

Operating Instructions. KaVo PROPHYcenter® 1058 P.



Always on the safe side.



KaVo. Dental Excellence.

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A 1 User information

A 1.1 Meaning of the pictograms



Situation which may lead to danger, damage to material or to operating faults if the information is ignored.



Important information for operator and engineer.

A 1.2 Important information



The KaVo PROFHYcenter 1058 P is a dental treatment unit according to ISO 74 94 with a dental chair according to ISO 68 75.



The operating instructions should be read by the user before the unit is put into operation for the first time, in order to avoid incorrect operation and other damage. If further language versions are required, please request these from your responsible KaVo agent.

Duplication and distribution of the operating and assembly instructions/engineers' instructions require the prior consent of KaVo. All technical data, information and properties of the equipment described in these instructions were compiled to the best of our knowledge and correspond to the state on going to press.

The product may be modified on the basis of new technical developments. This does not imply a right to upgrading of existing units.

KaVo assumes no responsibility for damage arising from:

- external effects (poor quality of the media or poor installation),
- use of incorrect information,
- use of the unit for purposes other than the intended purpose,
- improperly performed installation, commissioning and repairs.

The following are authorized to repair and maintain KaVo products:

- the engineers of KaVo agents throughout the world,
- those engineers of the KaVo dealers who have been specially trained by KaVo,
- independent Service Technicians specially trained by KaVo.

The approvals shall become null and void if the unit is modified by third parties.

A 1.3 Requirements for proper technical operation

Responsibility shall be assumed for the safety, reliability and performance of the unit if

- installation, extensions, adjustments, modifications or repairs are carried out by persons trained by KaVo and the installation was reported to KaVo by means of a transfer protocol,
- the electrical installation of the relevant room meets the requirements and specifications according to VDE 0100-710
- and the unit is operated in conformity with the operating instructions.



It is advisable to use only KaVo original spare parts for operation and for repair since these are subjected to extensive tests with regard to their safety, function and specific suitability.

Legal provisions

The general guidelines and/or national laws applicable to medical products, national regulations and the rules of the industry should be applied to the KaVo product for commissioning and during operation in accordance with their prescribed purpose and should be fulfilled.

INTRA LUX motor K200/INTRA LUX motor KL 701

The mode 2 min operation/5 min pause represents the possible limiting load of the motor (full load at maximum speed). In practice, pulsed loads lasting for seconds and pauses lasting for seconds to minutes are realistic, the maximum possible motor current usually not being reached. This corresponds to the usual dental procedure.

A 1.4 Safety checks

■ *PROPHYcenter 1058 P unit system is not approved for operation in areas where there is a risk of explosion.*

■ *Each time before the unit is used, the user must be sure of the operational safety and proper condition of the unit.*

■ *Never continue working with damaged functional parts.*

■ *Instrument tubing may not be treated with adhesive.*

■ *Instrument tubing must be regularly subjected to visual inspection and must be replaced immediately if damaged.*

■ *Repairs to instrument tubing may be performed only by the persons mentioned in Section A 1.2.*

■ *The insufflation of spray air or blown air into open wounds in the operation area must be avoided since otherwise there is the danger of air embolism or cutaneous emphysema.*

■ *Because of stagnation, water- or air-conveying lines in treatment units must be flushed or*

blown through before initial operation and after standing times (weekend, public holiday, vacation, etc.). Remove every hand-piece/motor (without attached instrument) from the holder and operate alternately with water and air.

■ *Operate the tumbler filler several times.*

■ *After the end of the treatment, remove rotating instruments from turbines, straight and contra-angle handpieces and treatment heads.*

■ *Never change the scaler tip without a key – risk of injury and infection.*


■ *Before leaving the practice, switch off the main switch.*

■ *In the case of new installations and after maintenance work, interventions and repairs on the product, the unit must be made ready for operation in accordance with VDE 0751-1 (according to the state of the art) before being put into operation again.*

Further annual measures:

Visual inspection based on DIN EN ISO 6875, DIN EN ISO 7494 and DIN EN 60601-1 for:

- Mechanical stability of the unit
- Proper movement sequences of the components of the unit
- Stability and mechanical intactness of the spring arms
- Intactness of the housing claddings and covers
- Penetrated moisture and abrasion of the connections

 *To ensure continuous availability and value of your KaVo treatment unit we suggest that you have it serviced, by a qualified KaVo Service Engineer, annually.*


During the maintenance work, all safety devices should be checked by the service engineer:

- Braking and locking devices
- End positions and stopping devices of moving parts
- Safety system of the building water connection according to DIN 1988-4 and DIN EN 1717

Interference with electromedical equipment by radio telephones

To ensure the operational safety of electromedical devices, it is advisable to prohibit the operation of mobile telephones in the area of the practice or clinic.

Cardiac pacemakers

 *Risks caused by electromagnetic fields.*

Electromagnetic fields may interfere with the functions of implanted systems (such as pacemakers).

Consult the patient before treatment.

References:

- Machtens, E.: Die zahnärztliche Behandlung von Patienten mit Herzschrittmachern.
Dtsch. zahnärztl. Z. 38: 1048 - 1052 (1983).
- Wahl, G.: Diskussionsbeitrag zu Machtens zur Beeinflußbarkeit von Herzschrittmachern in der zahnärztlichen Praxis.
Dtsch. zahnärztl. Z. 42: 11 -16 (1987)
- Aderhold, L. , J. Kreuzer:
Untersuchungen zur Beeinflußbarkeit von Herzschrittmachern in der zahnärztlichen Praxis.
Dtsch. zahnärztl. Z. 42: 11 - 16 (1987)


Electromagnetic compatibility

In accordance with legal stipulations governing electromagnetic compatibility (EMC -DIN EN 6061-1-2, of October 2002), we must point out that:

- Electrical medical devices are subject to special EMC safety measures and, as a result, the KaVo Assembly instructions must be closely adhered to.
- Portable and mobile high-frequency electronic communications equipment may interfere with electrical medical devices.
- Further information about technical electromagnetic compatibility requirements can be provided upon request.

Disposal of wastes and residues from the unit and the accessories at the end of the service life

The resultant wastes should be recycled or disposed of in such a way that they present no danger for people and the environment, the applicable national regulations being complied with. In the event of queries, please contact your nearest KaVo agent (see Overview A 1.6).

 *Please note that the EC Directive on waste electrical and electronic equipment applies to this product. Within Europe therefore, this product must undergo special disposal.*

Full processing (disinfection /_sterilisation) must be performed before disassembly / disposal of the product, as laid down in the "Processing Methods" Section.

For more detailed information about this, please contact KaVo or your specialist dental supplier.

A 1.5 Purpose and potential applications

Instruments

Motors and turbines, as well as straight and contra-angle handpieces, are designed only for dental treatment.

It is therefore necessary to consult the appropriate information in the respective instructions for the instruments.

For technicians' work where a pressure higher than that during work in the oral cavity is required, for example when grinding prostheses, etc., a special technicians' machine must be used. Stronger bearings have been used in these machines.

Dental chair


The maximum load of 135 kg for the lifting movement must not be exceeded.

Loading of the tray support

The maximum loading of the table tray supports is dependent on the instruments used.

In principle, the following basic values (free load) may be assumed:

1058 T dentist's element	2 kg
Assistant's tray support	1 kg

 *These values must not be exceeded.*

A 1.6 Customer Service

Technical support for the KaVo equipment is provided by your dental depot.

The dental depot engineers trained by KaVo constantly take part in training courses and special advanced training courses at the factory and are familiar with the entire KaVo product range.

In order to ensure that the KaVo equipment is always ready for operation and maintains its value, the recommended maintenance services should be regularly performed.

In Germany, it is mandatory for all operators, equipment supervisors and handlers to operate equipment in compliance with the stipulations of the German Medical Devices Act. Maintenance services incorporate all the testing activities stipulated in § 6 of the German Ordinance on Operating Medical Devices (MP Betreiber V).

In the event of queries, please contact:

KaVo Dental GmbH

Customer Service Center

Bahnhofstr. 20

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Germany

Tel.: 0 73 51 - 56 0

Instruments Division Tel.: 0 7351-56 1500

Equipment Division Tel.: 0 7351-56 2500

In the event of queries, always indicate the exact unit type designations and serial numbers.



A 2 Description of unit

A 2.1 Dental chair

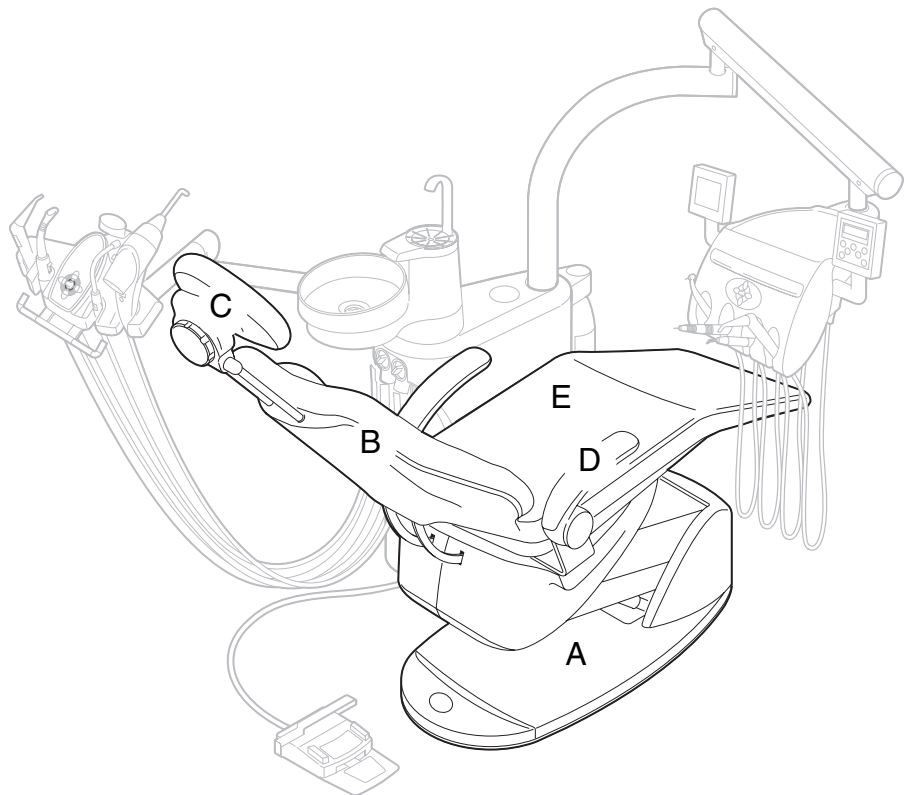
A Chair base

B Backrest:

C Headrest:

D Arm rest

E Seat



A 2.2 Dental chair COMPACTchair

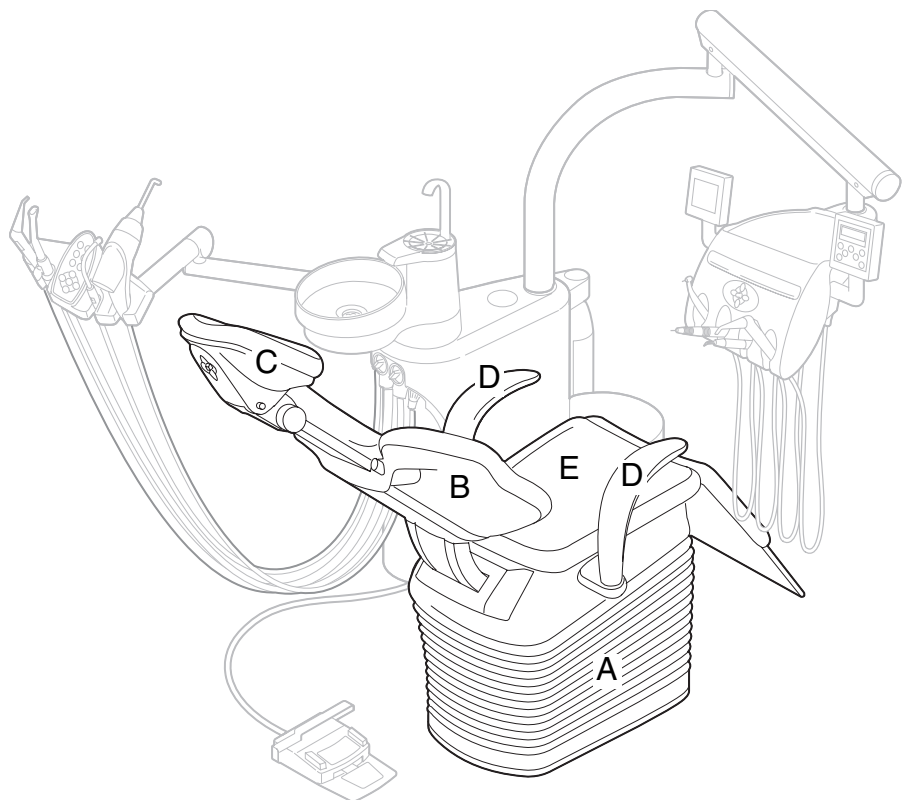
A Chair base

B Backrest:

