 mm
- 2 compartments 42 x 40 mm
- 48 compartments 14 x 14 mm
- 1 centre drip tray
- H 133, W 163, D 295 mm

**E 430/1 insert 1/3 mesh tray**
Can be inserted in the G 7831/G 7881 and G 7891, O+U
- For placing instruments
- Wire netting with 5 mm mesh size
- H 40, W 150, D 445 mm

**O = Top basket**
**U = Bottom basket**
E 473/1 insert
Can be inserted in the G 7831/G 7881 and G 7891, O+U
- Mesh tray with lid for small instruments
- For hooking in mesh trays
- H 85, W 60, D 60 mm

E 520 insert
Can be inserted in the G 7831/G 7881 and G 7891, O+U
- For 18 root canal instruments
- Hinged secure positioning and optimum cleaning of the endo-instruments
- H 45, W 75, D 30 mm

E 521/2 insert
Can be inserted in the G 7831/G 7881 and G 7891, O+U
- For placement of 7 orthodontic forceps
- Compartment size 21 x 90 mm
- H 114, W 100, D 189 mm

E 522/1 insert
Can be inserted in the G 7831/G 7881 and G 7891, O+U
- 9 holders for hooking impression plates
- H 140, W 100, D 190 mm

E 147/1 insert 1/2 (Fig.)
Can be inserted in the G 7881/G 7891, O+U
- For 10–12 mouth rinsing cups, max. Ø 80 mm
- Plastic-coated
- H 155, W 220, D 455 mm

E 801/1 insert
- Can be inserted in the G 7831, O+U
- For 8 mouth rinsing cups, max. Ø 75 mm
- Plastic-coated
- H 155, W 200, D 320 mm
Inserts

**E 130 insert 1/2**
Can be inserted in the G 7881/G 7891, U
- For 10 trays
- 11 holders (10 compartments) H 170, clearance 35 mm
- H 180, W 180, D 445 mm

**E 338 insert 3/5**
Can be inserted in the G 7881/G 7891, O + U
- For 8 tray-half trays
- 10 holders (8 compartments) W 295, clearance 33 mm
- Max. tray size 290 x 200 mm
- H 115, W 305, D 453 mm

**E 805 insert**
Can be inserted in the G 7831, U
- For 8 tray-half trays
- 10 holders (8 compartments) W 295, clearance 33 mm
- Max. tray size 290 x 200 mm
- H 114, W 305, D 353 mm

**E 339 insert 3/5**
- Can be inserted in the G 7881/G 7891, U
- For 16 tray-bases/trays
- 17 holders (16 compartments) W 295, clearance 21.5 mm
- Max. tray size 290 x 20 mm
- H 115, W 305, D 468 mm

**E 806 insert**
Can be inserted in the G 7831, U
- For 11 tray-bases/trays
- 12 holders (11 compartments) W 295, clearance 21.5 mm
- Max. tray size 290 x 200 mm
- H 114, W 305, D 315 mm

**E 339/1 insert 3/5 (Fig.)**
- Can be inserted in the G 7881/G 7891, U
- For 13 tray-bases/trays
- Max. tray size 290 x 200 mm
- 13 compartments, B 295 mm, clearance 30 mm
- H 115, W 305, D 498 mm

**E 413 insert 1/1**
- Can be inserted in the G 7881/G 7891, O 177/1 (adapter can be procured from the Sirona Company)
- For 6 aspirator tubes System Sirona
- H 205, W 390, D 450 mm

O = Top basket
U = Bottom basket
Inserts

ON 1
For G 7881/G 7891
• Holder for handpieces in the top basket
  O 177/1
• Consisting of: seal, threaded bushing, clamp, holder base part, holder, upper part, 5 filter plates

ON 2
• For G 7831
• Holder for handpieces in the top basket
  O 801/2
• Consisting of: seal, threaded bushing, clamp, holder base part, holder, upper part, 5 filter plates

Filter plates for ON 1 and ON 2
• 20 pieces
• Porosity 2
• Diameter 30 mm

A mild alkaline liquid detergent and a liquid acidic neutralisation agent are recommended when using ON 1 and ON 2 (Page 29).

ADS 1 adapter/silicon
• For hand and angle pieces
• Port Ø approx. 20 mm
• White

ADS 2 adapter/silicon
• For turbines
• Port Ø approx. 16 mm
• Green

ADS 3 adapter/silicon
• For hand and angle pieces
• System Sirona
• Port Ø approx. 22 mm
• Red

O = Top basket
U = Bottom basket
Reprocessing of turbines, hand and angle pieces

The safe disinfection of the inside and if necessary the sterilisation of invasive instruments is an important criterion in addition to the cleaning and disinfection of the exterior surface when preparing turbine, hand and angle pieces.

In addition to a filter plate the instrument holders in the top baskets O 177/1 and O 801/2 contain a silicon-adapter that can either hold a hand/angle piece or a turbine. The adaptor is mounted on the injector strip in place of the injector jet and then used to hold hollow body instruments. The filter plates must be replaced after approx. 20 wash cycles or every 2 weeks.

