

Washer disinfectors For dental surgeries

Miele
PROFESSIONAL



Setting the standard
The new generation
from Miele

Generation
G7/8



Instrument processing in dental surgeries

Extract from the recommendation made by the Robert-Koch-Institute

“for meeting hygiene standards in dental practices (8/98)”

5.1 Cleaning and Disinfection

“When disinfecting instruments, differentiation must be made between an immersion bath process and machine preparation, whereby the latter is the preferred method. Depending on the type of object, thermal procedures should be used for cleaning and disinfecting in preference to chemical procedures. When purchasing instruments, preference should be given to those which can be cleaned and disinfected in a thermal process.”

Extract from the Medical device directive § 4 paragraph 2, according to the 2nd amendment of 1.1.02

“Cleaning, disinfection and sterilisation of medical products must be carried out following the manufacturer’s instructions using suitable validated processes in such a manner that the success of the process is reproducible without risking the safety and health of patients, users or third parties”.



Practice leads to experience and with experience comes safety

Miele has been at the forefront of development in the field of washer-disinfectors for hospitals and surgeries for several decades now.

Intensive application linked research and close cooperation with hygiene specialists, instrument manufacturers and users have made Miele the innovation leader in the marketplace.

Daily practice

Dental instruments used to treat patients are contaminated with blood, saliva, amalgam residue etc., and should always be regarded as infectious. Treatment methods used to process these instruments must meet the relevant Health and Safety guidelines and accident prevention regulations for the protection of dentists, personnel and patients. Instruments must be disinfected prior to a manual cleaning process.

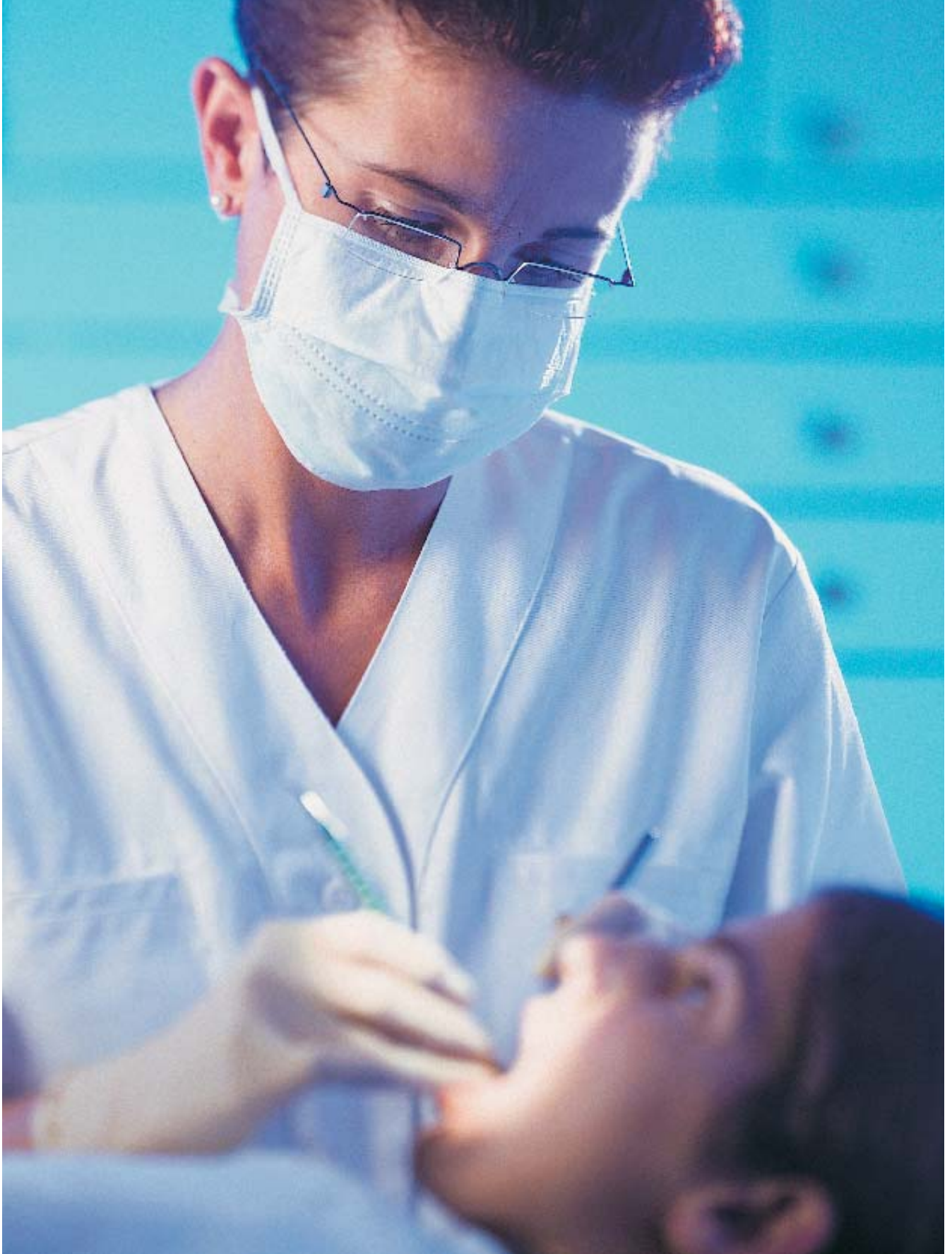
With machine processing, instruments can be cleaned and disinfected automatically in a closed-circuit system.

Thorough cleaning, ensures thorough disinfection

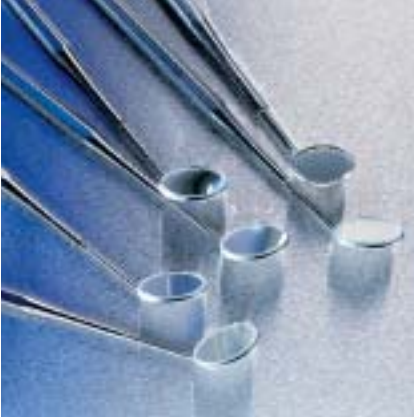
Machine preparation of instruments is absolutely indispensable for quality assurance when it comes to fulfilling the increasingly high standards of hygiene required in today's dental surgeries. And most dental professionals recommend thermal disinfection procedures.

Even the Robert-Koch Institute recommends machine preparation in preference to manual processing in their recommendations for hygiene in dental surgeries.

The medical device directive also states that instruments must be processed using procedures, which can be standardised and validated. This can only be achieved by machine processing.



Thorough cleaning, ensures thorough disinfection Typically Miele



State of the art instrument processing: High capacity, minimum costs

The advantages

- Comprehensive solution for all dental instruments, including hand pieces and contra angles
- Safe and gentle processing of valuable instruments
- Thorough cleaning, internally and externally
- Efficient use made of staff time

- High and consistent standards of hygiene maintained when processing instruments
- Reduced risk of contamination
- Minimum risk of injury and staff down times
- Can leave dry instruments in machines for up to 6 hours



Manual instrument processing: Cannot be standardised and is expensive

The disadvantages

- Very labour intensive
- Increased risk of contamination
- High water consumption
- No standardised procedures for cleaning and disinfecting
- Disinfection performance is not verifiable
- Hollow shafted instruments difficult to process

- Increased risk of injury and staff down times
- Increased burden on the environment through pollutant waste discharge
- High cost of chemical agents

Added Miele benefits



Innovative market leader

- Miele have been at the forefront of developing cleaning and disinfecting machines for several decades
- First class solutions, e. g. for the processing of transmission instruments
- Development of the DESIN vario TD process for sensitive materials
- Joint involvement with the Standardisation board CEN/TC 102 WG 8 and DIN NaMed D 09 as well as involvement with project groups and working parties (DGKH, AKI etc.)