C Headrest:

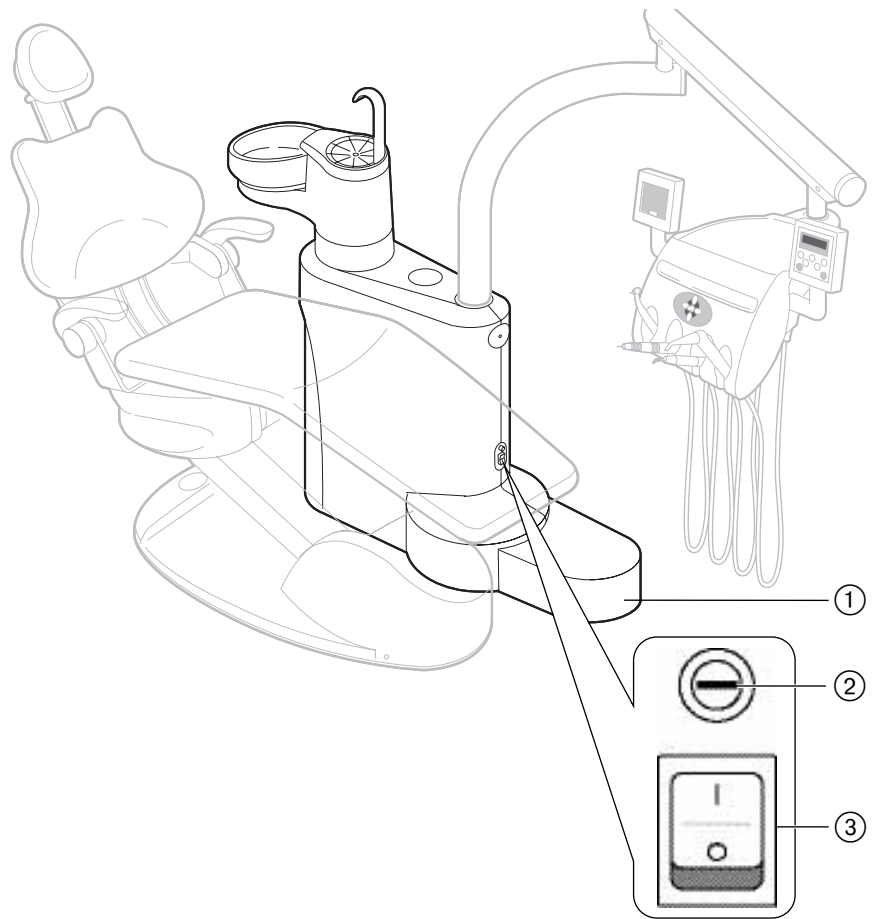
D Arm rest

E Seat



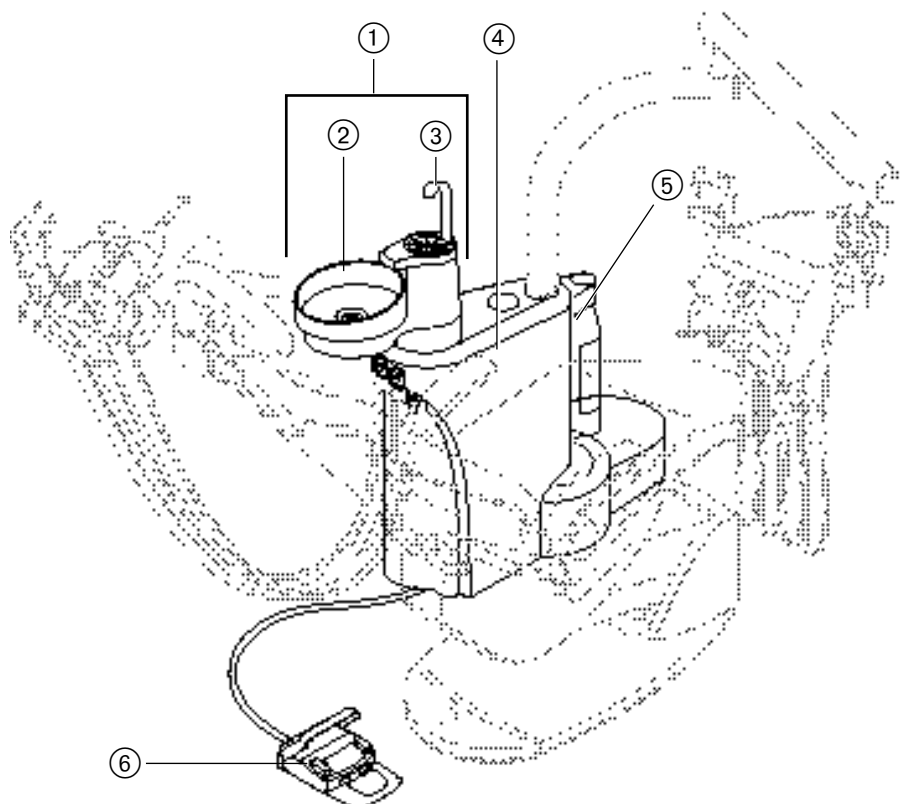
A 2.3 Unit base

- ① Supply element
Connection of electrics, water, compressed air, wastewater and suction air to the building installations
- ② Main fuse
- ③ Main switch



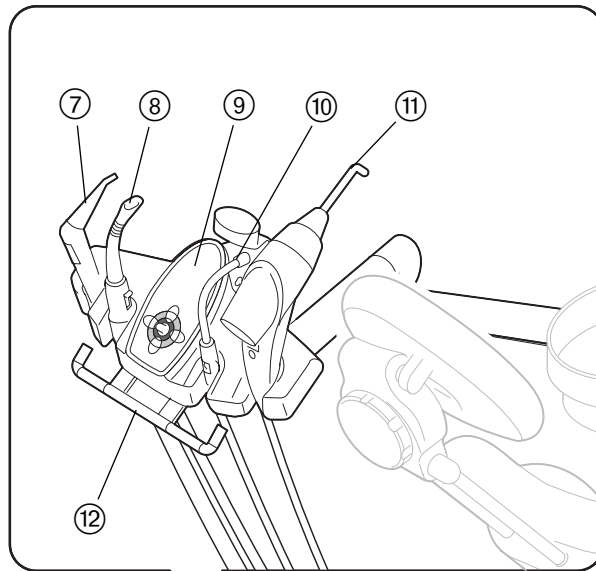
A 2.4 Unit body with patient's part

- ① Patient's part
- ② Spittoon
- ③ Tumbler filler
- ④ Unit body
The central control is housed in the unit body.
- ⑤ Pressurised water bottle (optional extras)
- ⑥ Multifunction foot control



A 2.5 Assistant's element

- ⑦ Three-or multifunction handpiece
- ⑧ HV suction
- ⑨ Control panel
- ⑩ Saliva ejector
- ⑪ POLYlux II handpiece
- ⑫ Suction tubing guide (kit)



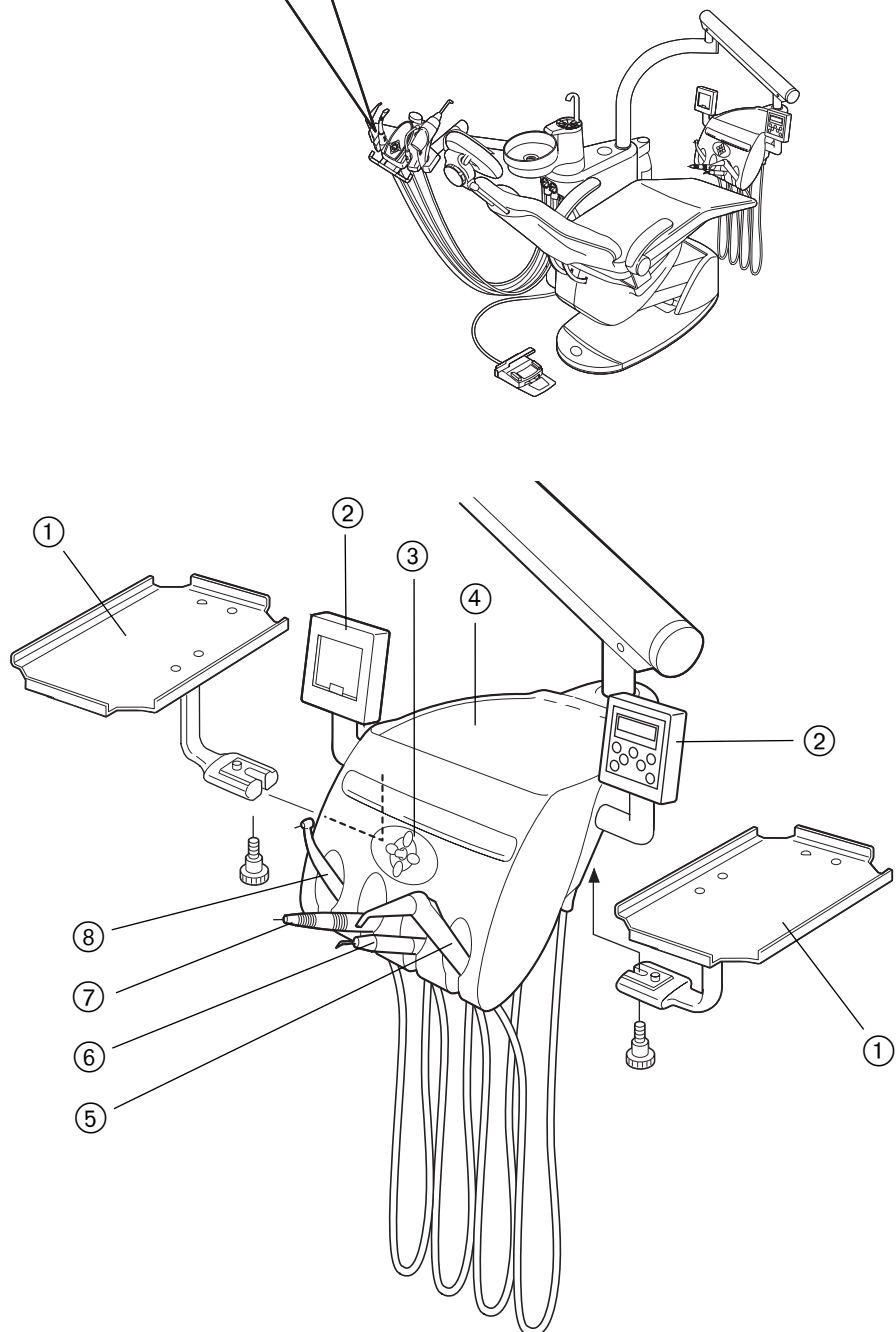
A 2.6 Dentist's element

- ① Control panel
- ② Memospeed or Compact X-ray viewer
- ③ Tray support
- ④ Keypad and display
- ⑤ Three-or multifunction handpiece
- ⑥ Either PIEZOlux or Multiflex connection
- ⑦ Either INTRA K-LUX 200 motor or INTRA KL 701 motor
- ⑧ Multiflex connection

i The arrangement of the instruments at positions ⑥, ⑦ and ⑧ can be changed if desired. Position ⑤ is available exclusively for the three-function or multifunction handpiece.

KaVo recommends using the following to protect the paintwork on the dentist's element:

Tray, small, stainless **Mat. No. 0.228.3016**
 Instrument tray
 Standard **Mat. No. 0.719.1070**
 U.S. tray **Mat. No. 0.725.8152**



A 2.7 Control panel

i The meanings of the indicator lamps and the functions of the joystick on the control panels of the dentist's element and of the assistant's element are identical.