Mild cleansing, safe disinfection
The reprocessing of handpieces is carried out in a vario TD (93°C-5) programme which is specifically designed for instruments that are very delicate and sensitive to temperature given that this programme only exposes the instruments to slight changes in temperature. At the same time all other instruments can also be prepared safely. A liquid detergent dispenser is required as optional equipment since only material-friendly non-mineral liquid detergents may be used for preparing the handpieces. Fully demineralised water is also recommended for the particularly material-friendly reprocessing of instruments; this is simple to achieve with reverse osmosis units. In order to prevent corrosion the handpieces must be removed from the unit as soon as the programme sequence is completed. Thereafter, dry the inside of the instruments with compressed air to remove any residual moisture and then treat with a cleansing spray.

Note
The timely disinfection and sanitary reprocessing of the instruments is demonstrated in the Miele film “Instrument reprocessing in the dental office” on CD-ROM.

Leading manufacturers recommend the reprocessing of handpieces in Miele thermo-disinfectors.
Miele provides a comprehensive solution for the sound and safe reprocessing of instruments in dental offices. Their service starts with providing competent advice with regard to thermo-disinfectors and sterilisers, includes information on financing and is completed during the commissioning process by trained medical product advisors.

The process chemicals ProCare Dent are new in the system and are used to thoroughly reprocess and also increase the value of the instruments in Miele thermo-disinfectors. The dental office is in safe hands with the Miele system solution and receives all services from a single source.

**ProCare Dent**
The ProCare Dent-products are adapted to the process chemicals in the Miele system which enable the best cleaning results, protect the material and prevent corrosion. The high quality dental instruments are safely reprocessed and protected with the Miele system solution.

**Easy and safe handling**
A colour system for the different ProCare Dent products ensures easy handling of the instruments. Sticker labels are attached to the dispensers of the liquid ProCare Dent products to prevent confusion.

**Recommendation for the routine reprocessing of standard instruments**
Programme: vario TD
Detergent:
Liquid detergent ProCare Dent 10 A or powdered detergent ProCare Dent 11 A
Neutralise:
ProCare Dent 30 P
Re-rinse:
ProCare Dent 40

**Recommendation for the routine reprocessing of standard instruments and handpieces**
Programme: vario TD
Detergent:
Liquid Detergent ProCare Dent 10 MA
Neutralise:
ProCare Dent C
Re-rinse:
ProCare Dent 40
<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Special notes</th>
<th>Identification of the ingredients in compliance with Regulation (EC) 648/2004</th>
<th>Package sizes</th>
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<tr>
<td>ProCare Dent 10 MA</td>
<td>Liquid detergent, mildly alkaline</td>
<td>• Excellent material and corrosion protection • Well suited for handpieces</td>
<td>• &lt; 5% non-ionic surfactants • 5–15% NTA • Also enzymes, preservatives (phenoxethyl alcohol, methyl, ethyl, butyl, and propylisopropylparaben)</td>
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<tr>
<td>ProCare Dent 10 A</td>
<td>Liquid detergent alkaline</td>
<td>• Excellent cleaning performance • Not suitable for handpieces</td>
<td>• 15–30% Phosphate</td>
<td>5 l Drum</td>
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<tr>
<td>ProCare Dent 11 A</td>
<td>Powdered detergent, alkaline</td>
<td>• Excellent cleaning performance • Not suitable for handpieces</td>
<td>• &lt; 5% non-ionic surfactants • &gt; 30% Phosphate</td>
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</tr>
<tr>
<td>ProCare Dent 30 C</td>
<td>Liquid acid neutralisation agent</td>
<td>(based on citric acid) • Well suited for handpieces</td>
<td>• Organic acids</td>
<td>5 l Drum (with filling inlet for G 7831)</td>
</tr>
<tr>
<td>ProCare Dent 30 P</td>
<td>Liquid acid neutralisation agent</td>
<td>(phosphoric acid based) • Corrosion inhibitory effect • Not suitable for handpieces</td>
<td>• 15–30% Inorganic phosphorus (from phosphoric acid)</td>
<td>5 l Drum (with filling inlet for G 7831)</td>
</tr>
<tr>
<td>Re-rinse</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProCare Dent 40</td>
<td>Liquid rinsing agent</td>
<td>• Spotless instruments • Improved and shortened drying times • Protection against corrosion</td>
<td>• &lt; 5% Phosphonate • 15–30% nonionic surfactants • Preservative (methylchloroisothiazolone, methylisothiazolinone)</td>
<td>1 l Bottle (with filling inlet)</td>
</tr>
<tr>
<td>Reactivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProCare Universal 61</td>
<td>Coarse-grained special salt for regeneration of the internal water softener</td>
<td>• Prevents calcium deposits and protects the items being washed</td>
<td>(with filling inlet)</td>
<td>6 kg Package</td>
</tr>
</tbody>
</table>

Programme sequence vario TD in the Miele thermo-disinfector

The vario TD programme is well suited for routine reprocessing in compliance with EN ISO 15883 for all thermo-stable instruments. The procedure is very easy on the materials and can also be recommended for the reprocessing of handpieces. Course and visible contamination (e.g. dental cement or impression compounds) should be wiped off prior to reprocessing in the machine.