Legendary Miele quality

- Advanced technology, high quality, made in Germany
- Product development and production are in accordance with DIN EN ISO 9001 quality assurance standards
- Miele have been awarded the internationally acclaimed DIN EN ISO 14001 certification and EC decree No. 761/2001 for environment management
 - ECO Management and Audit Scheme (EMAS)



Quality management for medical devices

- CE-mark in accordance with EC Guidelines 93/42/EEC
- Intensive technical application research in laboratories and surgeries
- Close co-operation with hygienists, instrument manufacturers and end-users



Safety for dental surgeons, assistants and patients

- Decontamination procedures standardised and validated
- Cleaning and disinfection in a closed-circuit system
- Thermal disinfection with fungicidal, bactericidal and virucidal disinfection
- Validation and revalidation using thermo-electrical tests
- Test-Kit for checking protein removal from instruments



Approved for use by

- Robert-Koch-Institute: for meeting hygiene standards required in dental practices
- Legislative body: Medical device directive
- Professional trade association: Accident prevention regulations VBG Nr. 103 § 11



Comprehensive support system

- Highly trained Miele advisors
- Large dealer network
- Training film available on Video and CD Rom
- Extensive network of highly qualified Miele technicians
- Maintenance and service contracts

Systematic protection against infection: 7 steps for hygienic instrument processing

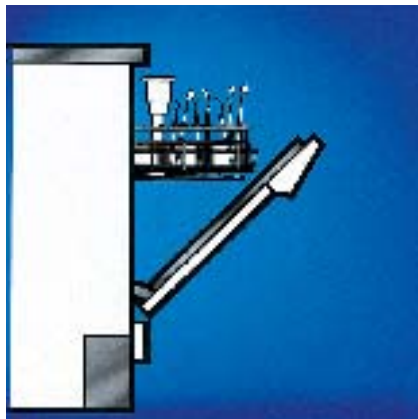


In the interest of maintaining the highest possible efficiency and hygiene standards in surgeries, the following steps have been widely accepted by the dental profession.

1. Transfer to hygiene centre

2. Waste disposal

Immediately after treatment, used instruments and accessories are placed on trays and taken to the central service area. **Immersion of instruments in a disinfectant solution is not necessary if instruments are to be processed by machine.** Waste material is handled with forceps and transferred to suitable waste receptacles.



3. Cleaning and Disinfection

When processing instruments in a Miele washer disinfector they should be placed in the machine as follows:

Either in instrument supports, stacked for efficient use of space, or in mesh trays or special inserts. Trays can also be accommodated. Hollow instruments should be placed on injector jets.

Contaminated instruments can be left for interim dry storage for 5–6 hours in the machine.

Programmes are carried out fully automatically in Miele washer disinfectors.

The procedure

With thermal disinfection temperature and time are used without the addition of chemical disinfecting agents to ensure fungicidal, bactericidal and virucidal disinfection, combating HBV (hepatitis infectiosa) and HIV (Aids). Automatic processing also ensures standardised cleaning and optimum instrument protection. Excellent cleaning performance is a prerequisite for a consistently high standard of hygiene throughout the dental surgery. Safe sterilisation can only be guaranteed if instruments are perfectly clean.



4. Instrument inspection and maintenance

After cleaning, disinfection and drying instruments must be inspected and any worn or damaged items discarded.

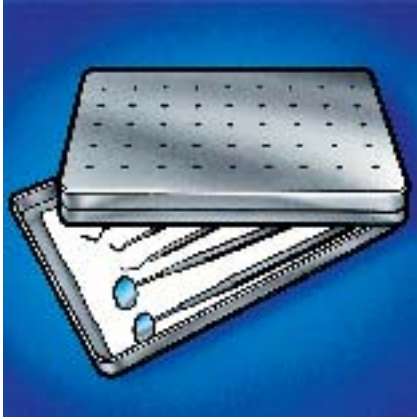
Hinged instruments may require subsequent treatment with instrument milk.

Instruments that do not require subsequent sterilisation are then placed in a central storage unit or returned to the treatment room.

Please note

Speculae are generally very sensitive and will deteriorate with use. Rhodium plated speculae are more tolerant to machine processing, but this will depend on the manufacturing quality and on mechanical influences such as how they have been handled in the surgery.

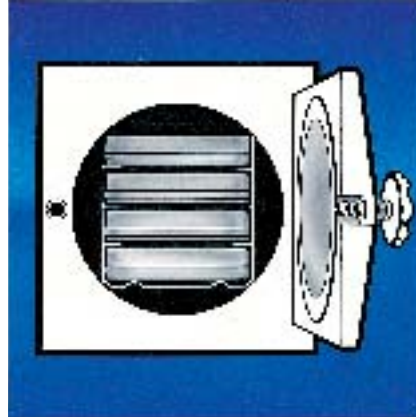
Instruments with rotating parts, such as drills, burs and grinding tools can be machine processed if the manufacturer has given their approval. However drill bits made from instrument steel cannot be machine processed.



5. Preparation for sterilisation

Individual instruments such as surgical forceps and small instrument sets are usually wrapped in sealed pouches if a porous load steriliser is to be used.

Complete sets of instruments such as those used for tooth extraction and periodontal treatment can be placed in set trays. Endodontic instruments are placed in the appropriate cassettes to which indicator strips are then attached.



6. Sterilisation

Sterilisation takes place in a steam steriliser (autoclave).



7. Hygienic storage

Instruments that have been sterilised in pouches or in cassettes are usually stored in the central service area.

Instruments that are more commonly used are kept directly in the treatment room.

Individual instruments and accessories, such as those required for preventative treatment, are stored in special instrument holders.

The storage facilities should feature a dust-proof seal.

Note

Further information on hygienic preparation of instruments is given in the Miele film "Professional instrument processing in dental surgeries" which is available either on Video cassette or CD Rom from your Miele Supplier.

G 7830 TD Washer disinfector

Width 45 cm



External casing: white (WG)



External casing: stainless steel (AE)

G 7830 TD Washer disinfector

This washer disinfector for automatic cleaning and thermal disinfection of dental appliances and stainless steel instruments, including transmission instruments, speculae and suction cannulae is built in accordance with general hygiene requirements and those concerning the containment of epidemics.

High tech and high quality

- Only 45 cm wide
→ takes up very little space
- Simple installation
→ 230 V 50 Hz single phase supply, cold water connection and drainage

Construction

- Front loading machine with drop down door
- Suitable for use freestanding or can be slotted under a countertop
- External casing:
Stainless steel (AE) or white (WG)
- Space frame construction with side insulation
→ excellent heat and noise insulation
→ easy to recycle
- Wash cabinet and spray arms in high grade stainless steel

Programme controls

- Multitronic Novo med 45 with 4 standard cleaning programmes (See page 14 for a description of the controls and page 27 for a description of the standard programmes)

Features

- Wash cabinet with 2 wash levels
→ high cleaning capacity
- 2 spray arms (3rd spray arm is on the top basket)
→ thorough cleaning results

- Direct coupling of upper basket to water connection
→ good internal cleaning of instruments
- Profi-Monobloc water softener
→ reactivates continually during the wash programme
- Water intake controlled and monitored by a flywheel counter
→ precise measurement of incoming water ensures the correct amount of cleaning agents are dispensed for the amount of water being used
- Steam condenser/heat exchanger uses a minimum amount of water
→ prevents emission of steam and hot air into the room
→ can be operated without connection to vent ducting
→ low installation costs
- 4-stage suds filtration system with wide area filter, coarse filter, glass splinter filter and micro-fine filter.
- Electric door lock
→ staff protection
→ high process security

Dispenser system

- Combi door dispenser for powder detergent and liquid rinsing agent
- Dispenser pumps for neutralising/refresh agents
→ breaks down alkaline residues
→ protects and cares for the load
- Connection points for liquid detergent dispensers

Test certificates

- VDE
- Radio and television suppressed
- DVGW
- MPG CE 0366
- RKI-List in accordance with § 18 IfSG
- Protection classification IP x 1 (drip water protected)

Options

- Dispenser (DOS module C 60) for liquid cleaning agents
→ easier operation for staff
→ reduced costs through accurate dosing
→ high process security
- Décor frame installation kit (M-DER)
H 570.5 +/- 0.5 mm
W 437 +/- 1 mm
Max. panel thickness 1.2 mm