Indicator lamps

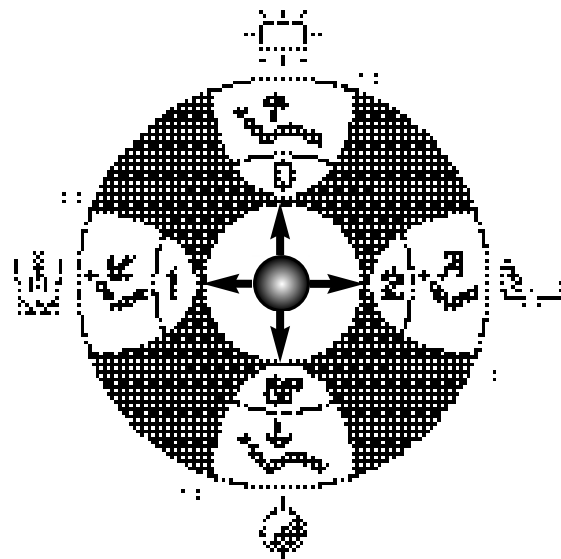
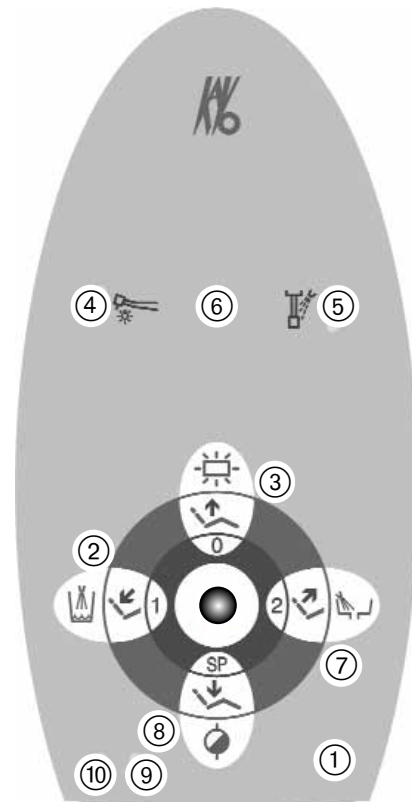
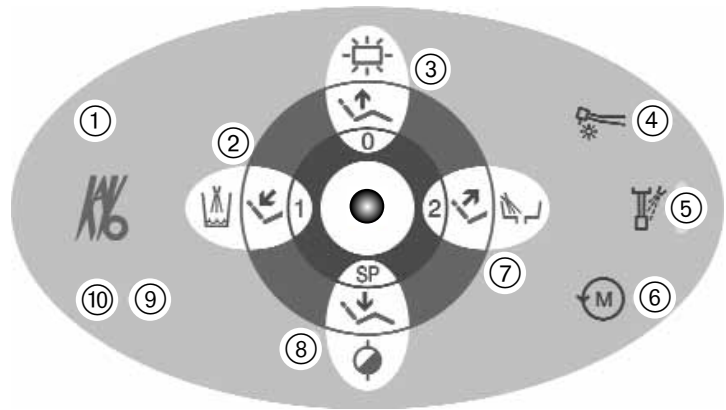
i ⑨ and ⑩ are interchanged on changing the memory level.

- ① Automatic chair position LP
- ② Automatic chair position 1
- ③ Automatic chair position (0)
- ④ Preselection of cold light on instrument
- ⑤ Spray preselection on instruments (green: water, yellow: air)
- ⑥ Motor counterclockwise preselection
- ⑦ Automatic chair position 2
- ⑧ Automatic chair position SP
- ⑨ Fault indicator (dentist 1 level) Power indicator (dentist 2 level)
- ⑩ Power indicator (dentist 1 level) Fault indicator (dentist 2 level)

Joystick

i Every movement of the joystick is responsible for several functions depending on duration. By briefly pressing the joystick, the AP mode is activated.

- Up** Short: X-ray viewer on/off
Long: seat up
AP mode: automatic position 0
- Left** Short: tumbler filler
Long: backrest down
AP mode: automatic position 1
- Right** Short: flush spittoon bowl
Long: backrest up
AP mode: automatic position 2
- Down** Short: Hydroclean on/off
Long: seat down
AP mode: automatic position Rinse



A 2.8 Rating plate and type plates

Rating plate

The rating plate is in two parts. One part is mounted on the outside of the unit base and shows several pictograms. The other part is mounted on the inside of the unit above the central control board and provides information about the customer's connected loads, also see technical data in the Appendix.

These connected loads are the same for all unit models.



■ The different power consumptions are based on the different states of the units when delivered.

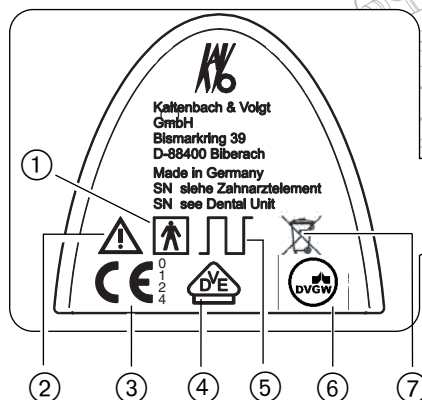
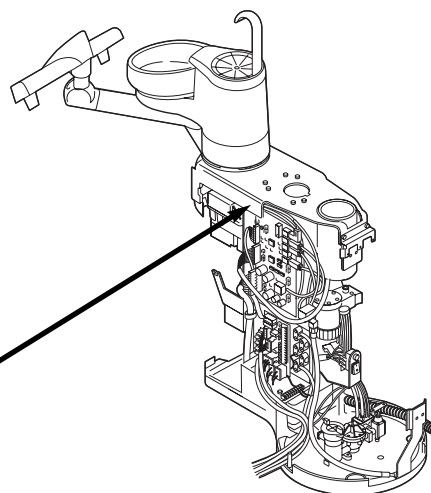
For a connected load of 100 - 130 V, the dental chair motor can only be operated in series.

■ The COMPACTchair has an operating voltage of 100 - 240 V and its tasks always operate in parallel.

Meaning of the pictograms:

- ① Classification
Dental handpieces are application parts type BF
Dental patient chair is an application part type B
- ② Note: See accompanying documents.
- ③ CE mark according to 93/42/EEC
Medical Products
- ④ VDE approval symbol
- ⑤
Dental chair operating time: 25 sec
Dental chair pause time: 300 sec
The permissible operating times correspond to the dental procedure
- ⑥ DVGW approval symbol
(Deutscher Verein des Gas- und Wasserfaches e.V.)
- ⑦ For information about proper disposal, see intended purpose

AB- Gerät:	1.002.2109
SN:	????????
230 V ~	50/60 Hz
(100-130 V)	30-800 VA
(220-240 V)	30-1000 VA



Type plate

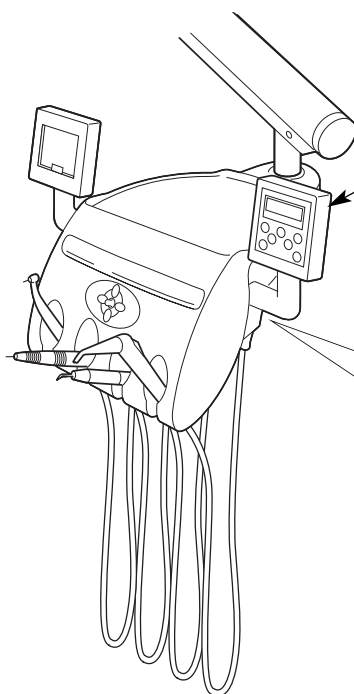
The type plate provides information on:

- | | |
|------|----------------------------------|
| Type | Version of unit |
| SN | Serial number |
| REF | Material number |
| ⑧ | Year of manufacture (e.g. 2002) |



■ Modifications which may impair safety are illegal.

■ In the event of faults or complaints, these values must always be stated in order to avoid unnecessary queries.



BF

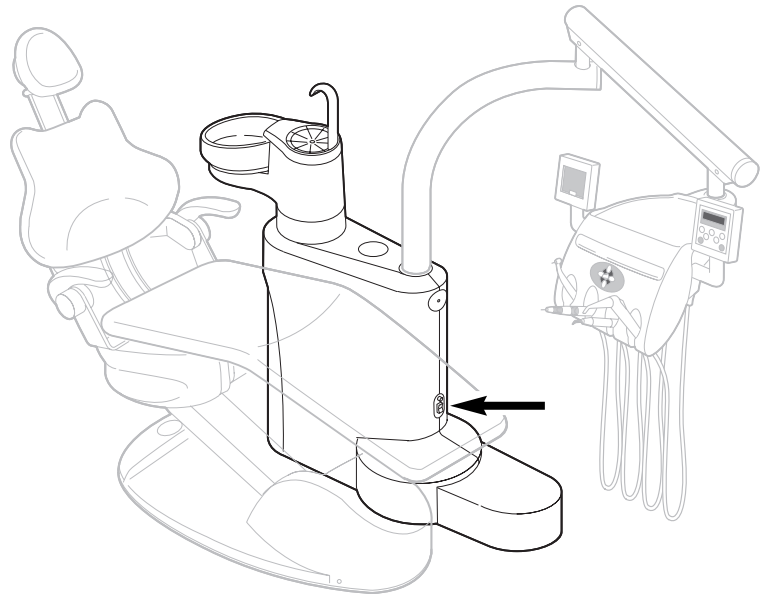


⑧

A 3 General operation

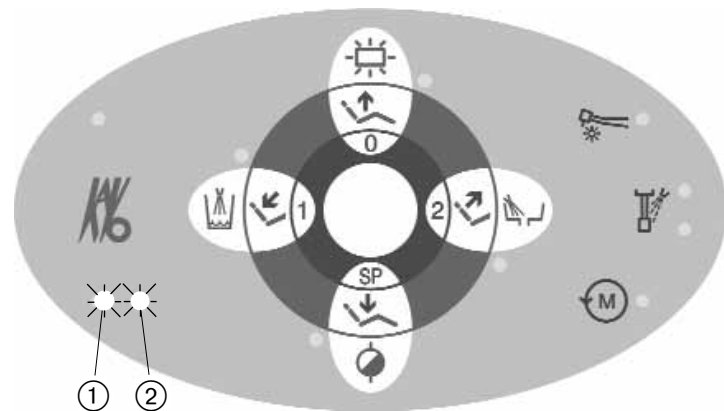
A 3.1 Main switch

Operate main switch.



Once the unit is ready for operation, this is indicated by the indicator lamps:

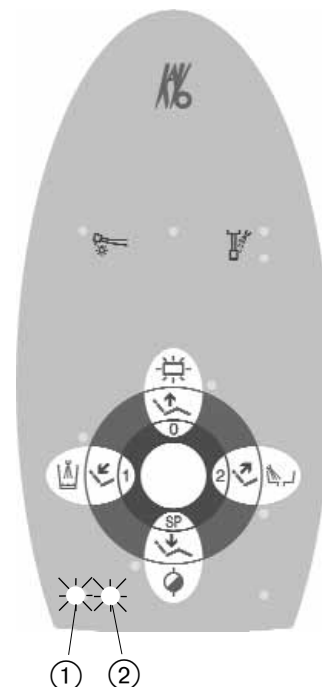
- LED ① (green) lights up:
Memory level dentist 1 is active.
- LED ② (yellow) lights up:
Memory level dentist 2 is active.



The main switch has the following functions:

- connecting all poles of the unit electrically to the mains network of the building or disconnecting it from this network.
- connecting the compressed air and water supply of the building via the solenoid valves or compressed air control installed in the unit or disconnecting these supplies.

⚠ Before leaving the practice, it is essential to switch off the main switch in order to avoid any water damage.



A 4 Operation of multifunction foot-control

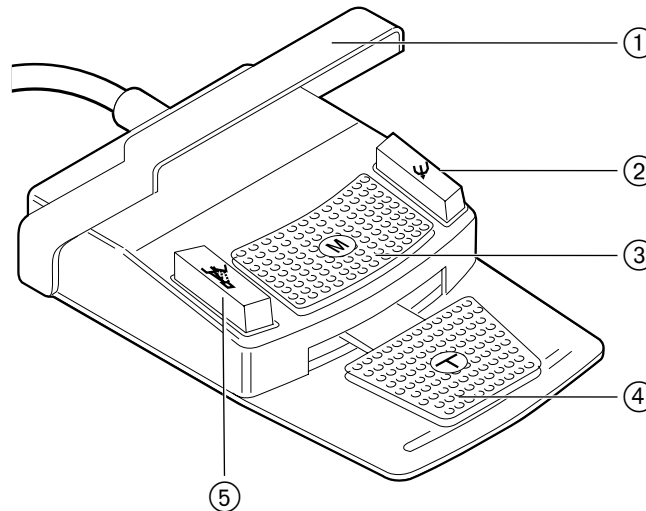
A 4.1 Control elements

- ① Carrying handle with switch for safety-cut-out and switching for chair movements with instrument picked up
- ② **With turbine/motor instrument replaced:**
Automatic position of dental chair
With turbine/motor instrument picked up: Air blast key
- ③ **With turbine/motor instrument replaced:**
Intermediate switch for operating the dental chair

With instrument picked up:
Motor counterclockwise preselection or instrument light preselection
- ④ **With turbine/motor instrument replaced:**
Video freeze-frame generation if Ergocom is installed and the camera is used.