The ProCare Dent products are adapted for the process sequences of this programme and round-off the Miele system solution.
Accessories for the dosing of process chemicals and monitoring of cleaning

Placement of dispenser modules and supply containers with process chemicals either in the dispensing cabinet G 7896 or in the existing base unit

G 7896 dispensing cabinet
Receiving cabinet for modules with supply containers for integration into the worktop counter
• H 850 (820), B 300, D 600 mm
• Compatible with G 7881, G 7891
• Freestanding unit, can be installed under the counter
• Cabinet with removable door
• External cladding either stainless steel or white
• Interior dimensions: H 530, W 249, D 480 mm
Divided into 3 levels
1st level: removable drawer on telescopic rails for receiving dispenser modules
2nd and 3rd level: removable drawer on telescopic rails with collecting tray and locking mechanism for receiving supply containers with process chemicals
4 à 5 l: 245 x 225 x 145 mm (L x H x W)*

DOS K 60 dispenser module
• For liquid alkaline detergent
• Hose dispenser pump, adjustable via electronic control system of the machine
• Integrated dispenser monitoring function for high process safety in compliance with EN ISO 15883
• Suction lance (333 mm) with level monitoring for 5 and 10 l container sizes
• Conversion kit (No. 5 45 80 30) for long suction lance (10–30 l container) available through customer service
• Length of the guide line: 1.90 m

DOS K 60/1 dispenser module
• As with DOS K 60,
• However suction lance (200 mm) with magnetic float for 5 l container (short suction lance)

* Only available with dispenser DOS K 60/1 and short suction lance

Test kit
• For determining protein and monitoring cleaning
• Contents for 48 examinations
• With coding stripes for reflectometer

Safety even after instrument reprocessing
In cooperation with the Merck Company Miele has developed this quick protein test (test kit) for simple cleaning control that easily checks the level of cleanliness on the instrument. This allows the dental office to monitor the cleaning performance through carrying out regular quality assurance controls.

Order placement through Miele customer service M.-No. 6 157 330

Figure shows Miele test kit with reflectometer from Merck (not included in the scope of delivery)

Test kit

Placement of dispenser modules and storage containers with process chemicals in the existing base unit

Placement of dispenser modules and storage containers with process chemicals in the existing base unit

Note
Liquid detergent should be used primarily in the vario TD programme.
System solutions from a single source
The quality of the water plays a very important role especially in connection with instrument reprocessing. Untreated water contains salts and minerals which can, in some cases, cause deposits on the instruments. Fully demineralised water also prevents the corrosion of the instruments. The reverse osmosis units present an alternative to using full demineralisation cartridges especially if water consumption is high (see diagram on page 27). Pre-treating the water on a constant basis increases the efficiency of the cleaners and disinfectors because filtration prevents harmful deposits from forming, decreases down-time and repairs and lowers the costs for cleaning agents.

Miele provides from a single source the water treatment systems reverse osmosis units RO-190 M1 and RO-190 M2 from VEOLIA to supplement the system.

Reverse osmosis unit RO-190 M2
- For the continuous removal of VE-water
- Capacity: max. permeate capacity 190 l/h*
- Reverse osmosis unit in stainless steel plinth with door and drip tray
- Installation of 2 x 5 l canisters for cleaning agents in the plinth
- 2 LEDs for status indication and conductance/flow rate function
- Max. recovery approx. 50%
- Salt rejection rate 96–98%
- Water quality approx. 5–100 μS/cm* (untreated water dependent)
- Water supply on RO ¾”
- Softened water discharge ¾”
- Concentrate outlet JG hose (8 mm)
- Water inlet pressure 2–6 bar
- Electrical connection 230 V/50 Hz
- Connected load 1 kW, fuse rating 10 A
- Operation control indicators
- Power consumption: 0.6 kWh
- Cold water up to max. 28°C, max. untreated water hardness 30° dGH, 15° dKH***
- Door stop changeable
- Exterior dimensions: H 520, W 600, D 560 mm

Reverse osmosis unit RO-190 M1
- For the continuous VE-water supply of a RDG and a steriliser**
- Capacity: max. permeate capacity 190 l/h*
- Stand-alone-solution for installation in an adjacent cabinet
- External cladding stainless steel
- Exterior dimensions: H 380, W 545, D 302 mm
- Additional equipment and technical data such as RO-190 M2

Options for RO-190 M1 and RO-190 M2
(VEOLA Company list of accessories)
RO-VB (always include)
- Pretreatment module for protecting the system from contamination
- RO-junction set
- For connecting additional loads onto the base system
Membrane pressure tank for 8 and 25 l
- When connecting other loads (short-term consumption > 105 l/hr)
RO-LC 117 ion exchanger
- For reducing the μS-value ≤ 5 μS
- Installation e.g. between RO-unit and steriliser (4000 l at 20° dGH)
RO-adaptor for LC 117
- The adapter can still be used after replacing the ion exchanger

Notes
* Dependent on the untreated water quality
** The ion exchanger LC 117 is always required when connecting a reverse osmosis unit to a steriliser to ensure residual conductivity lower than 5μS/cm.
*** Add an upstream water softener starting at an untreated water hardness of 30° dGH.
Accessories for the treatment of demineralised water

G 7895/1 Aqua Purificator
- Applicable for G 7881, G 7891
- Receiving cabinet for 2 full demineralisation cartridges for water E 310/E 318
- Integrated conductivity tester
- Commonly recommended quality for the final rinse < 15 μS/cm
- H 850 (820), B 300, D 600 mm
- Free-standing, built-in unit
- External cladding either stainless steel or white
- Electrical connection AC 230 V 50 Hz
- Water connection:
  - 1 x cold water ¾"-screw fitting
  - 1 x connection from the cartridge to the machine
  - 2.5–10 bar flow pressure to the cartridge (pressure loss approx. 1 bar per cartridge)

E 310 full demineralisation cartridges for water, filled
- Pressure-proof stainless steel cartridge
- H 570, Ø 240 mm
- Complete with air vent and pressure relief valve
- Filled with 20 l homogeneous mixture, regenerative resin

The anticipated capacity in litres depends on the overall salt content of the untreated water and the max. accepted conductivity.