See page 27 for technical data

Application example

Upper basket O 801/2

For direction injection of hollow instruments

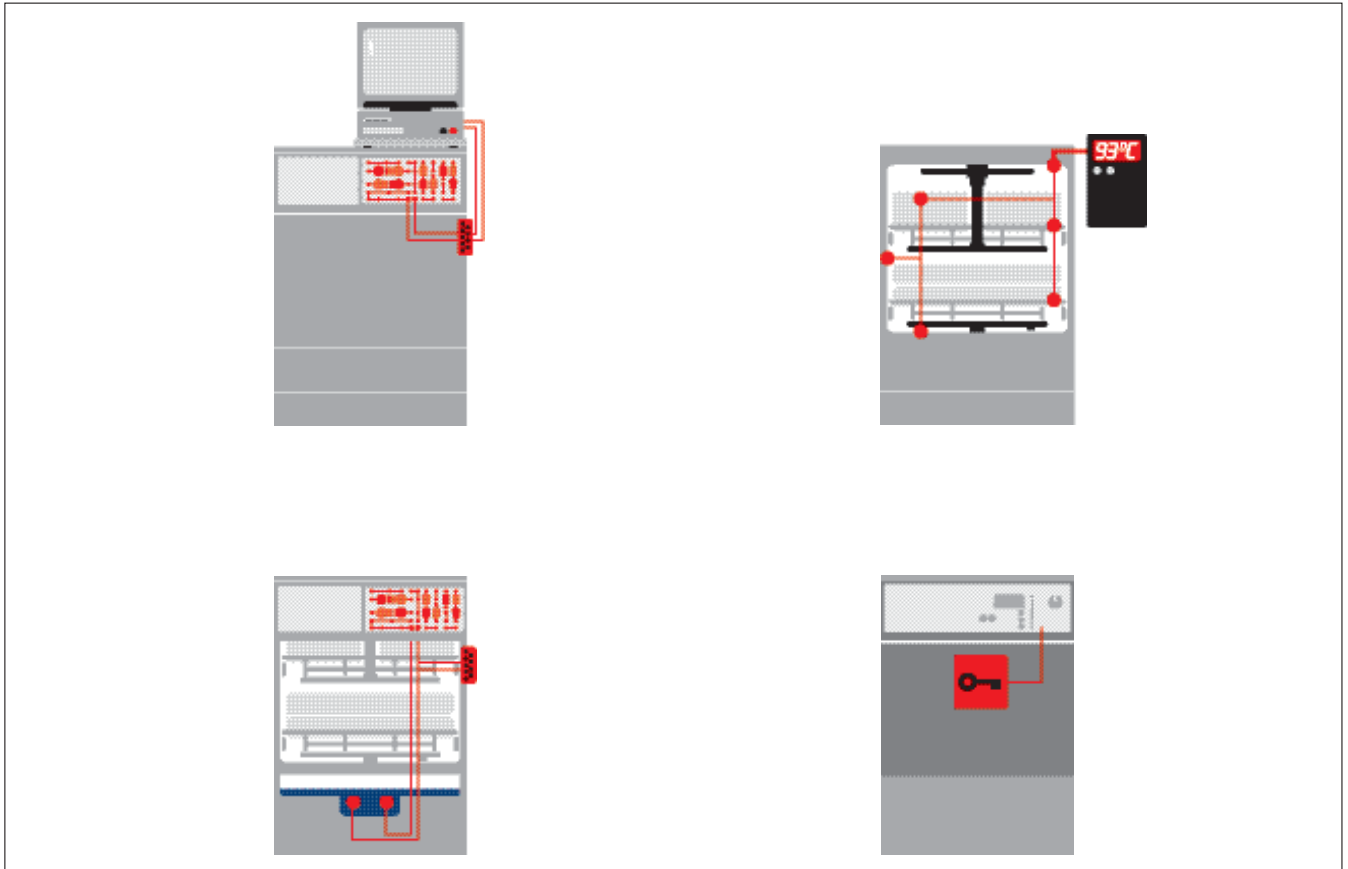
- Holders (AUF 2) for hand pieces and contra angles
- E 801 insert for 8 mouth rinse beakers
- E 802 insert for single and double ended instruments

Lower basket U 800

- E 806 insert for 11 trays or tray bases
- E 363 and E 146 mesh trays for instruments



New from Miele: G 7881 TD Washer Disinfector



The new standard

Thorough cleaning is an essential pre-requisite for processing medical instruments. The cleaning and disinfecting processes must also be validated in accordance with Health and Safety regulations (and the medical device directive).

Washer disinfectors will be expected to comply with a totally new set of standards in the future as specified by the European guideline PrEN ISO 15883. Miele has already implemented technical solutions in the latest generation of washer disinfectors, which meet the requirements of this guideline.

Setting the standard

Miele as a leading and innovative manufacturer, has set new standards for washer disinfectors with the latest **G 78** generation of machines. And in doing so have also been thinking about your pocket: All new machines can be equipped with your existing series G 77 machine baskets and inserts so you won't need to replace everything – typically Miele.

Greater safety

Serial interface for PC or printer connection for documenting process parameters.

Separate sensors control and monitor the process to ensure that the machine is able to maintain cleaning, disinfecting and final rinse temperature parameters with even greater precision.

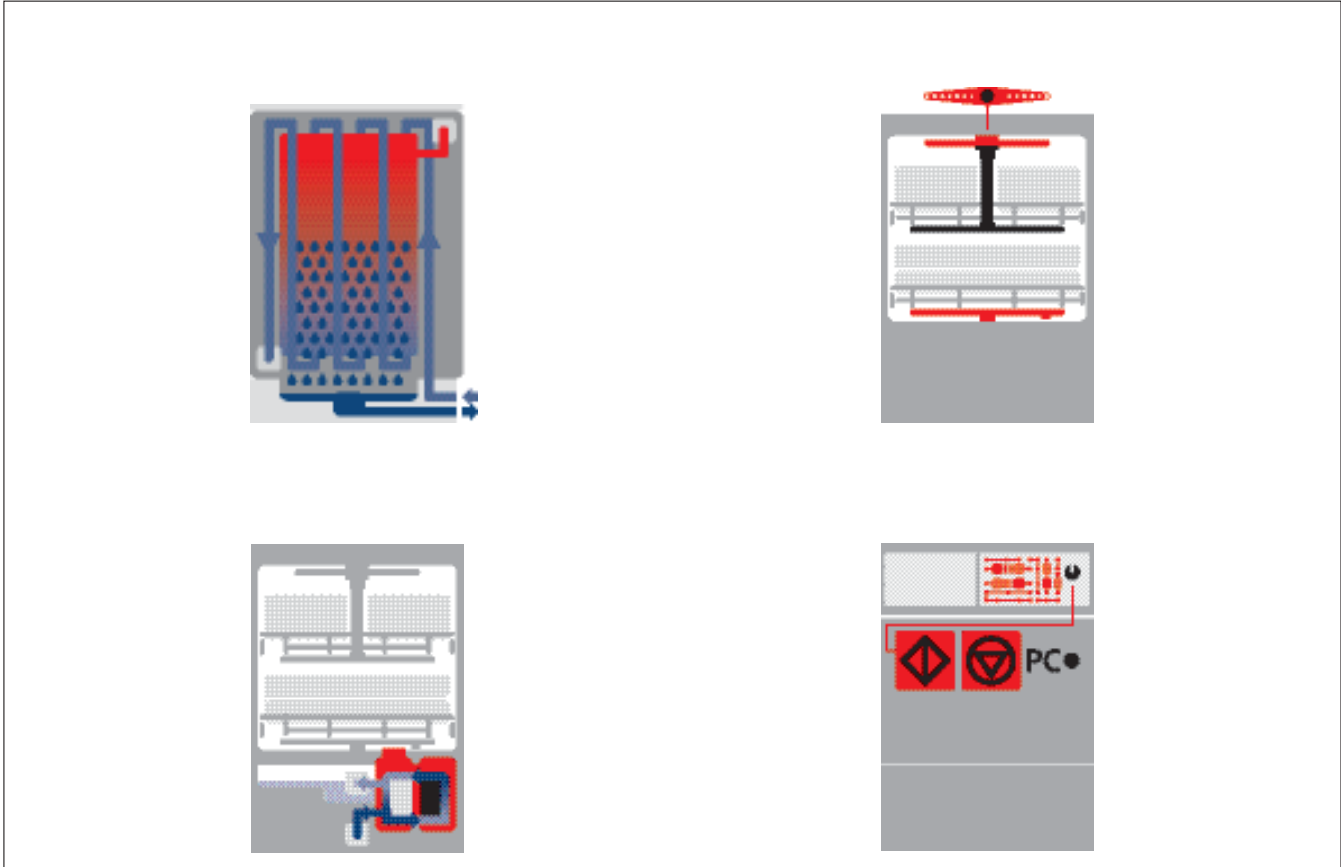
Temperatures in the wash cabinet and on the items being processed can be established via a sensor port on the machine for validation and revalidation purposes.