With turbine/motor instrument picked up:
Foot switch for starting the instruments and for speed/intensity regulation of the instrument
- ⑤ **With turbine/motor instrument replaced:**
Automatic position of dental chair

With turbine/motor instrument picked up:
Spray preselection key



i The operation of the multifunctional-foot control for operating the instruments is described in Section A6, Operation of dentist's element.

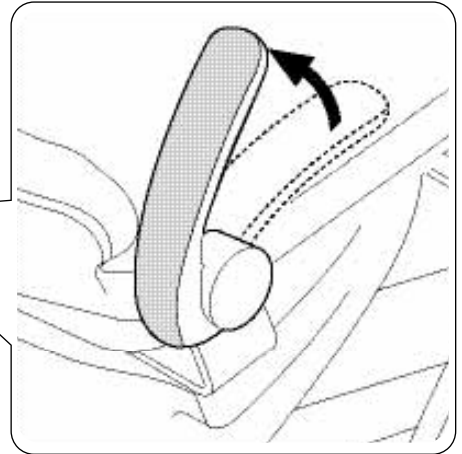
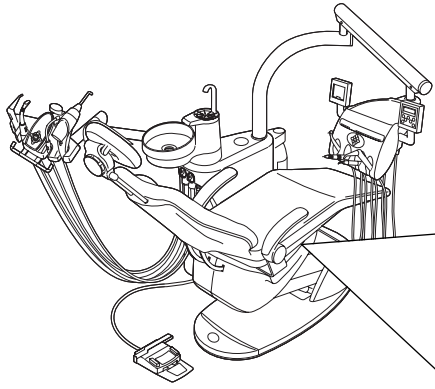
A 5 Operation of dental chair

A 5.1 Arm rest

To make it easier for the patient to get into the dental chair, the arm rest can be swivelled upwards.



When treating children, make sure that their sitting position is correct. If the patient's hands are improperly positioned, the fingers can be pinched between the backrest and armrest when raising the chair from the treatment position.



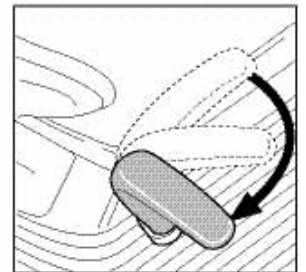
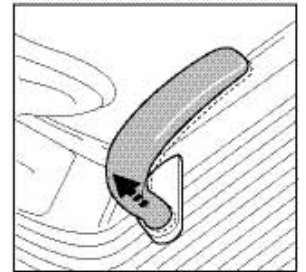
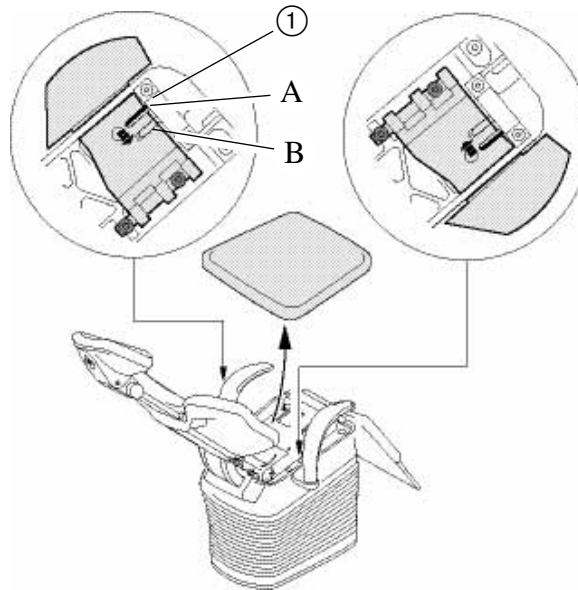
A 5.2 Arm rest for COMPACTchair patient chair (additional equipment)

To enable the patient to climb onto the patient's chair more easily, the arm rest can be swivelled outwards.



■ The arm rest on the unit body side must be fixed, i.e. the locking lever must be in position A in order to avoid accidental swivelling out and hence a collision.

■ To prevent collisions between the arm rest and the unit body, the locking lever ① must be appropriately remounted



Position A

Pivotability of the arm rest blocked

Position B

Pivotability of the arm rest possible

A 5.3 Primus patient chair seat adjustment for treating children



By tilting the seat, a level reclining surface for treatment of the upper jaw is enabled, especially useful when treating children of different heights.

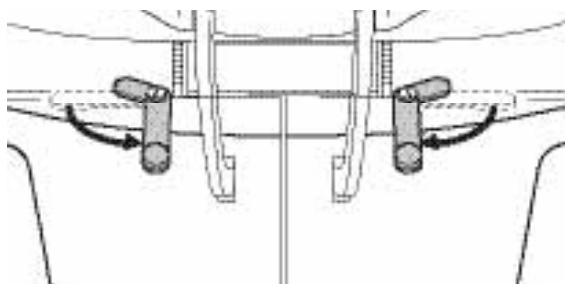
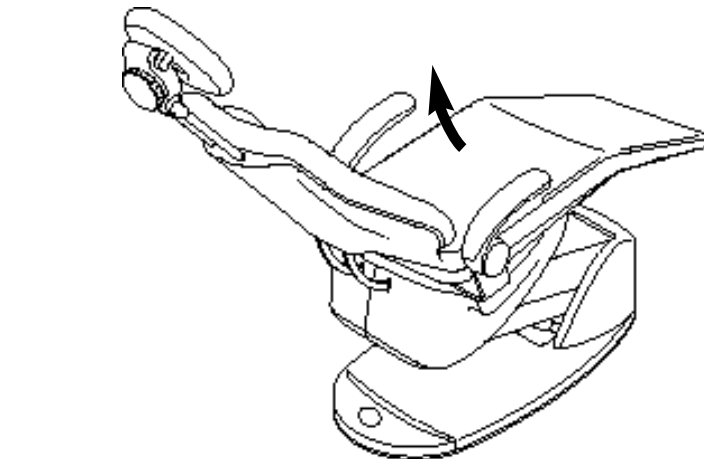
Slacken lever and tilt seat to the required position.

Three locking positions are available.

Locking is performed in a direction opposite to that indicated by the arrow.



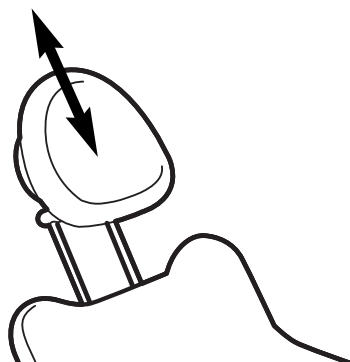
Check that the locking device is locked securely in place.



A 5.4 Operation of the headrest

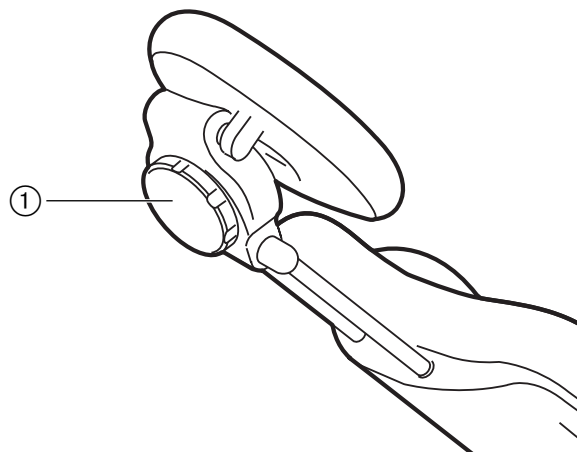
Height adjustment

Push headrest in or pull it out to suit the patient's height.



Swivelling

Turn clamping knob ① counterclockwise.
Bring headrest to desired position.
Turn clamping knob clockwise to clamp.

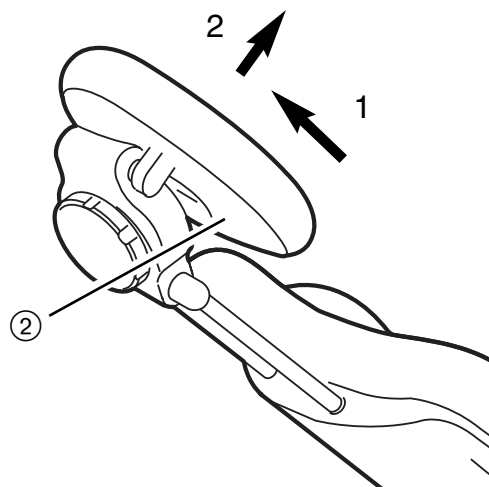


A 5.5 Removing the head upholstery

The upholstery of the headrest is removable.

Unscrew screw ②.

Pull upholstery slightly upwards and remove in a forward direction.

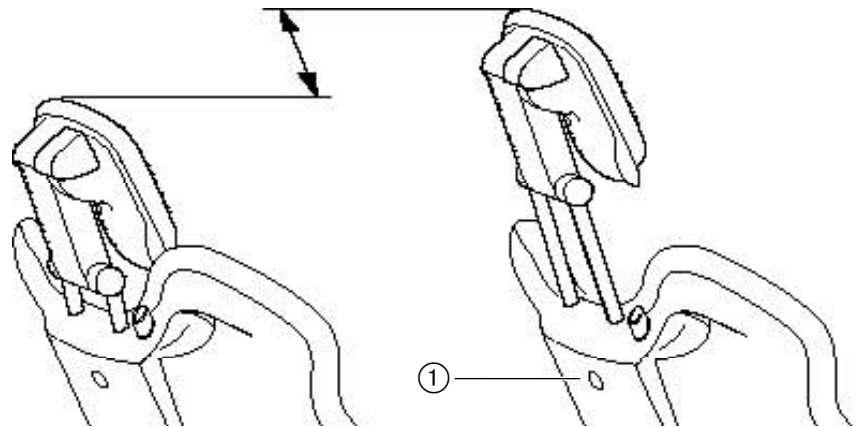


A 5.6 two-joint headrest (COMPACTchair patient chair)

Height adjustment

Push headrest in or pull it out according to patient's height. For this purpose, the locking knob 2 must be pressed.

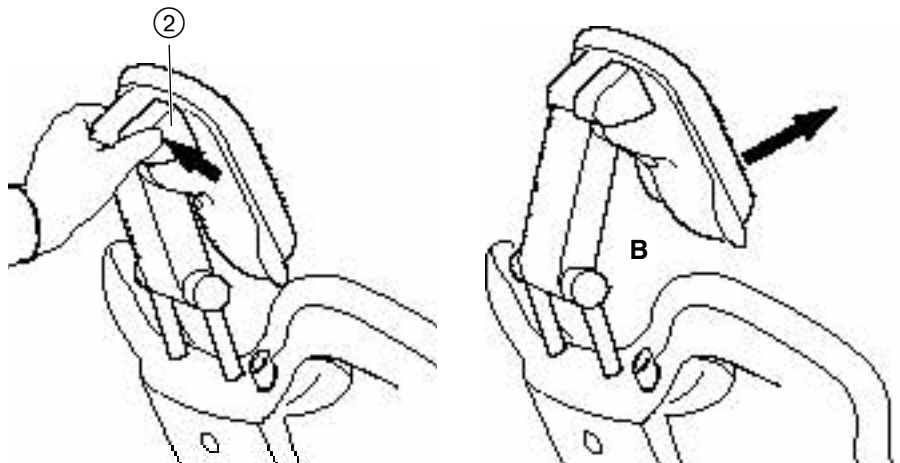
i Service Technicians can adjust the braking effect at attachment screw ① (using a 3mm Allen key).



Swivelling

Press locking knob ② and swivel head support to desired position.

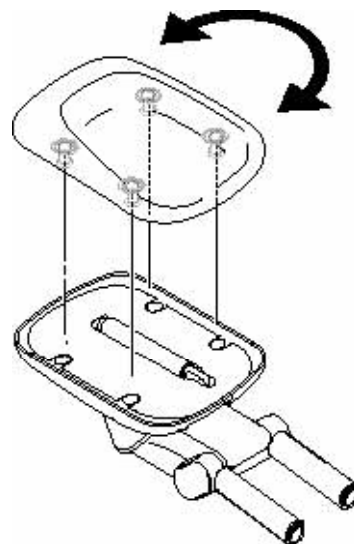
i When swivelling back, ensure that no object is in area B.



Turning the head upholstery

The upholstery of the double-jointed headrest is rotatable. It can thus be turned for better neck support as well as for the treatment of children.

Pull off upholstery evenly, turn through 180° and snap on again.



A 5.8 Safety cut-out

To avoid collisions when movements of the dental chair have been activated, special safety cut-outs are installed.

These safety cut-outs are intended to protect people from injury and the treatment unit from damage.