Maximum permissible conductivity value

<table>
<thead>
<tr>
<th>5° dH</th>
<th>10° dH</th>
<th>15° dH</th>
<th>20° dH</th>
<th>25° dH</th>
<th>30° dH</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.250</td>
<td>2.125</td>
<td>1.420</td>
<td>1.070</td>
<td>0.850</td>
<td>0.710</td>
</tr>
<tr>
<td>4.500</td>
<td>2.250</td>
<td>1.500</td>
<td>1.125</td>
<td>0.950</td>
<td>0.750</td>
</tr>
</tbody>
</table>

All of the values stated are reference values.

E 318 full demineralisation cartridge for water, empty
- Can be filled with 20 l of disposable resin

E 315 disposable resin
- 20 l homogeneous mixture of resin for E 318
- Package with 2 bags à 10 l, vacuum sealed and shrink-wrapped in plastic sacks
- Filter sack for replacement

E 316 transfer kit
- Plastic barrel with lid and funnel for 30 l of disposable resin

LWM module C conductivity tester
For VE-water cartridges E 310/E 318
- H 118, W 235, D 110 mm
- Electrical connection for AC 230 V 50 Hz
- 2 hoses approx. 1.9 m, ¾" screw fitting
- Integrated conductivity tester of
  - 0–20 μS/cm
  - 1.5 μS/cm = Tridestillate
  - 2.5 μS/cm = Bidestillate
  - 20.0 μS/cm = Monodestillate

E 310 full demineralisation cartridges for water, filled
- Pressure-proof stainless steel cartridge
- H 570, Ø 240 mm
- Complete with air vent and pressure relief valve
- Filled with 20 l homogeneous mixture, regenerative resin

The anticipated capacity in litres depends on the overall salt content of the untreated water and the max. accepted conductivity.

Maximum permissible conductivity value

<table>
<thead>
<tr>
<th>5° dH</th>
<th>10° dH</th>
<th>15° dH</th>
<th>20° dH</th>
<th>25° dH</th>
<th>30° dH</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.250</td>
<td>2.125</td>
<td>1.420</td>
<td>1.070</td>
<td>0.850</td>
<td>0.710</td>
</tr>
<tr>
<td>4.500</td>
<td>2.250</td>
<td>1.500</td>
<td>1.125</td>
<td>0.950</td>
<td>0.750</td>
</tr>
</tbody>
</table>

All of the values stated are reference values.
VE-water cartridge versus reverse osmosis unit

Miele recommends using fully demineralised water in the final rinse programme for the material-friendly reprocessing of instruments. For this purpose Miele provides the “VE-water cartridge” and “reverse-osmosis unit.” The economic use of a VE-water cartridge or a reverse-osmosis unit depends on the number of cleaning batches per day. The reverse-osmosis unit should always be used before a VE water cartridge if water consumption is high.
### Technical data
**G 7831, G 7881, G 7891**