The door is securely locked for the whole programme duration. It can only be opened at the end of the programme if all programme parameters have been successfully achieved.

Greater safety

Economical

Excellent cleaning performance



Economical

The steam condenser with heat exchanger ensures significantly reduced water consumption.

Thanks to the new Profi Monobloc water softener reactivation during a cleaning programme has led to a reduction in salt consumption of about 50% (in hardness range 5°–15° dH/ 89–267 ppm). A separate reactivation programme is not necessary.

If you update your machine to a newer model you can still use your existing baskets.

Service friendly and easy to recycle construction.

Excellent cleaning performance

The spray arms have been designed to deliver maximum cleaning power to the surfaces being washed at the same time as being economical with the amount of water they use.

High pressure for getting into hollow bodied items.

Additional spray arm for better external cleaning.

Improved wash results have been achieved by arranging the jets carefully and regulating the rotation of the spray arms.

Greater programming flexibility for cleaning and disinfecting programmes achieved with the new electronic controls. Numerous programme parameters can be altered. So you can optimise processes to your surgery's individual requirements.

G 7881 TD Washer disinfector

Width 60 cm



External casing: white (AW)



External casing: stainless steel (AE)

G 7881 TD Washer disinfector

The new G 78 generation of washer disinfectors is the latest development of professional machines for thorough processing of dental instruments. Miele has an extensive range of baskets and inserts designed to accommodate a diverse range of instruments and accessories.

High tech and high quality

- Only 60 cm wide
→ large wash cabinet
- Powerful circulation pump
→ high capacity
Q_{max} = 400 l/min
- Electrical connection
3N AC 400 V 50 Hz or AC 230 V 50 Hz
→ short programme running times
- Serial interface (optional)
→ PC or printer port for process documentation
- Connection for fully demineralised water (optional)

Construction

- Front loading machine with drop down door
- Suitable for use freestanding or can be slotted under a countertop
- External casing:
Stainless steel (AE), white (AW) or white housing with décor frame door (DER)
- Space frame construction with side insulation
→ excellent heat and noise insulation
→ easy to recycle
- Wash cabinet and spray arms in high grade stainless steel

Programme controls

- Multitronic Novo plus with 5 Standard cleaning programmes (See page 14 for a description of the controls and page 27 for a description of the standard programmes)

Features

- Wash cabinet with 2 wash levels
→ high cleaning capacity
- 2 spray arms (3rd spray arm is on the top basket)
→ thorough cleaning results

- Direct coupling of upper basket to water connection
→ good internal cleaning of instruments
- Profi-Monobloc water softener
→ reactivates continually during the wash programme
- Water intake controlled and monitored by a flywheel counter
→ precise measurement of incoming water ensures the correct amount of cleaning agents are dispensed for the amount of water being used
- Steam condenser/heat exchanger uses only a minimum amount of water
→ prevents emission of steam and hot air into the room
→ can be operated without connection to vent ducting
→ low installation costs
- 4-stage suds filtration system with wide area filter, coarse filter, glass splinter filter and micro-fine filter
- Electric door lock
→ staff protection
→ high process security
- Special port for positioning of sensors in the wash cabinet for validation and revalidation purposes

Depending on model

- Serial interface RS 232 for PC or printer for process documentation
- Connection for fully demineralised water (AD)

Dispenser system

- One dispenser each in the door for powder cleaning agent and liquid agents (rinsing agent)
- 1 DOS 10/30 dispenser pump for liquid acidic agent
- Connection points for liquid detergent dispensers

Test certificates

- VDE
- Radio and television suppressed
- DVGW
- MPG CE 0366
- RKI-List in accordance with § 18 IfSG (applied for)
- Protection classification IP x 1 (drip water protected)

Optional extras

G 7881 TD

- Dispenser (DOS module G 60) for liquid cleaning agents

See page 27 for technical data

Application example

Upper basket O 177

For direction injection of hollow instruments

- Holders (AUF 1) for hand pieces and contra angles
- E 338 insert for 8 tray bases

Lower basket U 874

- E 339 insert for 16 tray bases
- E 131 insert for 5 mesh trays
- 5 x E 146 mesh trays with E 328 inlay racks



Controls:

G 7830 TD Multitronic Novo med 45

G 7881 TD Multitronic Novo plus



G 7881 TD: Multitronic Novo plus

G 7830 TD Washer disinfectator Control system

- Multitronic Novo med 45

Programmes

- 4 standard cleaning programmes
- Some process parameters can be altered to suit

G 7881 TD Washer disinfectator Control system

- Multitronic Novo plus

Programmes

- 5 standard cleaning programmes
- Some process parameters can be altered to suit

Programme control

- Single knob programme selector switch

Displays

- Programme sequence
- Temperature and programme duration
- Programme end, optical and acoustic signal (G 7881 TD)
- Service and fault check lights

Control and safety features

- 2 NTC probes in the sump for temperature monitoring and redundant temperature control (G 7881 TD)
- Electric door lock
- Programme safety cut out
- Buzzer, acoustic signal for programme end or fault
- Programme stopped in event of power cut

Interface

- G 7881 TD: Serial interface RS 232 for PC or printer for process documentation (standard on G.B. machines)

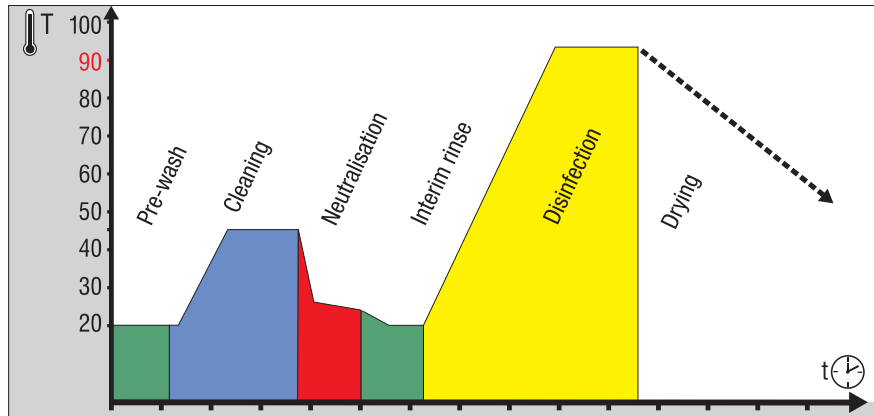


Serial interface for PC or printer connection



Special port for positioning of temperature sensors for independent monitoring and validation and revalidation purposes.

Cleaning and disinfecting programme DESIN vario TD



Programme: DESIN vario TD
Temperature/time line with a disinfection phase at 90°C with a 5 min holding time

The European guideline pr EN ISO 15883 specifies the standards expected of washer disinfectors and the required tests that they must comply with. The cleaning programme specified by the Norm is the VARIO programme. Items must be thoroughly cleaned with no adverse reaction to materials. Cleaning takes place within the optimum temperature range for blood removal (45°C–55°C), i.e. in a non-denatured range. A liquid cleaning agent is recommended. Thermal disinfection takes place in the last rinse. In order to inactivate the highly temperature tolerant

Hepatitis-B Virus, the norm requires a temperature of at least 90°C to be maintained for a period of 5 minutes in order to be effective on the instruments.