Dental chair and multifunction foot control

- ① Backrest
- ② Cover on seat back segment
- ③ Seat
- ④ Underside chair parallelogram
- ⑤ Articulating („break-leg“) part
- ⑥ Armrests
- ⑦ Stirrup on multifunction foot control

Unit body

- ⑧ Assistant's element
- ⑨ Patient's part swivelled over the dental chair

An actuated safety cut-out is indicated by flashing of the corresponding LED.

The safety cut-outs terminate the instantaneous movements of the dental chair immediately.

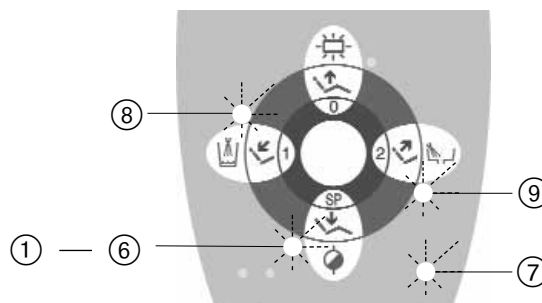
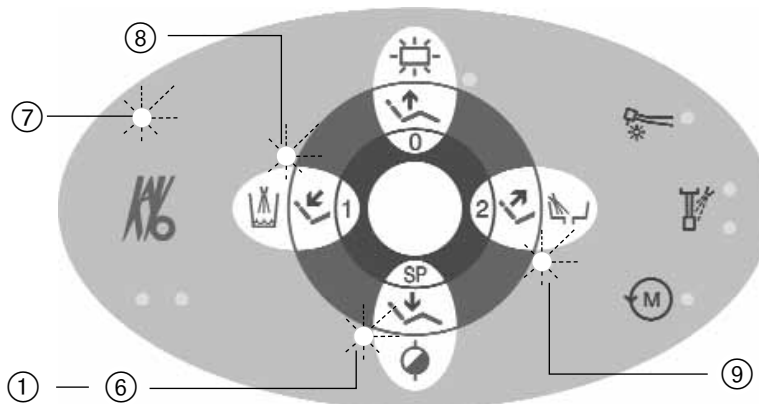
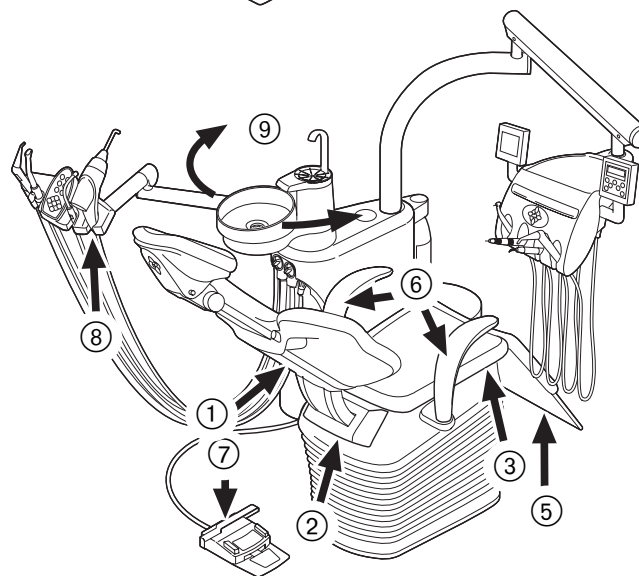
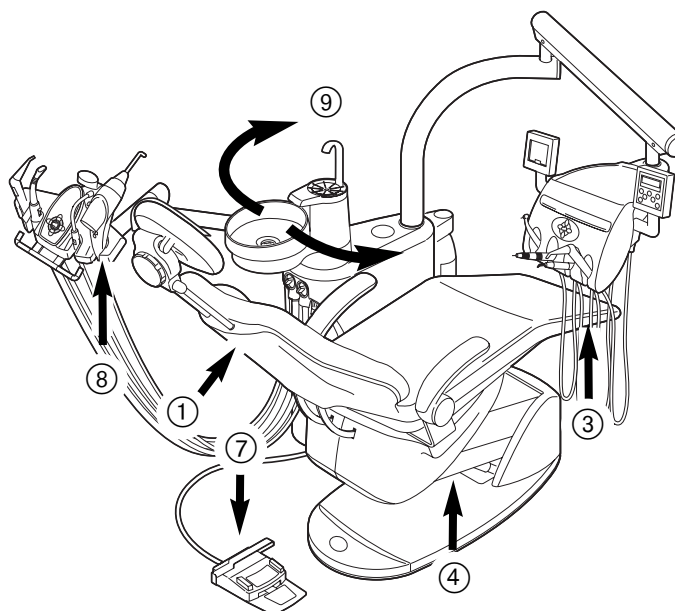
A change in position is not possible when safety cut-outs are active.

Exception:

The safety switch ⑥ only stops the upward and downward movement of the dental chair.

The up/down movement of the backrest can be activated.

⚠ In a few specific positions of the assistant's element relative to the dental chair, collisions may occur. It should be ensured that the assistant's element does not enter the range of movement of the dental chair. The sequence of chair movements must be monitored by the practice personnel.



A 5.9 Motor support (optional) for COMPACTchair headrest/patient part



The movement sequences of the motor assistance are set at the

factory. During commissioning or repairs, these settings should be checked with the aid of the following descriptions and if necessary adjusted.

Operation of the patient's component

The position of the patient's component is saved together with the chair position.

Two memory positions are available:

1. Storing with SP

The patient's component swivels to the rinse position after the end of the chair movement.

2. Storing with AP0 or AP1 or AP2

The patient's component swivels to the rest position before the sequence for the automatic position.

Storage:

Set chair position.

Swivel patient's component to desired position.

Press AP key on which the position is to be stored until a signal is heard.



The patient's component can also be swivelled manually.

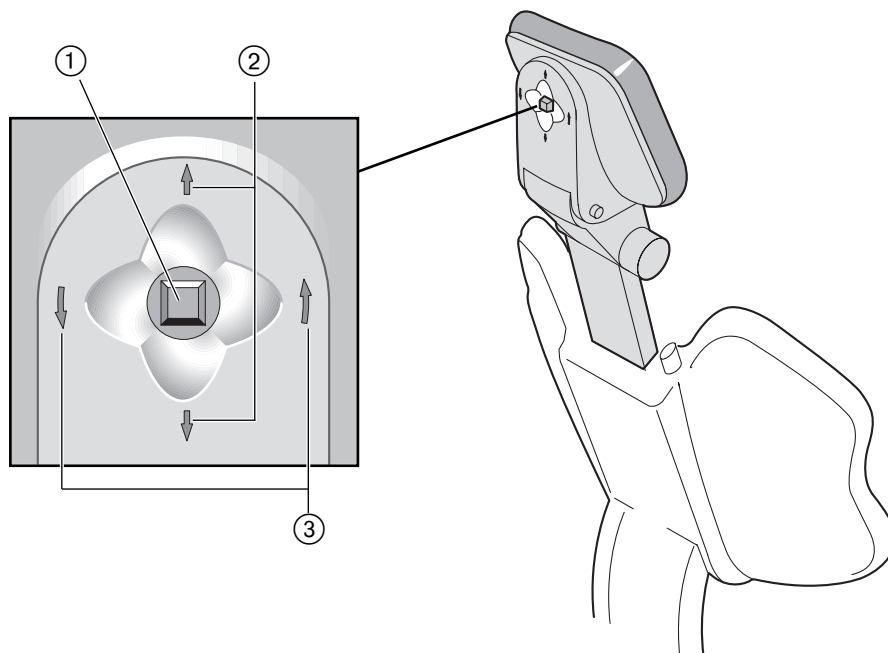
Operation of the headrest

i The motor assistance for the headrest makes it possible to position the patient optimally by means of a few manipulations. The patient's head is moved anatomically correctly through the compensated movement sequence.

The patient can be positioned manually using the joystick switch ① or by means of the preset AP.

A brief description follows here in order to ensure error-free operation and to demonstrate all possibilities of this headrest.

The headrest is operated in 4 directions using the soft silicone joystick switch. In addition, the joystick has two special functions which will be explained later. As indicated by the arrows, the stem length ② (straight arrows) and the inclination ③ (curved arrows) can be adjusted.



Special function 1

By pressing the joystick switch ① once, the position for small persons is approached (compensation off). This is displayed by flashing of the AP LEDs. Without compensation, each axis can be moved independently. In the AP sequence, the headrest does not travel. When the joystick switch ① is pressed once again, the headrest travels to a programmed standard position. The AP positions of the headrest are now available again.

Special function 2

When the joystick switch ① is pressed twice (like a double click on a PC mouse), the headrest travels to the AP for the treatment of children.

Treatment of children

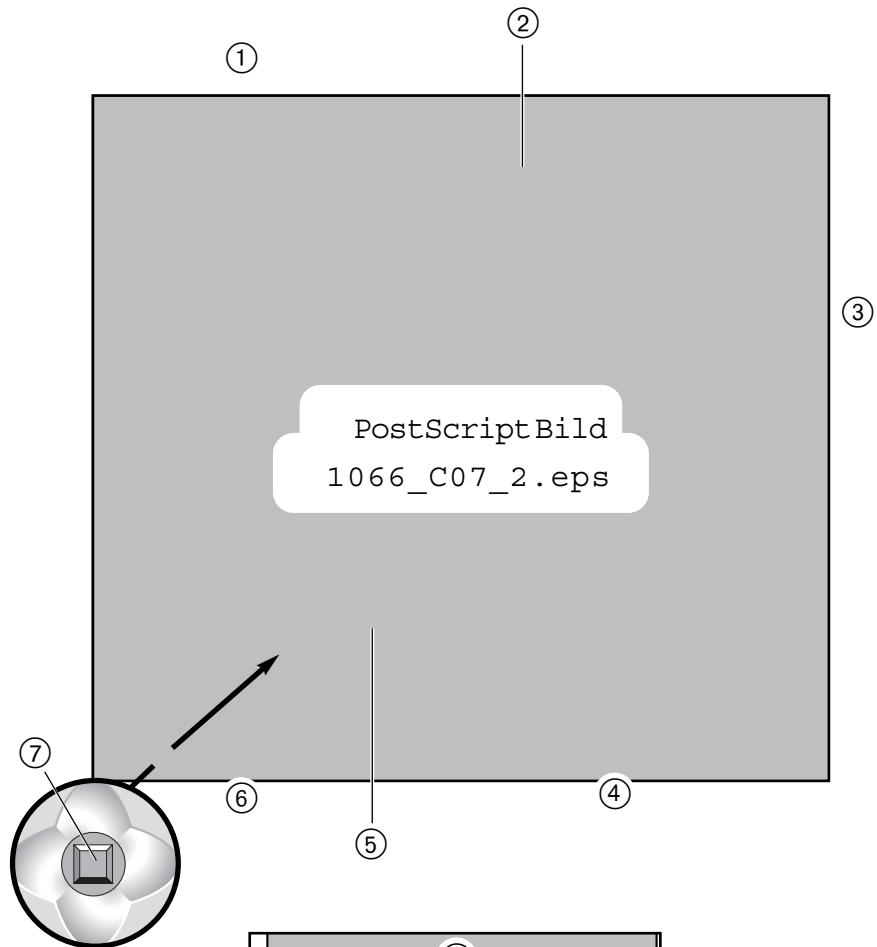
⚠ *Never adjust the inclination with the button ④ depressed!*

For the treatment of children, this headrest is equipped with a special function which makes it possible to position the head upholstery in a continuous plane with the back upholstery.

To do this, the joystick switch ⑦ is operated by double clicking (as described in the introduction).

The headrest travels to the AP for children (stem length fully inwards ③). The fixed headrest ⑤ is released by means of the pushbutton ④. Now tilt ⑥ this headrest so that it is in line with the backrest and snap in. The stem length ③ can still be changed. Once the headrest has reached its position, the turnable upholstery ② should be turned ① so that the flat part points towards the backrest.

When swivelling back manually (press pushbutton ④), the standard starting position is approached and all functions are available again.



Programming

Bring chair and headrest to desired position and then store on the selected AP-0 to AP-2 and SP.

Patient sitting in the chair

Adjust stem length individually for each patient using the joystick switch.

Treatment

Approach treatment position by means of stored APs. If necessary, make manual correction.