<table>
<thead>
<tr>
<th>Cleaners and disinfectors (thermo-disinfectors)</th>
<th>G 7831</th>
<th>G 7881</th>
<th>G 7891</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front loader with hinged door without basket equipment</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Free-standing unit with cover, built-in counter unit</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Fresh water rinsing unit, max. temperature 93°C</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Circulation pump, ( Q_{\text{max}} ) [l/min]</td>
<td>200</td>
<td>400</td>
<td>400</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control, programmes</th>
<th>G 7831</th>
<th>G 7881</th>
<th>G 7891</th>
</tr>
</thead>
<tbody>
<tr>
<td>MULTITRONIC NOVO MED 45, 5 programmes</td>
<td>•</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>MULTITRONIC NOVO PLUS, 5 programmes</td>
<td>–</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Electrical door locking</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Buzzer, acoustic signal at the end of the programme</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Programme failure protection</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Serial interface for process documentation</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water connections</th>
<th>G 7831</th>
<th>G 7881</th>
<th>G 7891</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x cold water, 0.5–10 bar flow pressure (50–1000 kPa)</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>1 x cold water for DK, 0.5–10 bar** flow pressure (50–1000 kPa)</td>
<td>–</td>
<td>–</td>
<td>•</td>
</tr>
<tr>
<td>Depending on the model: 1 x AD-water, 0.5–10 bar flow pressure (50–1000 kPa)</td>
<td>–</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Supply hose ½” with ¾”-screw fitting, ( L = \text{approx. 1.7 m} )</td>
<td>1 x</td>
<td>2 x</td>
<td>3 x</td>
</tr>
<tr>
<td>Drain pump DN 22, delivery head 100 cm</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Water proof system (WPS)</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electrical connection</th>
<th>G 7831</th>
<th>G 7881</th>
<th>G 7891</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC 230 V 50 Hz, supply cable approx. 1.8 m, 3 x 1.5 mm² incl. Schuko-plug</td>
<td>•</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>3 N AC 400 V 50 Hz, supply cable approx. 1.8 m, 5 x 2.5 mm² including CEE-plug</td>
<td>–</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Heater [kW]</td>
<td>3.1</td>
<td>9.0</td>
<td>9.0</td>
</tr>
<tr>
<td>Circulation pump [kW]</td>
<td>0.2</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Total connection [kW]</td>
<td>3.3</td>
<td>9.7</td>
<td>9.7</td>
</tr>
<tr>
<td>Fuse rating [A]</td>
<td>1 x 16</td>
<td>3 x 16</td>
<td>3 x 16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dispensers</th>
<th>G 7831</th>
<th>G 7881</th>
<th>G 7891</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 combination dispenser/door for powdered detergent and liquid media (rinse aid)</td>
<td>•</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>1 dispenser/door for powdered detergent</td>
<td>–</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>1 dispenser/door for liquid media, adjustable between 1–6 ml</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>1 dispenser pump DOS 10/30 for liquid, acidic media</td>
<td>–</td>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Connection options</th>
<th>G 7831</th>
<th>G 7881</th>
<th>G 7891</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispenser for liquid detergent</td>
<td>DOS K 60</td>
<td>DOS K 60</td>
<td>DOS K 60</td>
</tr>
<tr>
<td></td>
<td>DOS K 60/1</td>
<td>DOS K 60/1</td>
<td>DOS K 60/1</td>
</tr>
<tr>
<td>Feature</td>
<td>G 7831</td>
<td>G 7881</td>
<td>G 7891</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>Cleaners and disinfectors (thermo-disinfectors)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water softener</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>For cold and warm water up to 70°C, Monoblock</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Steam condenser</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heat exchanger</td>
<td>•</td>
<td>•</td>
<td>–</td>
</tr>
<tr>
<td>Spray mist</td>
<td>–</td>
<td>–</td>
<td>•</td>
</tr>
<tr>
<td><strong>Drying</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fan [kW]</td>
<td>–</td>
<td>–</td>
<td>0.3</td>
</tr>
<tr>
<td>Heater battery [kW]</td>
<td>–</td>
<td>–</td>
<td>1.4</td>
</tr>
<tr>
<td>Total connection [kW]</td>
<td>–</td>
<td>–</td>
<td>1.7</td>
</tr>
<tr>
<td>Air flow [m³/h]</td>
<td>–</td>
<td>–</td>
<td>50</td>
</tr>
<tr>
<td>Temperature adjustment in 1°C intervals [°C]</td>
<td>–</td>
<td>–</td>
<td>50–99</td>
</tr>
<tr>
<td>Time setting in 1 min. intervals [min]</td>
<td>–</td>
<td>–</td>
<td>1–99</td>
</tr>
<tr>
<td>Particulate air filter/Hepa filter class H 12,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filtration capacity &gt; 99.5% (DIN 1822), service life 100 h</td>
<td>–</td>
<td>–</td>
<td>•</td>
</tr>
<tr>
<td><strong>Dimensions, weight</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior dimensions H/W/D [mm] (without cover H = 820 mm)</td>
<td>850/450/600</td>
<td>850/600/600</td>
<td>850/600/600</td>
</tr>
<tr>
<td>Wash cabinet dimension H [mm]</td>
<td>560</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Wash cabinet dimension W [mm]</td>
<td>O=362, U=380</td>
<td>535</td>
<td>535</td>
</tr>
<tr>
<td>Wash cabinet dimension D [mm]</td>
<td>O=474, U=505</td>
<td>O=474, U=516</td>
<td>O=474, U=516</td>
</tr>
<tr>
<td>Weight, unloaded [kg]</td>
<td>58</td>
<td>70</td>
<td>78</td>
</tr>
<tr>
<td><strong>External cladding, optionally with</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>white housing, front with frame for decor panels (DER)</td>
<td>–</td>
<td>•</td>
<td>–</td>
</tr>
<tr>
<td>Door: H 441–442/W 585–586/thickness 1 mm, lid: H 116.5–117.5/B 585–586/thickness 1 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>white housing, plastic lid (AW)</td>
<td>•</td>
<td>•</td>
<td>–</td>
</tr>
<tr>
<td>Stainless steel (AE)</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td><strong>Conformity with standards</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIN EN ISO 15883-1/2, EN 61010-2-40, EN 61326</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td><strong>Inspection and identification number</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VDE, VDE-EMV, DVGW, MPG CE 0366, (IP X1)</td>
<td>• (–)</td>
<td>• (+)</td>
<td>• (+)</td>
</tr>
<tr>
<td>O = top basket, U = bottom basket, • = standard, – = not available</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sterilisation

Thermo-disinfector G 7881, small-steriliser PS 1201B
Miele Professional – innovative market leader with efficient thermo-disinfectors for dental offices – now reveals its own newly developed B-class small steriliser: the PS 1201B. As a result, Miele Professional is now a system provider for the entire instrument cycle. Cleaning and disinfection, sterilisation, documentation and service – for the first time with the advantage “everything from a single source.” System4Dent.

This Miele system solution is a development that is primarily aimed at efficiency. It reduces the costs and achieves safe, reproducible results during both simple and demanding applications.

The advantage of Miele Professional is its high level of competency in the entire field of medical instrument reprocessing – which was acquired over decades of in-depth cooperation with experts in the hygiene industry and practice-oriented users.

The sterilisation process was developed based on the fractionated pre-vacuum procedure. In combination with mature technology this method provides a very safe sterilisation process and a highly efficient system. At the same time the Miele small steriliser achieves very short batch times starting at 21 minutes for the B-class cycle including drying.