The user must routinely confirm the standard of cleaning and disinfection. Instruments should be given a regular visual check for residual soiling. To be certain that cleaning is thorough and to test areas that are not visually accessible Miele offers a Protein Test Kit for a semi-quantitative assessment of the presence of proteins. Periodic temperature / time checks should also be made using measuring systems which are independent of the machine to test the thermal disinfection parameters. Contact your Miele supplier for further details.

Top and bottom baskets for the G 7830 TD



O 801/2 Upper basket/injector unit (empty)

- Front and rear sections free for various inserts, clearance 200 mm
- Central shaft with 10 silicone holders and 10 x 4.0 mm jets, length 30 mm, clearance 175 mm with retainer rack
- H 267, W 381, D 475 mm
- Built in spray arm
- Clearance 200 mm



O 800 Upper basket/carrier (empty)

- For various inserts
- H 270, W 381, D 475 mm
- Built in spray arm
- Clearance 200 mm



U 800 Lower basket/carrier (empty)

- For various inserts
- H 62, W 385, D 505 mm
- Clearance approx. 295 mm
- Usable space 325 x 485 mm



Loading example

O 801/2 Upper basket/injector unit with holders (AUF 2) for hand pieces and contra angles
 E 802 insert for instruments and
 E 801 insert for mouth rinse beakers



Loading example

O 800 Upper basket/carrier
 E 802 insert for instruments and
 2 x E 146 mesh trays for instruments



Loading example

U 800 Lower basket/carrier
 E 800 insert for mesh trays
 E 146 mesh tray for instruments
 E 363 mesh tray for instruments
 E 379 mesh tray for instruments

Top and bottom baskets for the G 7881 TD



O 177 Upper basket/injector unit (empty)

- Left side free for inserts
- Right side for hollow instruments, 28 silicone holders fitted with 28 x 4.0 mm jets, length 30 mm, 7 funnels, loose, with height adjustable retainer rack
- H 263, W 498, D 455 mm
- Built in spray arm
- Clearance 230/205 mm



O 190/1 Upper basket/carrier (empty)

- For various inserts
- H 265, W 531, D 475 mm
- Built in spray arm
- Clearance 215 mm
- Height adjustment +/- 20 mm



U 874 Lower basket/carrier (empty)

- For various inserts
- H 50, W 534, D 515 mm
- Clearance when combined with upper basket:
O 177 approx. 220 mm + 20/+ 40 mm
O 190 approx. 220 mm +/- 20 mm



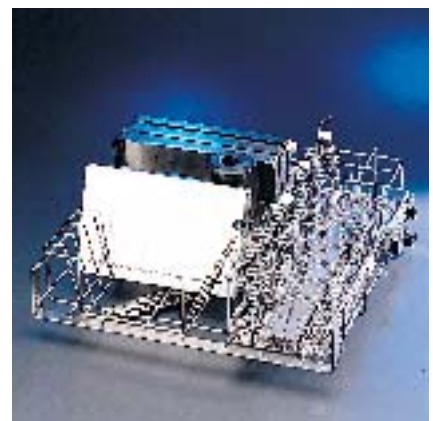
Loading example

- O 177 top basket/injector unit
- E 147/1 insert for mouth rinse beakers
- E 363 mesh tray for instruments



Loading example

- O 177 Upper basket/injector unit with holders (AUF 1) for hand pieces and contra angles
- E 337 insert for instruments
- E 363 insert/mesh tray for instruments
- E 146 mesh tray for instruments



Loading example

- O 190/1 Upper basket/carrier
- E 338 insert for tray bases
- E 337 insert for instruments

Inserts for upper and lower baskets



E 337 Insert 2/5

- For instruments, arranged in an upright position
- H 145, W 175, D 445 mm
- 18 sections 47 x 51 mm
75 sections 14 x 14 mm
- 1 full length tray in the middle section
- For use in G 7881, in the upper or lower basket
- For use in G 7830, in the lower basket



E 802 Insert

- For instruments, arranged in an upright position
- H 133, W 163, D 295 mm
- 4 sections 47 x 51 mm
4 sections 47 x 40 mm
2 sections 42 x 51 mm
2 sections 42 x 40 mm
48 sections 14 x 14 mm
- 1 full length tray in the middle section
- For use in G 7830, in the upper or lower basket



E 441 Insert 1/4

- Mesh tray for micro instruments
- H 620, W 183, D 284 mm
- Wire gauge 0.8 mm, mesh size 1.7 mm, closed sides, stackable
- Internal divisions with 6 adjustable supports provide the ideal storage for instruments
- For use in G 7830 and G 7881, in the upper or lower basket



E 523 Insert 1/2

- For mesh trays, e.g. IMS cassettes
- H 150, W 220, D 450 mm
- 6 holders: H 145 mm, spaced approx. 50 mm apart
- For use in the upper or lower basket



E 146 Insert 1/6 mesh tray

- For instruments
- H 55, W 150, D 225 mm
- Mesh size: Base 3 mm, sides 1.7 mm, lid 8 mm, with 2 hinged handles
- For use in G 7830 and G 7881, in the upper or lower basket

Not illustrated.

E 363 Insert 1/6 mesh tray

- As E 146, but with 1 mm mesh and no carrying handle



E 328 Inlay rack

- For E 146 and E 363 mesh trays
- For instruments when mesh trays are arranged in the upright position



E 521 Insert

- For 7 extraction or orthopaedic molar forceps
- H 105, W 100, D 189 mm
- Each section 21 x 80 mm



E 378 Insert 1/1 mesh basket

- For various inserts
- H 80 + 30, W 460, D 460 mm
- Wire gauge, 1.7 mm mesh size, with 2 handles
- For use in G 7881, in the lower basket

E 379 Insert 1/2 mesh basket

- H 80 + 30, W 180, D 445 mm
- For use in G 7830, in the lower basket and in G 7881 in the upper or lower basket



E 147/1 Insert 1/2

- For 10-12 mouth rinse beakers
- Plastic coated
- H 155, W 220, D 455 mm
- For use in G 7881, in the upper or lower basket

E 801 Insert (not illustrated)

- For 8 mouth rinse beakers
- Plastic coated
- H 155, W 200, D 320 mm
- For use in G 7830, in the upper or lower basket



E 430 Insert 1/3 mesh tray

- H 40, W 150, D 445 mm
- Mesh size 5 mm



E 131 Insert 1/2

- For 5 mesh trays/kidney dishes
- H 170, W 180, D 465 mm
- 6 holders, H 160 mm, Spacing approx. 65 mm
- For use in G 7881, in the upper or lower basket

E 800 Insert (not illustrated)

- For 3 mesh trays/kidney dishes
- H 165, W 140, D 290 mm
- 4 holders, H 165 mm, Spacing approx. 68 mm
- For use in G 7830, in the upper or lower basket



E 520 Insert

- For 18 root canal instruments
- H 45, W 75, D 30 mm
- Folds up

Inserts for upper and lower baskets



E 130 Insert 1/2

- For 10 trays
- H 180, W 180, D 445 mm
- 11 holders, H 170 mm, Spacing approx. 35 mm
- For use in G 7830, in the lower basket and in G 7881 in the upper or lower basket



E 338 Insert 3/5

- For 8 half trays
- H 115, W 305, D 453 mm
- 10 holders (8 sections) W 295, D 33 mm
- Max. tray size 290 x 30 mm
- For use in G 7881, in the upper or lower basket



E 805 Insert

- For 8 half trays
- H 114, W 305, D 353 mm
- 10 holders (8 sections) W 295, D 33 mm
- Max. tray size 290 x 20 mm
- For use in G 7830, in the lower basket