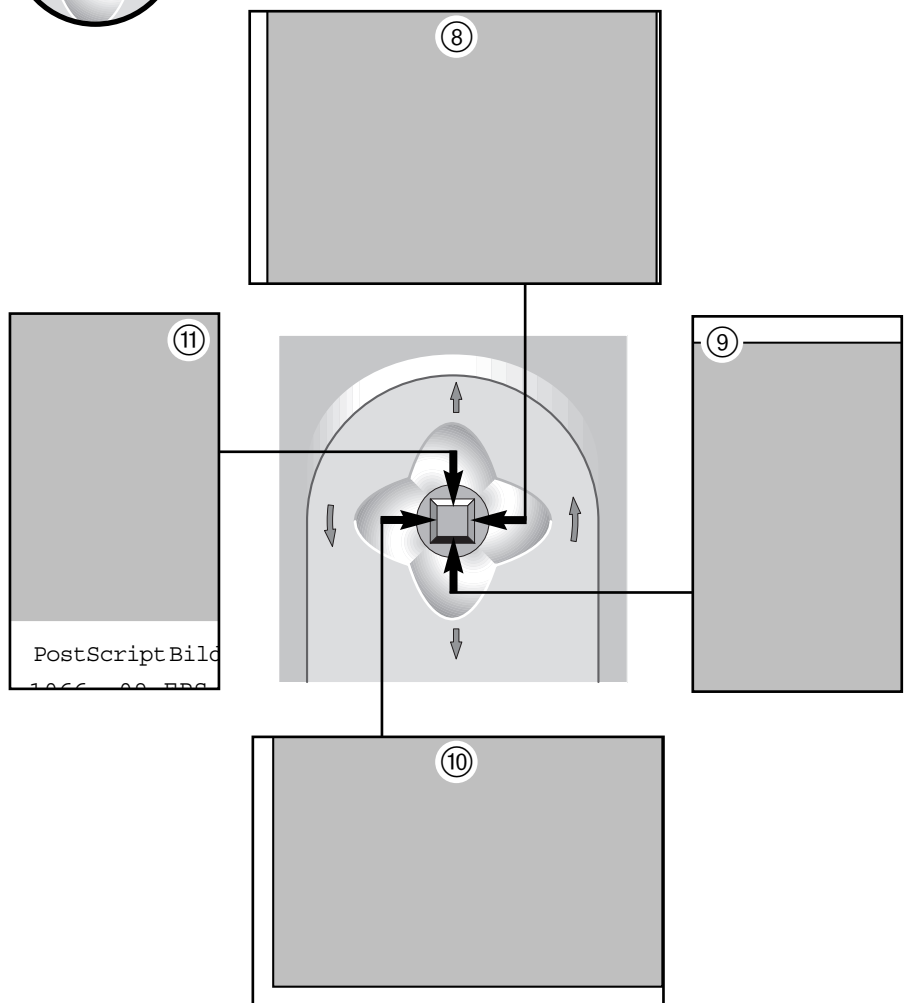
Operation of joystick/positions of the headrest

Stem length large ⑨

Stem length small ⑪

Upper jaw treatment
(Compensated sequence) ⑧

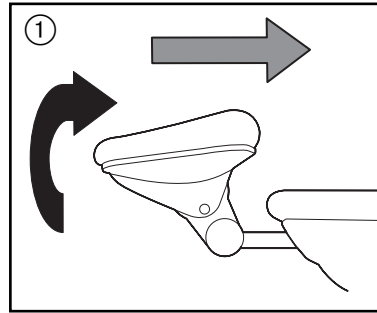
Lower jaw treatment
(Compensated sequence) ⑩



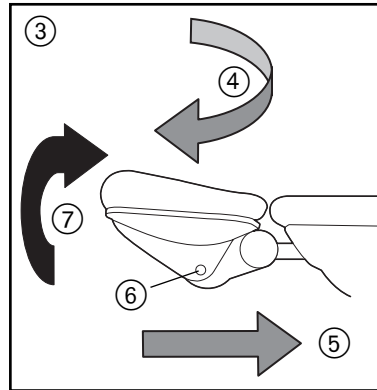
Small persons (persons with rounded back)

①

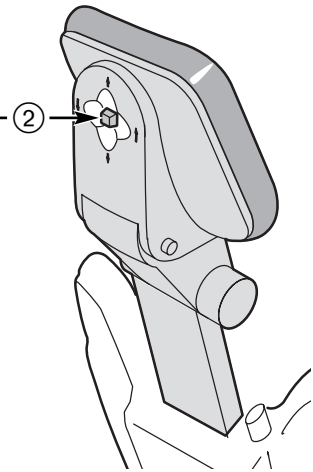
- Single click on the joystick switch ②.
- Programmed position is approached.
- Compensation off. This is indicated by flashing of the AP LEDs.
- All axes can be operated independently by means of the joystick switch.
- With another single click on the joystick switch ②, the standard starting position is approached and all functions are available.



1x



2x



Children's position (continuous plane) ③

- Double click on the joystick switch ②.
- Programmed position is approached.
- Swivel ⑦ headrest manually by means of pushbutton ⑥.
- Turn ④ upholstery manually.
- Only stem length correction ⑤ possible by means of joystick switch ②.
- When swivelling back manually (press pushbutton ⑥), the standard starting position is approached and all functions are available.

A 5.10 Adjustment of the chair positions

i The chair position can be set either with the joystick on the control panel of the dentist's or assistant's element or with the multifunctional foot control.

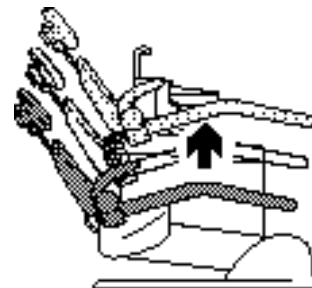
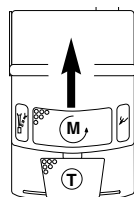
Move the joystick in the appropriate direction and hold

or

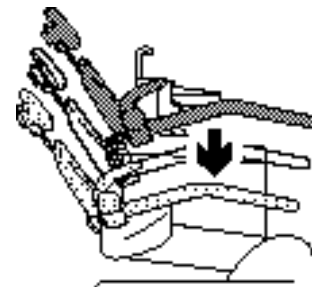
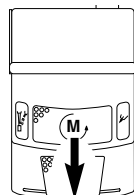
push the intermediate switch on the multifunctional foot control in the appropriate direction.

Seat and backrest can be moved simultaneously by means of the joystick and intermediate switch.

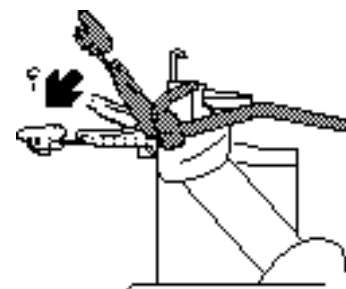
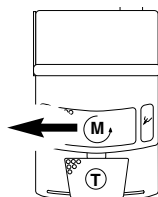
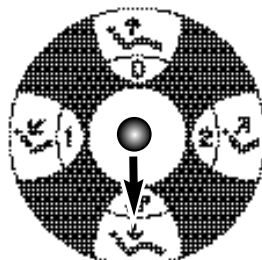
i However, a precondition for this is the dental chair be operated with a voltage of 220 -240 V.
Also see Section A 5.9 Special chair functions



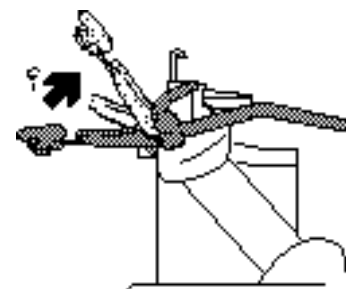
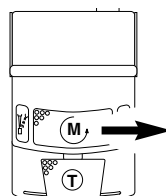
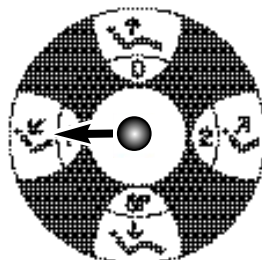
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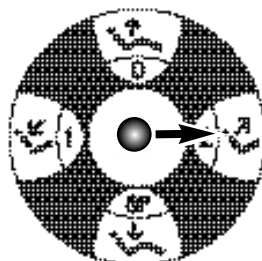
or



or



or



A 5.11 Chair position adjustment for COMPACTchair



■ When adjusting the COMPACTchair position, follow exactly the same procedure as for the Primus patient chair.

■ The „break-leg“ seat cannot be moved independently.

It is moved in unison with the backrest.

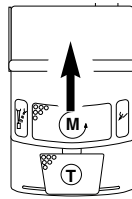
The fold-up footrest enables further lowering of the patient chair.

RThe seat back can be set to an almost fully vertical (85°) position.

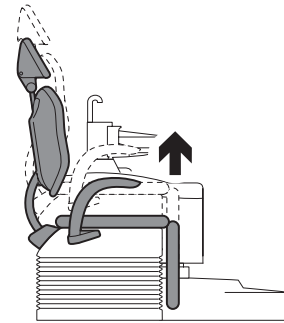
This considerably facilitates patient access and comfort.



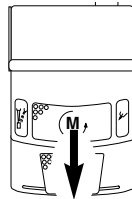
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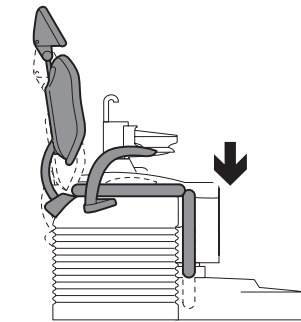
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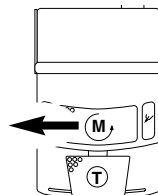
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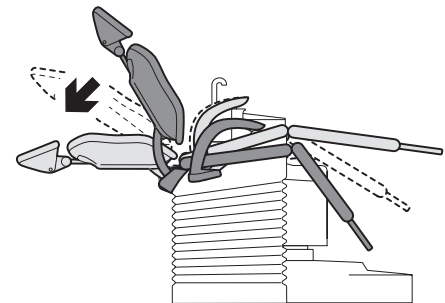
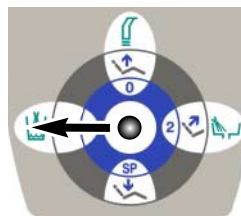
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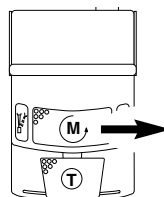
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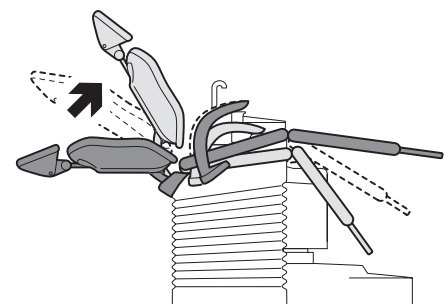
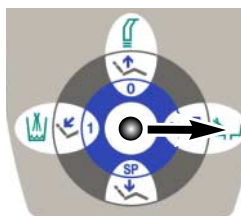
or



or



or



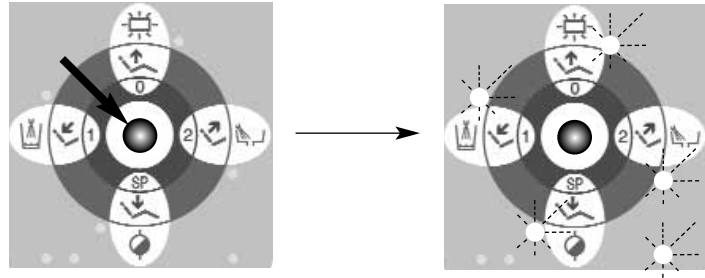
A 5.12 Calling up automatic chair positions

⚠ *The sequence of automatic chair movements must be monitored by the practice personnel.*

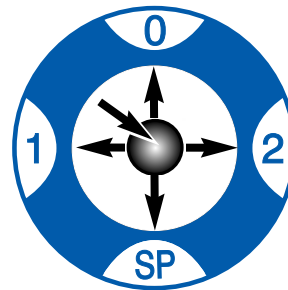
Five automatic positions can be called up on the control panel on the dentist's and assistant's element, and two by means of the keys on the multifunctional foot control.

On the control panel

Press the joystick briefly.
LEDs flash for approx. four seconds.



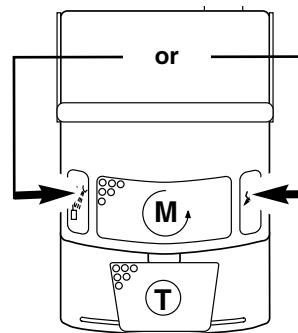
During this time, move the joystick in the appropriate direction or press once again for the automatic position LP (last position).



On the multifunctional foot control

- With turbine/motor instrument replaced:

Press the spray preselection key or air blast key on the multifunctional foot control.



- With turbine/motor instrument picked up:

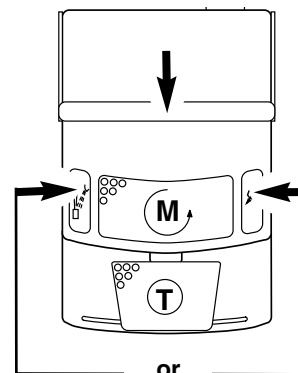
Operate the switch in the handle on the multifunctional foot control.

Chair functions of the keys on the multifunctional foot control are activated.