The benefits in the dentist office:
• Safe sterilisation processes for all instruments and porous materials
• Very short process times
• Very good drying results
• Intuitive handling
• Integrated water treatment
• Simple, service-friendly unit setup
The new small steriliser PS 1201B

**Fast**
The new PS 1201B has captured a leading position among small steriliser with its fast sterilisation process. Consequently, it is optimally designed for the requirements in a dental office. The QUICKSTART function also saves time during the daily use of the unit – and the comprehensive service provided by Miele is quick to respond if the need arises.

**Dry**
A partial vacuum of approx. 20 mbar absolute-pressure is achieved with the high-performance vacuum pump. The output enables the effective removal of the air from the sterilisation chamber and the treated materials. The patent protected hardware from Miele that heats the entire surface of the chamber also results in an excellent distribution of temperature. The high-level heat emission and the high vacuum power facilitate fast and thorough drying of the sterilised materials before they are removed from the chamber.

**Safe**
The PS 1201B is assembled like a large steriliser with its steam-heated and double walled pressure tank. The carefully developed hardware ensures the ideal distribution of heat in the chamber and the safe sterilisation of all instruments used in the dental office. The user of the unit can document the process via a standard equipment interface thereby providing additional validation for the work process.

**Reliable**
The display is very easy to read thereby allowing for safe operation and follow-up control of the various application and test programmes. The programmes are completely adaptable to the particular needs of the dental office. Additional advantages of the Miele small steriliser are low noise level operation, handling ease, a variable chamber insert for different tray heights and an electric door latch. The service-friendly setup of the unit makes the PS 1201B low maintenance and reliable.
B-class steriliser with 20 l chamber volume for all dental office needs.

**Type**
- Tabletop unit
- Can be placed on tabletops starting at a depth of 500 mm
- Exterior dimensions H 533, W 565, D 580 mm
- Sterilisation chamber Ø 250 mm, length 400 mm
- AC current connection 230 V, 50–60 Hz, 16 A
- Permanent water connection with water supply and drain hose

**Programmes**
- 121°C Universal: 33 min.
- 134°C Universal: 21 min.
- 134°C Prions: 35 min.
- Helix B&D Test: 14 min.
- Vacuum test: 23 min. (overall duration with drying, load specific)

**User convenience**
- Simple operation on the display with function keys
- Electrical door latch
- 90° rotating support for receiving 6 trays or up to 3 containers
- Service-friendly setup of the unit with easy to access components

**Technology**
- Double walled pressure tank for simultaneously generating steam and pre-heating the sterilisation chamber
- Integrated system for water treatment (reverse-osmosis unit)

**Safety and efficiency**
- Interface for process documentation
- Conforms with the European regulations for medical products
- Reproducible results, verifiable procedure
- Indication of the process results on the display
- Safety equipment in compliance with DIN EN 13060

**Equipment (standard)**
- ZS 110 tray holder 6/3 for the reprocessing of 6 trays or up to 3 containers, maximum height per container 48 mm
- ZS 131 Tray, 3 pieces
- Tray handle for safe removal of the trays after process approval
Accessories for the small steriliser PS 1201B

**ZS 111**
- Tray holder 6/2 for receiving 6 trays ZS 131
- or 2 containers up to a max. of 65 mm in height

**ZS 131**
- Tray
- H 20, W 190, D 290 mm

**Helix-Test ZS 150**
- Process control of the small steriliser through steam penetration test aided by the use of a chemical indicator
- Indication of the results through colour change
- 1 test object, 150 indicators
Technical data

Small steriliser

Tabletop unit with a chamber door that opens from the left  •
Steriliser with permanent water connection  •
Type class in compliance with DIN EN 13060  B-class steriliser
Instrument load  max. 6 kg
Textiles load  max. 2 kg

Control, programmes

121°C Universal  •
134°C Universal  •
134°C Prions  •
Helix B&D Test  •
Vacuum test  •
Electrical door locking  •
Serial interface for process documentation  •

Water connections

1 x cold water, 1.5–10 bar flow pressure (150–1000 kPa)  •
Supply hose ¾”-screw fitting, L = approx. 1.5 m  1 x
Drain hose, L = approx. 1.5 m  1 x
Water proof system (WPS)  •

Water connections

AC 230 V 50 Hz, supply cable approx. 1.5 m, 3 x 2.5 mm² incl. Schuko-plug  •
Total connection [kW]  3.2
Fuse rating [A]  1 x 16

Water treatment

Reverse osmosis unit with preliminary filter  •

Dimensions, weight

Exterior dimensions H/W/D [mm]  533 / 565 / 580
Can setup  starting at 500 mm table surface
Chamber size Ø [mm]  250
Chamber size D [mm]  400
Chamber volume [L]  20
Weight, unloaded [kg]  63

Conformity with standards

DIN EN 13060, EN 1717, EN 61010-1, EN 61010-2-040, EN 61326-1  •

Scope of delivery

Supply and drain hose, power supply cable, ZS 110 tray holder 6/3, ZS 131 tray (3 units), tray handle  •

The process control in the Miele Small steriliser PS 1201B ensures optimum steam penetration of the treated material in during short operation times.
Safety through verifiable reprocessing success

The documentation of the instrument reprocessing procedure ensures that the process is continuously monitored and followed by an evaluation. This is a significant advantage in quality for the patient and for the office team as well. The careful documentation of successful reprocessing is especially important with respect to legal security.