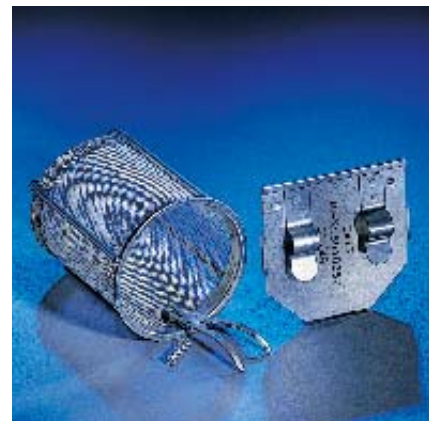
E 339 Insert 3/5

- For 16 tray bases/trays
- H 115, W 305, D 468 mm
- 17 holders (16 sections) W 295, D 21.5 mm
- Max. tray size 290 x 20 mm
- For use in G 7881, in the lower basket



E 806 Insert

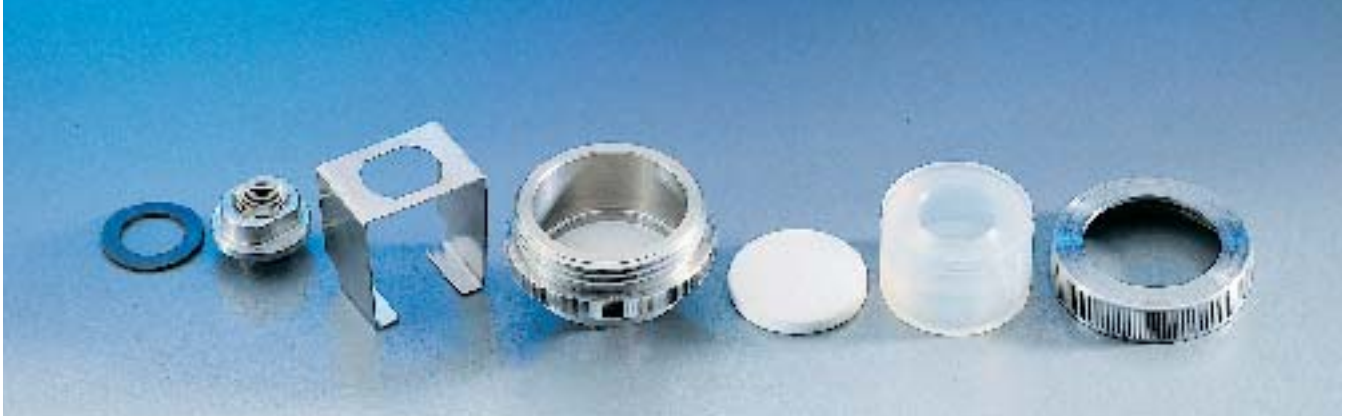
- For 11 tray bases/trays
- H 114, W 305, D 315 mm
- 12 holders (11 sections) W 295, D 21.5 mm
- For use in G 7830 and G 7881, in the lower basket



E 473/1 Insert

- Insert/mesh basket with lid for small instruments
- H 85, W 60, D 60 mm, for hooking onto mesh trays

Accessories for processing hand pieces and contra angles



The illustration shows: Seal, threaded bush, bracket, filter housing – lower section, ceramic filter, adapter, filter housing – upper section



Accessories for the G 7881

- **AUF 1**, holder for hand pieces and contra angles consisting of: Seal, threaded bush, bracket, filter housing – lower section, filter housing – upper section, 5 ceramic filters

Accessories for the G 7830

- **AUF 2**, holder for hand pieces and contra angles consisting of: Seal, threaded bush, bracket, filter housing – lower section, filter housing – upper section, 5 ceramic filters



ADS 1 Silicone adapter

- For approx. 20 mm Ø hand and angle pieces
- white

ADS 2 Silicone adapter

- For approx. 16 mm Ø hand and angle pieces
- green

ADS 3 Silicone adapter

- For approx. 22 mm Ø hand and angle pieces
- red



- **FP**, 20 ceramic filters for AUF 1 and AUF 2
- Porosity 3
- Diameter 30 mm

Processing drive units, hand pieces and contra angles



The situation today

Cleaning hand pieces and contra angles hygienically and with little effort is a difficult task for dental practices. As with other dental instruments, hand pieces and contra angles come into contact with blood and saliva and are therefore at risk of contamination by pathogenic bacteria. Up until now it has only been possible to clean and disinfect external surfaces of these instruments or to process them in machines specially constructed for that purpose only.

Cleaning and disinfecting external surfaces as well as internal shafts

Soiling and contamination not only affect external surfaces of instruments, but also internal surfaces. Internal surfaces are at risk of contamination due to the back flow or suction effect of the instruments during use. To ensure that any micro organisms on internal surfaces of hand pieces and contra angles cannot cause infection it is essential that all external and internal surfaces of invasive instruments are thoroughly disinfected, and where necessary also sterilised, after treating each patient. Disinfecting external

surfaces only is not adequate and therefore not acceptable (RKI guidelines: "for meeting hygiene standards required in dental practices"). Where possible hand pieces and contra angles should be cleaned and disinfected by machine.

Hand and angle pieces are made up of a variety of materials (gears, fibre optics etc.) and should only be processed by machine in a programme specifically designed to protect these materials.

Because of their complex construction internal cleaning is difficult. The shafts of spray jets and motors are very narrow and therefore very difficult to flush through.

An economical solution for all your instruments

Miele has been working in conjunction with the manufacturers of hand pieces and contra angles, as well as with dental professionals and end users to develop a system in which these and other instruments can be cleaned and disinfected together in a thermal disinfector. The instruments are cleaned both externally and internally

thus fulfilling the requirements of the Robert-Koch Institute.

The procedure

Hand pieces and contra angles must only be cleaned and disinfected in a thermal disinfector using the special care "Vario" programme. The Vario programme first carries out a cold pre-rinse to remove any coarse residues of blood and saliva and then does a wash at 45-55°C. Thermal disinfection takes place in the final rinse. This process provides the optimum cleaning and disinfecting results whilst providing maximum protection to sensitive materials, such as instruments with delicate fibre optic cables and gearing components. A pH-neutral to mildly alkaline, non-mineral liquid cleaning agent must be used. **Powder cleaning agents must not be used.**

The liquid cleaning agent must be dispensed using a liquid dispensing pump. A special rinsing agent is dispensed in the final rinse, which contains additional corrosion inhibitors and enables any residual water to run off instruments quickly and efficiently. The Desin 93°C-10' programme (G 7830 TD) and SPECIAL 93°C-10'



After removing an injector jet from its manifold in the upper basket, fit a seal together with threaded bush and bracket in its place. The filter housing – lower section is then screwed into the threaded bush. A ceramic filter is then placed in the filter housing. The adapter and filter housing – upper section are then combined and screwed onto the lower section.

The adapters are suitable for 16, 20 and 22 mm Ø. Drive units, hand and angle pieces can then be fitted into the holders (AUF 1 or AUF 2). Any free jets can then be used for speculae and suction tubes.

programme (G 7881 TD) are not suitable for use with these instruments because they will suffer material damage.

Only clean and disinfect instruments and medical utensils that are stated by the manufacturer as being suitable for cleaning and disinfecting in this type of machine.

Simple handling

A special system has been developed to ensure that internal surfaces are sufficiently flushed through. On the G 7881 TD this system consists of a special holder (AUF 1), which is fitted into upper basket O 177. A total of 12 holders can be fitted in the O 177. The instruments are held in position using special adapters. To cater for different diameter hand pieces, contra angles and drive units a variety of adapters are used. To protect the sensitive gearing systems in instruments from particles a ceramic filter has to be fitted in the holder. **The ceramic filters need to be replaced approx. every 2 weeks or after 20 wash cycles.**

Hand pieces, contra angles and drive units can also be cleaned and disinfected in the G 7830 TD. The new O 801/2 upper basket can accommodate a maximum of six holders (AUF 2).

After being cleaned and disinfected instruments should be dried and maintained in accordance with manufacturer's instructions before being sterilised and made available for the next patient.

Thorough cleaning, ensures thorough disinfection

The effectiveness of the disinfection process in Miele washer disinfectors has been tested to show a bacterial reduction of more than 6-log steps. This is more than sufficient for disinfection.

Conclusion

Miele thermal disinfectors are therefore able to process all dental instruments hygienically and economically in one machine. Hand pieces and contra angles do not require any additional, time consuming and expensive special measures.