Press the spray preselection key or air blast key.

The dental chair travels to the stored automatic position.

To deactivate the chair functions of the keys on the multifunctional foot control, operate the foot switch.

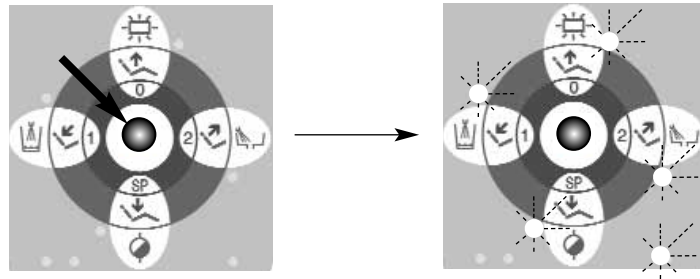


A 5.13 Storing chair positions

Move the dental chair to the desired position.

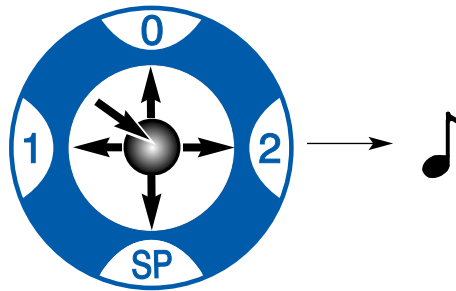
Storing on the control panel

Press joystick briefly.
LEDs flash for approx. four seconds.



During this time, move the joystick in the appropriate direction or press once again for the automatic position LP (last position) until a signal is heard.

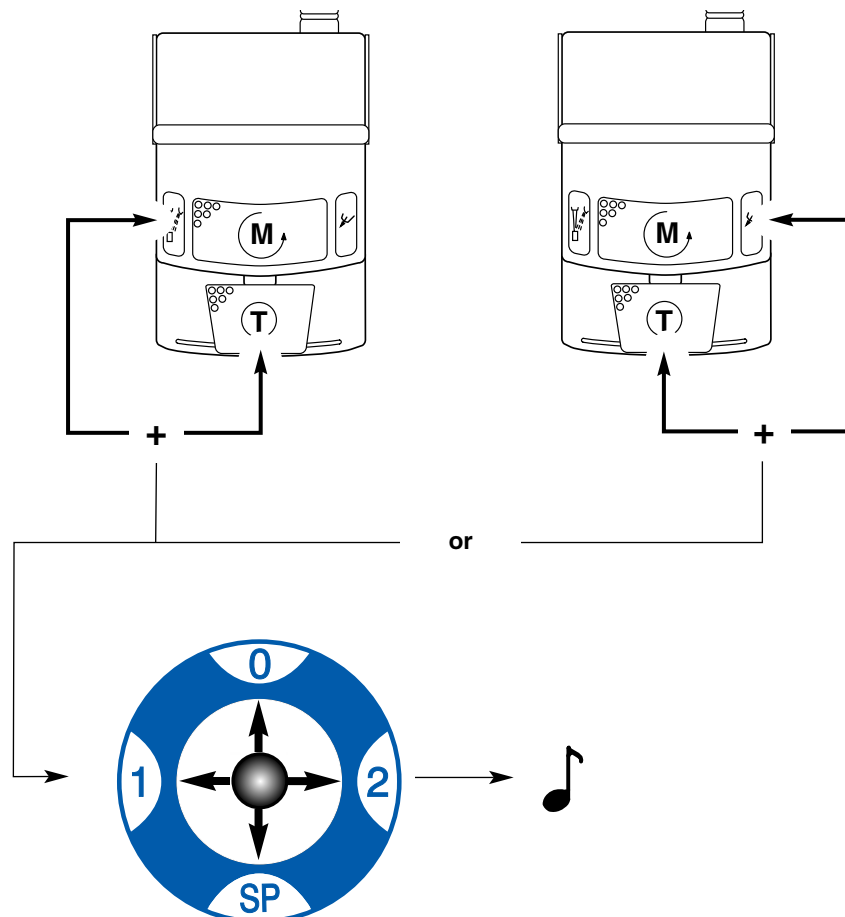
The automatic position is saved under the chosen designation.



Assign automatic positions to the spray preselection and air blast keys on the multifunctional foot control.

Simultaneously operate the foot switch and desired AP key on the multifunctional foot control on which the position is to be saved. During this time, push the joystick in the direction of the desired automatic position until a signal is heard.

The automatic position is saved.



Standard setting

Spray key: Automatic position LP
Chip air key: Automatic position SP

A 5.14 Special chair functions

At an operating voltage above 200 V, the spindle motors can be operated in parallel, i.e. chair movement and backrest movement occur simultaneously in the automatic program.

At an operating voltage below 200 V, the **movements** in the automatic program **must take place in succession** owing to the power consumptions.

The conversion is performed by a service engineer.

The **COMPACTchair** has an operating voltage of 100 - 240 V and its **tasks always operate in parallel**.



The lifting motor and backrest motor are provided with thermal fuses.

The motors are switched off at an operating temperature of 140 °C.

Depending on the ambient temperature, the cooling phase takes about 15 minutes.

After the end of the cooling phase, the lifting motor and backrest motor are ready for operation again.

In customary operation in the practice, such temperatures are not reached.


In demonstrations and exhibitions, the cut-out temperature may be reached in the event of frequent operation, particularly in the case of the lifting movement (about 8 complete movement sequences).

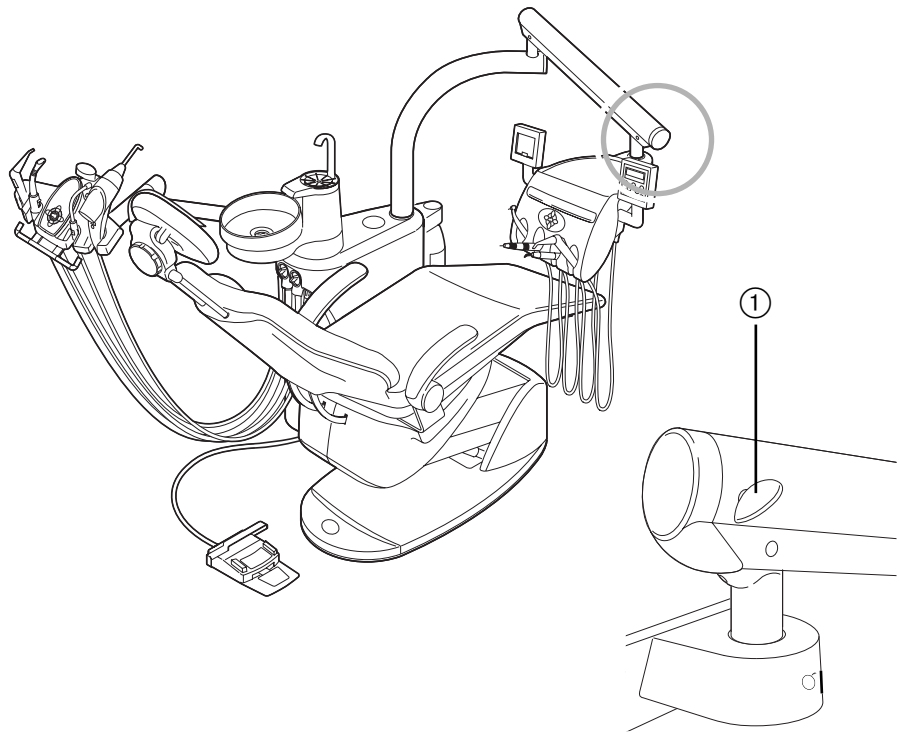
A 6 Dentist's element

A 6.1 Movement of the dentist's element


The swivel range of the dentist's element is limited by stops.

Adjust the height of the dentist's element with the spring arm brake ① released.

 *Do not pull the dentist's element into position by the instrument tubing.*



A 6.2 Switching between the memory level dentist 1 / dentist 2

 *To be able to set the instrument parameters individually with different treatment types, it is possible to select two dentist's levels when the instruments have been set down.*

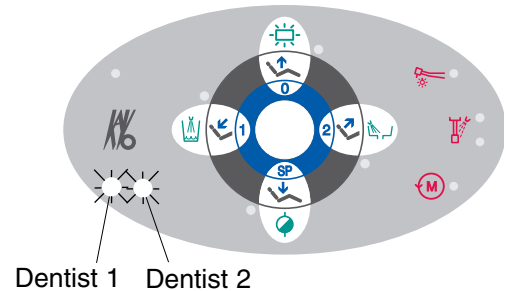
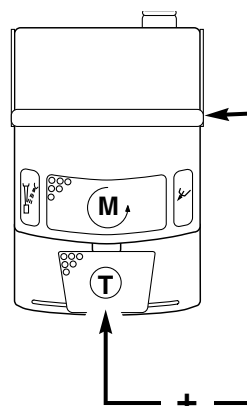
Dentist's level 1: Green LED lights up.
Dentist's level 2: Yellow LED lights up.

Switching on the multifunction foot control:

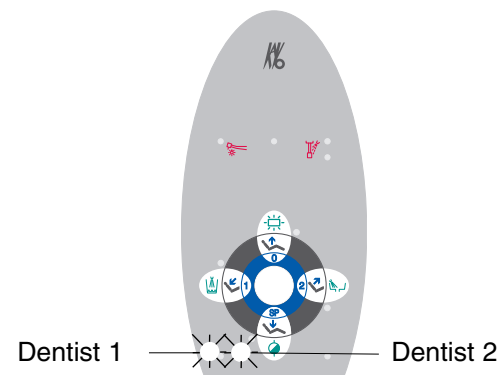
Keep the foot switch depressed and additionally operate the stirrup switch.

Switching on the Memospeed control (optional extra):

Press the level preselection key on Memospeed until a signal is heard.



Dentist 1 Dentist 2



Dentist 1 Dentist 2

A 6.3 Spittoon bowl and tumbler filler

i Operation of the mouth wash basin and of the tumbler filler is performed with the joystick on the control panel of the dentist's or assistant's element and if required in combination with the multifunctional foot control.

Spittoon bowl

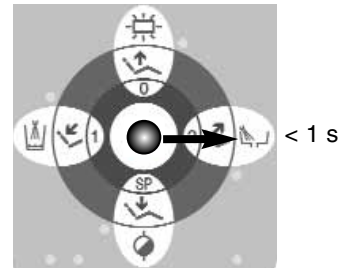
Push the joystick briefly to the right. The spittoon bowl is flushed.

Switch off flushing again:

Push the joystick once again briefly to the right

or

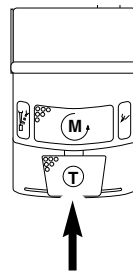
after reaching the set time.



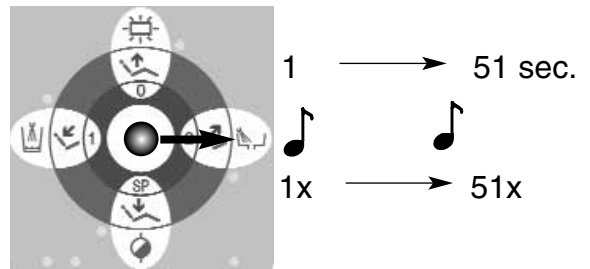
Time setting

Press the foot switch and keep it depressed. Push the joystick to the right and hold it there until a signal is heard at one second intervals.

Each tone corresponds to one second. After the desired time has been reached, release joystick and pedal.



+

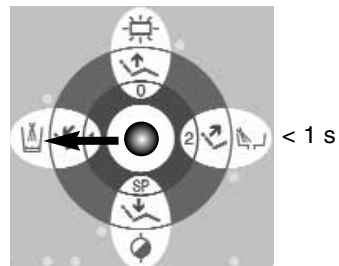


Maximum time: 51 sec.

Tumbler filler

Push the joystick briefly to the left. The tumbler is filled.

The further procedure and the time settings are identical to those for bowl flushing.

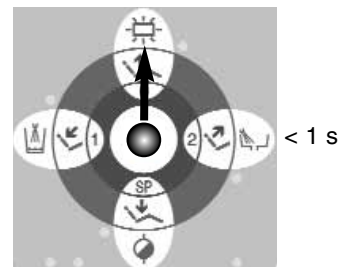


A 6.4 X-ray viewer (kit)

Push the joystick briefly upwards. The X-ray viewer comes on.

Switch off X-ray viewer again:

Push the joystick briefly upwards again.



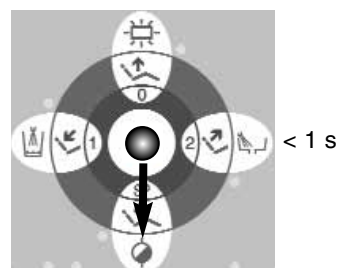
A 6.5 Hydroclean

i For the Hydroclean function, also see the care instructions for the unit.