Miele now provides for the first time within the framework of the System4Dent its own complete solution for the process documentation. The centrepiece is the documentation software Segosoft Miele Edition. The software can be used to implement different documentation solutions depending on the needs of the customer and the requirements of the dental office. The Miele units and software are carefully adapted and interact perfectly with each other.

The user-friendly Segosoft Miele Edition allows for accurate, transparent and reliable documentation of the reprocessing procedure in the thermo-disinfector and small steriliser. Traceability is enabled through the recording of process protocols and temperature and pressure curves that are exported by the units via an interface during the programme sequence. Both daily and batch related routine examinations can be documented in addition to such process data. This is a key advantage over manual documentation with standard work instructions.

The software also provides documentation concerning pending maintenance. For example the user can replace a filter and then document this as maintenance procedure. This is how the documentation makes an important contribution to quality management in the dental office.

Digital documentation
A retention period of 30 years applies for the documentation of instrument reprocessing. Paperless digital documentation can also prevent files from growing into mountains. This is true since it is now legal to use the advanced method of electronic signatures to sign documents. This digital signature exposes subsequent changes to documents and therefore provides protection against manipulation.

The documents are created by Segosoft Miele Edition in PDF/A-1 format and comply with the Standard ISO 19005-1:2005. This format was developed especially for long-term archiving and also ensures long-term access to the documents. The digital creation of the signature takes place electronically with user name and password and does not require any additional signature-hardware. When compared to memory card solutions with conventional office programmes, the Segosoft Miele Edition sets new standards with regard to security against manipulation and legal acceptance.

Documentation – made simple
The Segosoft Miele Edition is impressive thanks to the low time expenditure required, its ease of handling and overall efficiency. The software automatically records all relevant data during the reprocessing procedure once the Miele thermo-disinfector or the small steriliser is started. After the instruments are unloaded, and visually inspected, the user can evaluate and then approve the reprocessing procedure with user name and password by actuating two mouse-clicks on the computer. The approval process takes less than 10 seconds.

Legal security
The burden of proof is shifted if allegations are made following a medical treatment. The treating dentist must prove that the instruments were reprocessed and sterilised (up to 30 years). Based on complete and traceable documentation of the sanitary measures this proof can be easily maintained and the corresponding accusations invalidated before the court. As a result, the Miele software provides legal security and satisfies the requirements of the RKI guideline and regulations governing the sale of medical products (MPBetreibV).
Options for using process documentation in the dental office

The instrument reprocessing documentation can be implemented in different ways depending on the needs of the customer and the requirements of the dental office.

1. Electronic documentation: direct connection with a computer
   - Thermo-disinfectors and small sterilisers are connected directly to a computer with pre-installed documentation software via a cable (up to 13 m long). The computer (netbook, laptop, PC) can be setup in the sanitary room or may already exist in an adjacent room.
   - Short distances and easy handling through batch approval on-site in the sanitary room
   - The most flexible solution is provided by connecting two or more units in the sanitary room
   - Automatic data transmission from the unit to the software
   - Digital archiving

2. Electronic documentation: network connection
   Thermo-disinfectors and small sterilisers are connected to one computer with pre-installed documentation software via the internal office network, e.g. to a central PC at the reception desk. The network integration of the units with their serial interfaces is carried out with a network converter.
   - Utilisation of an existing computer in the dental office
   - Automatic data transmission from the unit to the software
   - Digital archiving

Segosoft®
Miele Edition
3. Electronic documentation:
via USB stick
The thermo-disinfector or small steriliser process data is intermediately stored on a USB stick. The data is subsequently exported to the documentation software.

- Less work required within the computer and network infrastructure
- Utilisation of an existing computer in the dental office
- Digital archiving

4. Process documentation per printer
The process data are printed-out with a receipt printer in the sanitary room. The printouts are filed for archiving purposes.

**Documentation options in comparison**

<table>
<thead>
<tr>
<th></th>
<th>PC-direct connection</th>
<th>Network connection</th>
<th>Documentation via USB</th>
<th>Printer</th>
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</thead>
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<tr>
<td>Documentation: process protocol</td>
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<td>Documentation: temperature/pressure curves</td>
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<td>Documentation: routine inspections</td>
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<td>Documentation: maintenance</td>
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<td>Simple digital signature</td>
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<td>Advanced digital signature with reference to user</td>
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<td>Option</td>
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<tr>
<td>Manual approval with signature</td>
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<tr>
<td>Digital approval with user/password</td>
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<td>•</td>
<td>Option</td>
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<tr>
<td>Convenience through short distances in the dental office</td>
<td>+++</td>
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<td>Paperless data archiving</td>
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<td>Backup function for data backup</td>
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<td>Creating of sterile supplies labels</td>
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<tr>
<td>Legal security</td>
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<tr>
<td>Purchase price</td>
<td>+++</td>
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• = available  – = not available  + = evaluation scale
**Segosoft Miele Edition – products and accessories**

**Segosoft Miele Edition process documentation software for PC-direct connection or network connection**

Software package “Comfort Plus” with enhanced functions:
- Documentation of process data, routine inspections, maintenance
- Advanced digital signature with reference to user in the PDF document.
- User specific approval of process protocols with user name and password
- User administration for any number of user names/passwords
- Backup function for automatic data backup

Range of services:
- Software CD, software package:
  - Comfort Plus, installation manual
  - License card for 1 unit
  - Option: additional license for additional units
- Free support
- Telephonic installation support for 30 days, software installation and introduction

Connectible units:
- Serial connection: max. 4 units
  - Network connection: any number of units