Note

Further information on hygienic preparation of hand pieces and contra angles is given in the Miele film "Professional instrument processing in dental surgeries" which is available either on Video cassette or CD Rom from your Miele Dealer.

Processing instrument and suction tubes

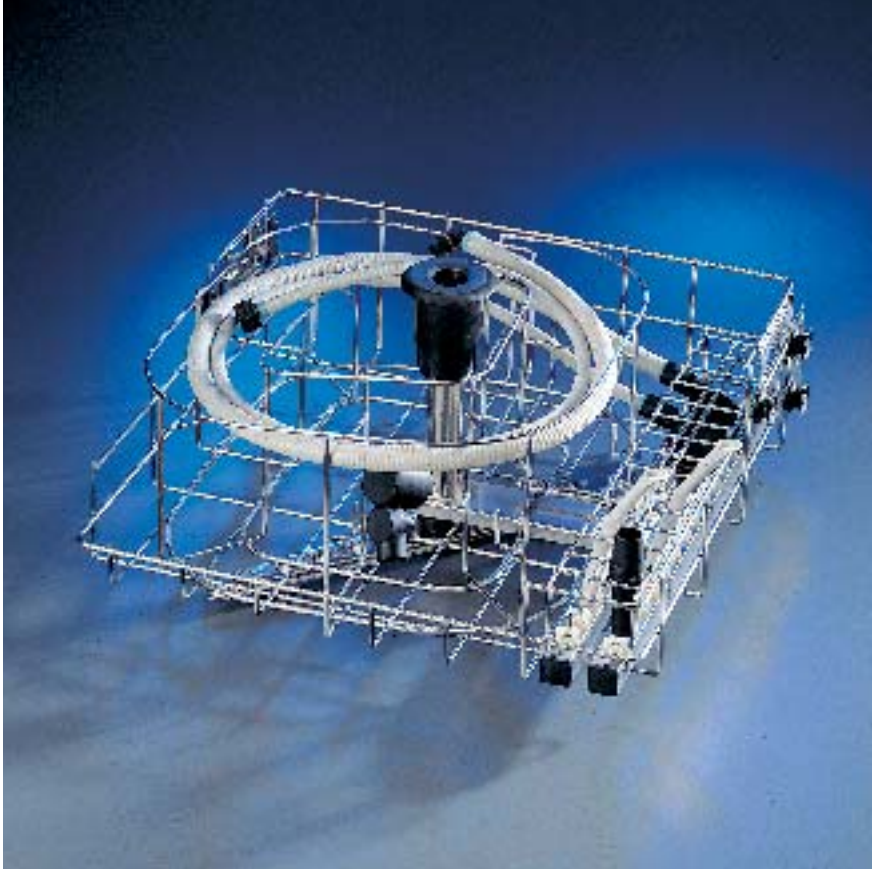


Illustration shows a special adapter



After the preliminary removal of residues (e.g. from swabs and larger cement residues etc.) connector blocks can be dismantled and cleaned. Small items can be placed in the E 146 mesh tray. Hooks for supporting the filter block are provided with the E 413 insert.

The U 874 lower basket is suitable for cleaning and disinfecting instrument tubes such as SC motor tubes, turbine tubes, Strayvit tubes, ultrasonic tubes and HF connecting cables.

The new design now enables the user to meet the hygiene requirements by using thermal disinfection in preference to chemical disinfection.



The E 413 insert, specially developed for the O 177 upper basket/injector, enables cleaning and disinfection of thermally stable instrument and suction tubes in one batch. The tubes have to be connected using special adapters provided by the relevant manufacturers.

The special adapters cover two jets. The resulting upward-moving water column guarantees excellent cleaning performance.

Unused jets can be used for suction instruments.

E 413 Insert 1/1

- For 6 suction tubes for SIEMENS systems
- H 205, W 390, D 450 mm
- For O 177 upper basket (adapters can be ordered from Siemens dental suppliers)

Accessories



DOS G 60 module

- Dispenser for liquid detergent
- Freely adjustable from 3-78 ml
- Adjustable siphon tube with level indicator for various container sizes
- For G 7881 TD
- **Important:** Liquid detergent should be used for the vario TD programme

DOS C 60 Module (not illustrated)

- Dispenser for liquid detergent
- Freely adjustable from 3-78 ml
- Adjustable siphon tube with level indicator for various container sizes
- For G 7830 TD
- **Important:** Liquid detergent should be used for the vario TD programme



Test Kit

- Tests the presence of proteins and monitors cleaning results
- Contents sufficient for 48 tests

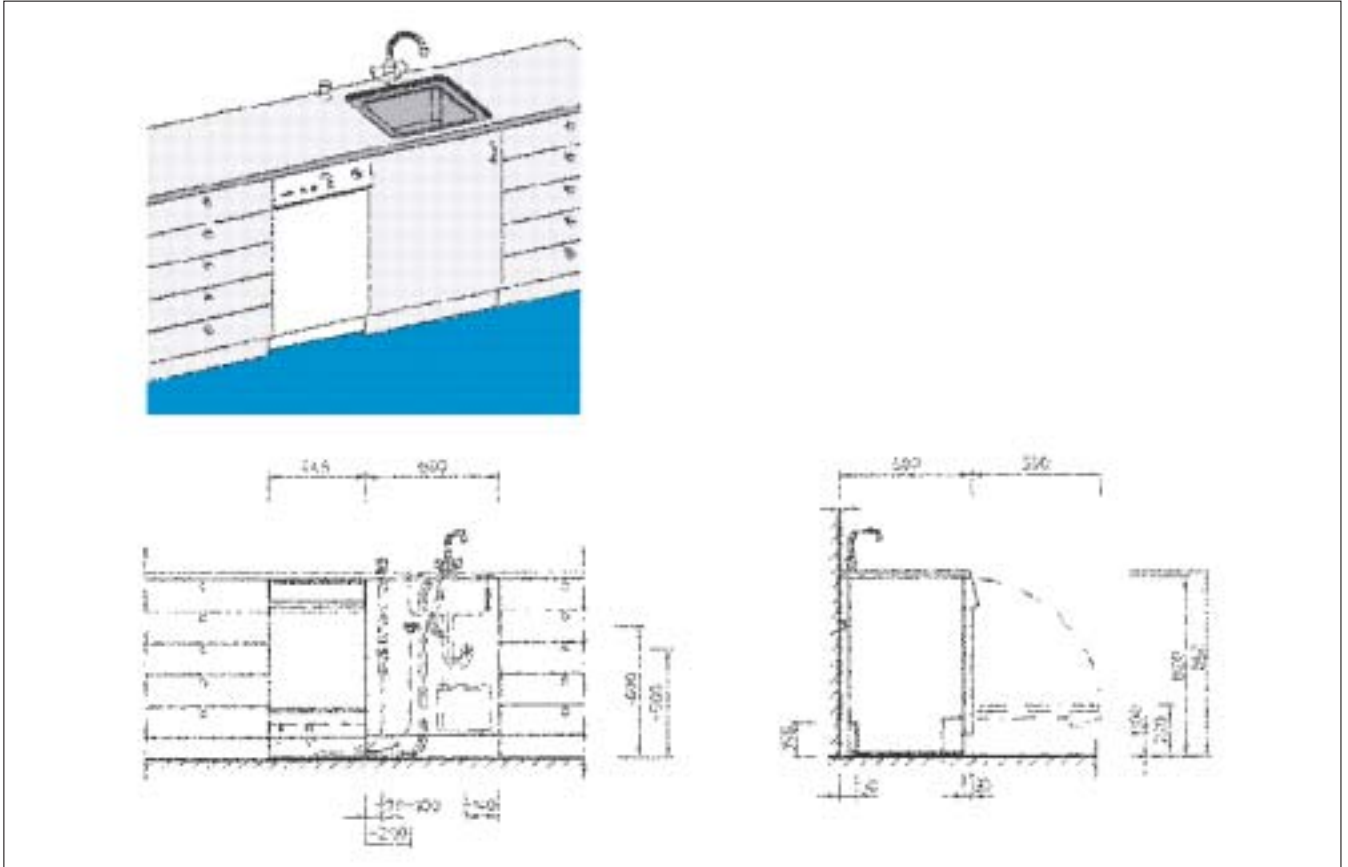


G 7796 DOS-unit

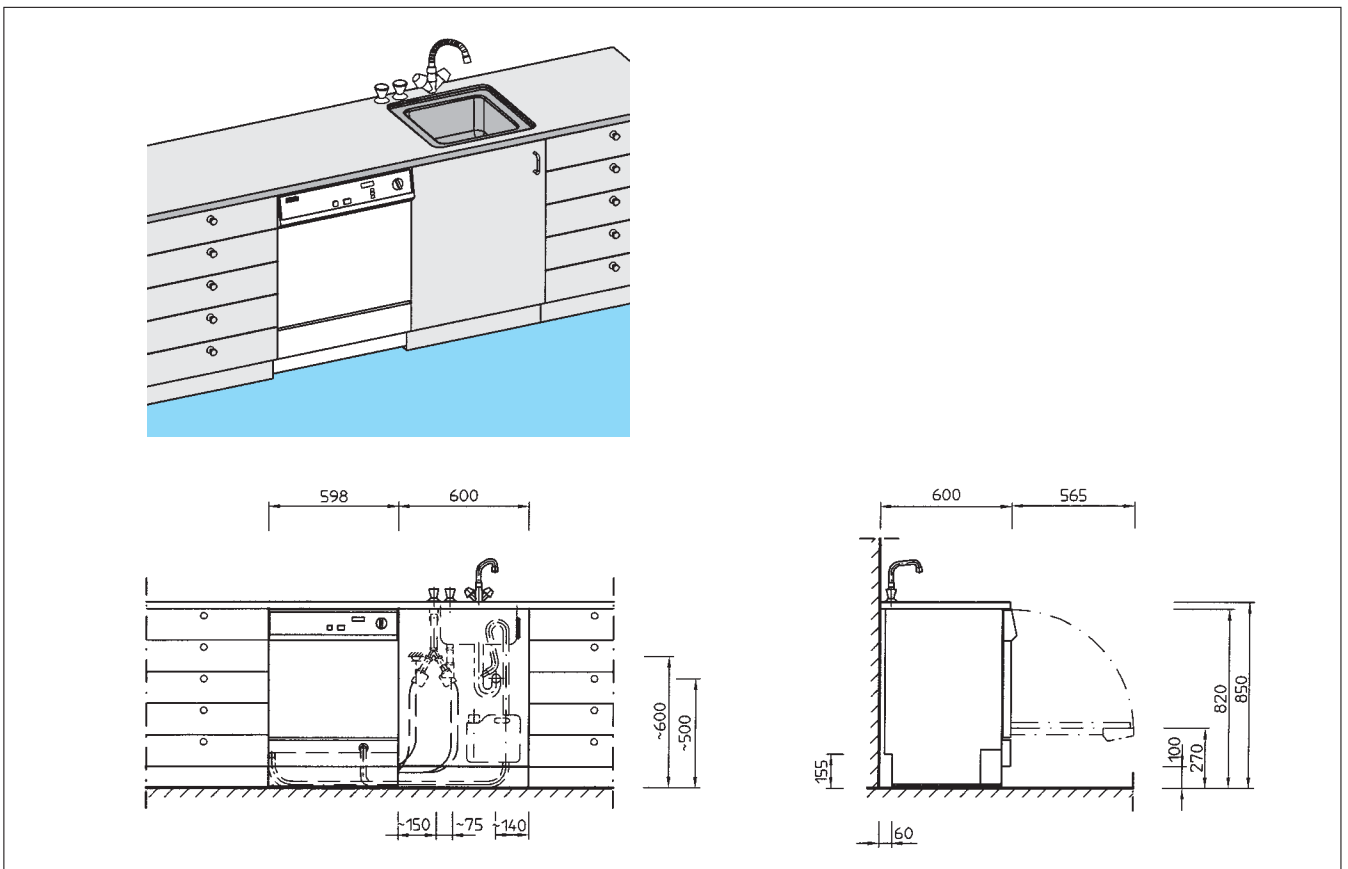
- Supply unit for 1-4 DOS-modules with storage containers
- H 850 (820), W 300, D 600 mm
- Divided into 3 levels
Level 1: Pull-out drawer on telescopic runners for max. 4 DOS-modules. Levels 2 + 3: Pull-out drawer on telescopic runners with drip tray and retainer for storage of 2 x 5 litre containers.
- Internal dimensions:
H 530, W 249, D 480 mm
- Containers with the following dimensions can be used:

Container:	Dimensions (L x W x H)
4 x 5 l	245 x 145 x 225 mm
2 x 10 l	222 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
3 x 10 l	268 x 151 x 350 mm
1 x 20 l	289 x 233 x 396 mm
1 x 25 l	288 x 234 x 456 mm
- Compatible with G 7881 TD, G 7830 TD

Installation







G 7830



G 7881

Technical data

Washer disinfectors	G 7830	G 7881
Controls <ul style="list-style-type: none"> ● Multitronic Novo plus ● Multitronic Novo med 45 ● Electronically controlled gentle start up mechanism 	– ● –	● – ●
Water connection <ul style="list-style-type: none"> ● 1 x cold water, 0.5–10 bar flow pressure ● 1 x cold water, 2.5–10 bar flow pressure ● or: 1 x cold water/1 x AD-water, 2.5–10 bar flow pressure (depending on model) ● Circulation pump ● 1 x Drain pump DN 22, head height 100 cm 	● – – 200 ●	– ● ● 400 ●
Electrical connection <ul style="list-style-type: none"> ● 3 N AC 400 V 50 Hz/AC 230 V 50 Hz ● Circulation pump ● Heater rating ● Rated load ● Fuse rating ● Connection cable approx. 1.6 m long 	–/● 0.2 2.6–2.8 2.8–3.0 1 x 13 3 x 1.5	●/● 0.7 3 x 3/2 x 3 9.7/6.7 3 x 16/1 x 30 5 x 2.5/3 x 4
Dispenser systems <ul style="list-style-type: none"> ● 1 x Combi door dispenser for powder detergent and liquid agent ● 1 x Dispenser system for powder detergent in the door ● 1 x liquid dispenser in the door, adjustable between 1-6 ml ● 1 x DOS 10/30 dispenser pump for liquid acidic agent 	● – ● –	– ● ● ●
Connections for: <ul style="list-style-type: none"> ● DOS module C 60 dispenser for liquid cleaning agents ● DOS module G 60 dispenser for liquid cleaning agents 	● –	– ●
Water softener <ul style="list-style-type: none"> ● WES Profi "Monobloc" for cold water 	●	●
Steam condenser: <ul style="list-style-type: none"> ● Heat exchanger 	●	●
Dimensions, weight <ul style="list-style-type: none"> ● External dimensions H 850 (820) W 450 D 600 mm, wash cabinet H 560, W 362, D 474 mm ● External dimensions H 850 (820) W 600 D 600 mm, wash cabinet H 500, W 535, D 500 mm ● Weight 	● – 58	– ● 70

Programme sequence	Programme name	Machine**	Duration Main wash min	Consumption l	Consumption kWh
Main wash/Disinfection 93°C	DESIN 93°C–10'	G 7830	55	18.8	1.9
	Interim rinse	SPECIAL 93°C–10'	G 7881	43	21.0
	Final rinse				
Pre-wash	DESIN vario TD	G 7830	54	25.3	1.7
	Main wash	vario TD*	G 7881	42	48.0
	Interim rinse				
	Final rinse/Disinfection				
Pre-wash	Intensive 	G 7830	39	23.3	1.3
	Main wash 60°C–3 min.	Universal 	G 7881	28	39.0
	Interim rinse				
	Final rinse 65°C–1 min.				
Freely programmable	–	G 7830	–	–	–
	A	G 7881			
Separate rinse	Cold 	G 7830	4	6.5	0.01
	Cold 	G 7881			

* for machines with AD water connection, consumption is 38.5 l kW and 9.5 l AD-W

** Data quoted for the G 7881 is for a 3 N AC 400 V 50 Hz machine

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