Connecting cables must be ordered separately

**Segosoft Miele Edition/USB-solution process documentation software for data transmission via USB stick**

Software package “Comfort” with basic functions:
- Documentation of process data
- Simple digital signature
- User specific approval on the attached signature block
- Option: software upgrade to “Comfort Plus” e.g. for digital approval with user name and password, additional functions see software package: “Comfort Plus”

Range of services:
- Complete package for 1 unit
  - Software CD, software package:
    - Comfort, installation manual
    - USB stick
    - USB data logger module
    - Dimensions (H x L x W): 35 x 118 x 85 mm, including 230V power adapter, 1.8 m power cable
    - Serial interface cable for connection between the unit and the data logger (cable length: 3 m)

Connectible units:
- max. 1 unit
- Option: connection of up to 5 units possible through software upgrade to “Comfort Plus”

**Network converter Net500**

Network converter Net500 for connecting units with serial interfaces to an office network, conversion of serial data RS232 into network data (TCP/IP)

Range of services:
- Network converter
  - Dimensions (H x L x W): 37 x 132 x 102 mm including 230V power adapter, 1.4 m power cable

**Protocol printer PRT100**

Printer for printing-out process protocols, inkjet print with waterproof ink

**Other accessory components**

Miele provides cables that are compatible with the units for connection to a PC. Miele provides after-sales service and technical support for the selection of suitable software and hardware.
Fast labelling with Segolabel Miele Edition

Software for sterile supplies labelling
With the software **Segolabel Miele Edition** it is possible to create labels very quickly and provide the packaged sterile supplies with an expiration date. The labels are created with a special printer after sterilisation and contain the batch number, creation date, expiration date, and the name of the person responsible for the batch in the dental office. Information about the content of the package can also be printed upon request. Process data can be correlated quickly with patient data and the reprocessing procedure traced back to the patient at a later date through barcode labelling.

**Segolabel Miele Edition:**

**starter kit**
Compact package with software and hardware for creating sterile supplies labels
The use of **Segolabel** is recommended in combination with **Segosoft Miele Edition**.

Range of services:
- Software CD, installation manual
- Label printer PRT200 including power adapter (cable length: 3.8 m) and USB cable (length: 2 m)
- 1 label roll à 1,000 labels and ink transfer ribbon (both accessories can be obtained by Miele)
Miele sales and factory customer service centres – the all-round service advantage

Miele thermo-disinfectors and small sterilisers set new standards for reprocessing instruments in the dental office. The customer oriented Miele sales department and the factory customer service centre with its comprehensive and fast “on-site service” guarantee all-round service which supplements the System4Dent.

Good advice from the very beginning
The Miele sales department provides comprehensive advice even before the installation of its units. Our professionals provide assistance for selecting the unit best suited to the needs of each dental office and also conduct an extensive feasibility study during the process. Miele can make individual financing proposals upon request.

- Advice on selecting a unit
- Feasibility study
- Attractive financing options

Complete service all from a single source
Miele provides comprehensive service support starting with the delivery of the new unit. This service is conducted from the onset by carefully trained medical product technicians and takes into consideration the legal regulations and guidelines as well as the on-site requirements.

A list of your benefits:
- Quality service with short response times provided by a comprehensive network of Miele medical product technicians (e.g. over 150 technicians in Germany)
- Short travel times “On-site service” is guaranteed within 24 hours
- Professional advice in application technology
- 90% of the service issues are handled during the first call
- Reliable spare parts service (even 15 years after production ceases for functionally important original spare parts)

Individual service contracts
The Miele service contracts guarantee that your Miele units are inspected regularly by trained Miele factory customer service professionals. The function and safety of all important components are analysed. This ensures that errors are detected early, that spare parts are replaced in a timely fashion and that the unit remains ready for use. This significantly reduces the risk of failure.

Regular inspection, maintenance, and service help to maintain the value of the unit and also protect your investment.

Miele offers the following service contracts:

Inspection contract
The inspection process includes the following services:
- Annual inspection including target and actual performance evaluation
- Detailed assessment and documentation of the technical state of the unit
- Inspection of the maintenance condition
- Electrical safety inspection
- Thermoelectric inspection

Maintenance contract
The maintenance contract includes the following services in addition to the services provided under the inspection contract:
- Comprehensive maintenance according to the unit specific Miele service plan
- Proposal for additional preventative service measures
- Preventative replacement of specific expendable parts
- Required safety inspections

If additional repair work should become necessary then it will be invoiced separately.

Service contract
There service contract provides a very safe cost calculation basis. In addition to the services provided under the maintenance contract, the service contract includes all necessary repair work. The contract covers not only the costs for expendable and spare parts but also the labour costs and travel expenses of the Miele service technicians.

Validated performance
Miele also provides a series of process validations that are carried out by qualified Miele service technicians in accordance with the regulatory and standardised requirements and country-specific recommendations.

- Initial validation consisting of installation, operating and performance qualification after installation of the unit
- Re-validation (renewed performance qualification) generally every 12 months, after maintenance, repair or after the installation or operating parameters have been changed
- Performance evaluation for thermo-disinfectors in consideration of the fact that predominantly semi-critical instruments are reprocessed in dental offices.

Information can be obtained from the Association of Dentists and the inspection authorities in charge regarding required inspections.

It is no coincidence that the Miele customer service department has been repeatedly given top grades for excellent service (determined annually by ServiceBarometer AG, Munich).