Push the joystick briefly downwards. The Hydroclean function is switched on.

Switch off Hydroclean function again:

Push the joystick briefly downwards again.



A 6.6 Priority circuit

All instruments, except for three-function-handpiece, on the dentist's element are protected from simultaneous use by a priority logic circuit.

Only the instrument first removed is ready for operation.

All instruments subsequently removed cannot be activated.

On these instruments, it is now possible to change e.g. bur or PIEZOlux tips.

A 7 Settings and handling of the instrument

The following instrument-specific settings can be made and (except for the speed) can be saved:

Turbine: -Speed

- Speed mode (only with Memospeed)
- Cooling state
- Cold light on/off
- Cold light intensity

KL 701 motor /

INTRA K motor: -Speed

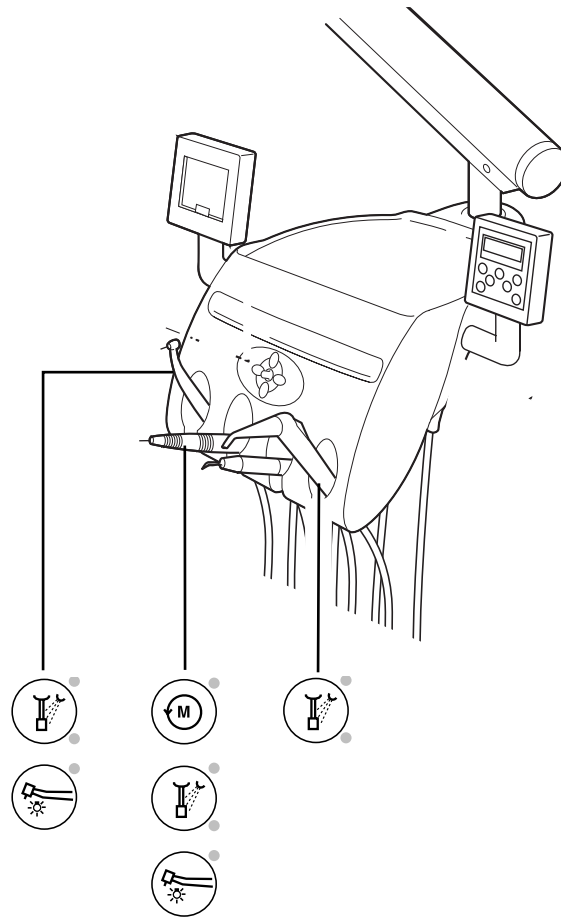
- Speed range (only with Memospeed)
- Cooling state
- Cold light on/off
- Cold light intensity
- Motor direction

PIEZOlux: -Intensity (only with Memospeed)

- Cooling state (only with appropriate setting in the service mode, group 9)
- Cold light on/off
- Cold light intensity

Multifunction-

handpiece: -Heating and cold light ON/OFF



■ Instrument settings which are not saved are lost when the unit is switched off.

■ When Memospeed is installed, there are additional possibilities for setting and saving instrument-specific values. The possibilities for setting and saving which exist without Memospeed, are retained.

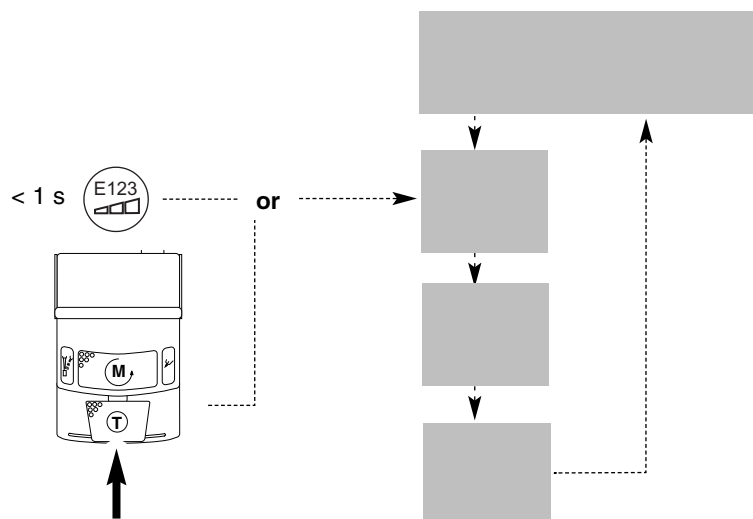
A 7.1 Memory level selection with Memospeed (kit)

It is possible to choose between levels E, 1, 2 and 3. In Levels 1, 2 and 3, the instrument-specific settings can be saved. In level E, no settings can be saved. When the unit is switched on, memory level E appears on the Memospeed.

To reach the next level in each case,

briefly press the level preselection key or operate the foot switch with the turbine/motor instrument replaced.

From the third level, the user is returned to level E.



A 7.2 Settings on the turbine

! *Separate operating and assembly instructions are provided in the turbine packaging. These instructions must be followed.*

Remove the turbine from the support.

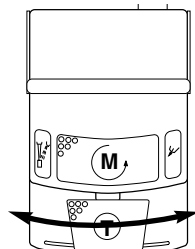
Set the speed

i *In the maximum speed mode (see **Setting the turbine with Memospeed**), the speed cannot be set.*

Push the foot switch to the left or right.

Left stop: min. speed

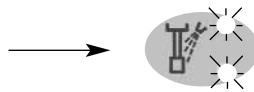
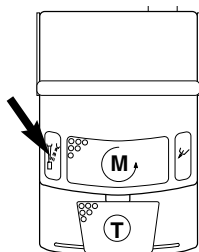
Right stop: max. speed



Setting the cooling state

Press the spray preselection key on the multifunctional foot control.

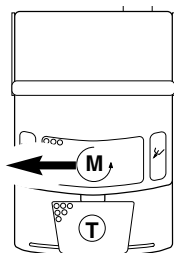
LED lights up: Cooling state **Spray**



Setting the cold light

Move the intermediate switch to the left.

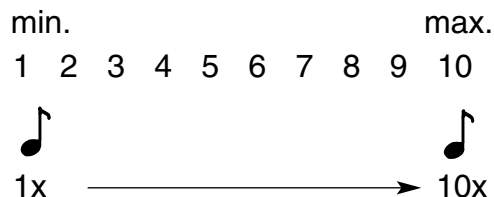
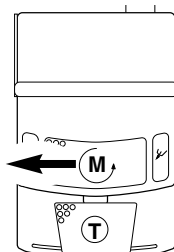
LED lights up: Cold light **on**



Setting the cold light intensity

The cold light intensity is adjustable in 10 steps.

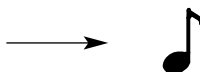
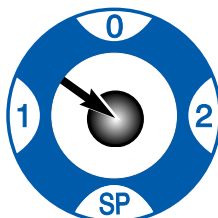
Move the intermediate switch to the left and hold it there until the desired intensity is reached, then release it.



After the first buzzing tone, the buzzing tone is heard every further second, indicating the next highest intensity level.

Saving settings

i *The settings can be saved either individually or all at once. The speed cannot be saved.*



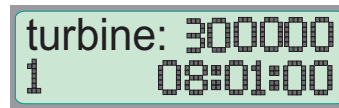
After the setting(s), press the joystick with the instrument picked up until a signal is heard.

Setting on the turbine with Memospeed

Remove the turbine from the support.

The display for the turbine appears on the Memospeed.

Select memory level (except for level E) (see A 7.1 Memory level selection with Memospeed).



Setting the speed mode

Press the level selection key until a signal is heard.

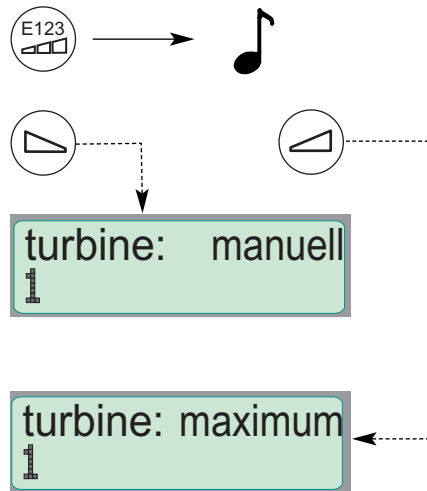
Switch between maximum mode and manual mode using the plus key and the minus key.

Manual mode:

Using the foot switch, any speed between 160000 min⁻¹ and 300000 min⁻¹ can be set (see above: **Setting the speed**).

Maximum mode:

In this position of the foot switch, the turbine is always operated at maximum speed.



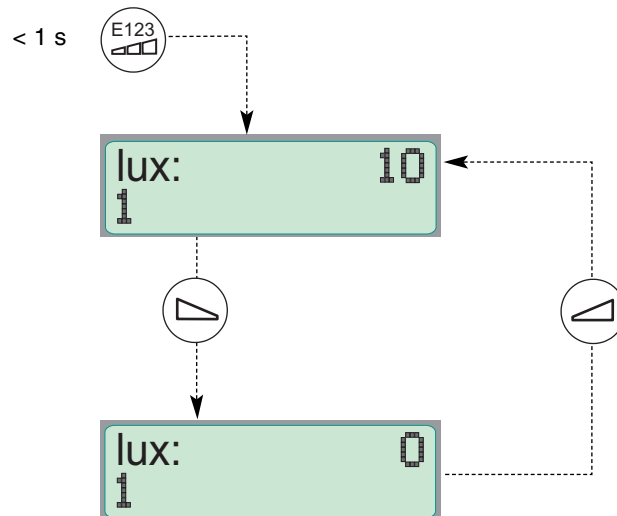
Press the level selection key briefly.

The system switches to the setting of the cold light intensity.

Setting the cold light intensity

The cold light intensity can be set in 10 steps.

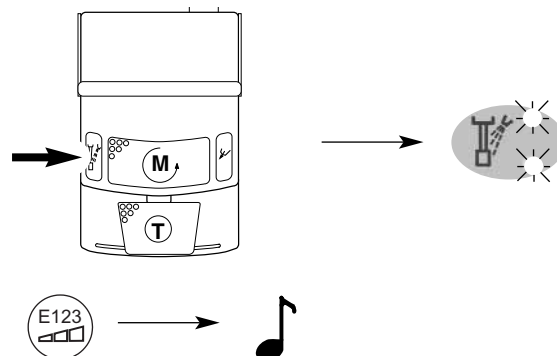
In order to reach the next highest or next lowest step, press the plus key or minus key.



Setting the cooling state

Press the spray preselection key on the multifunctional foot control.

LEDs light up: Cooling state **Spray**




Saving the settings

Press the level selection key until a signal is heard.


All settings, including the cooling state, are saved.

A 7.3 Settings on the INTRA LUX K 200 motor / INTRA LUX KL 701 motor

 *Separate operating and installation instructions are included in the packaging. It is essential to follow these instructions.*

Mode motor K 200/motor KL 701

Operating	2 min.
Pause	5 min.

 *The mode 2 min operation/5 min pause represents the possible limiting load of the motor (full load at maximum speed). In practice, pulsed loads lasting for seconds and pauses lasting for seconds to minutes are realistic, the maximum possible motor current usually not being reached. This corresponds to the usual dental procedure.*

Setting and saving of the settings for speed, cooling state and cold light are performed in the same way as for the turbine (see A 7.2 Settings on the turbine).



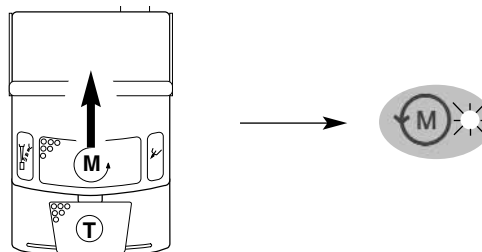
- *The speed cannot be saved.*
- *The minimum or maximum magnitude of the speed depends on the motor used and on the attached straight or contra-angle handpiece.*

Setting the motor direction

Remove the motor from the support.

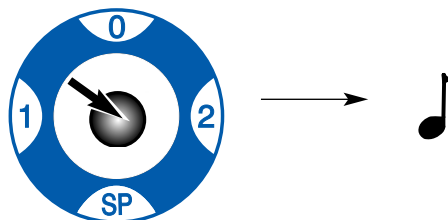
Press the motor counterclockwise key on the multifunctional foot control.

LED lights up: Motor counterclockwise rotation has been preselected.



Saving the motor direction

Press the joystick with the instrument picked up until a signal is heard.



Settings on the INTRA LUX K 200 motor/ INTRA LUX KL 701 motor with Memospeed

Remove the motor from the support.

The display for the motor appears on the Memospeed.

Select the memory level (except for level E) (see A 7.1 Memory level selection with Memospeed).



Setting the speed range

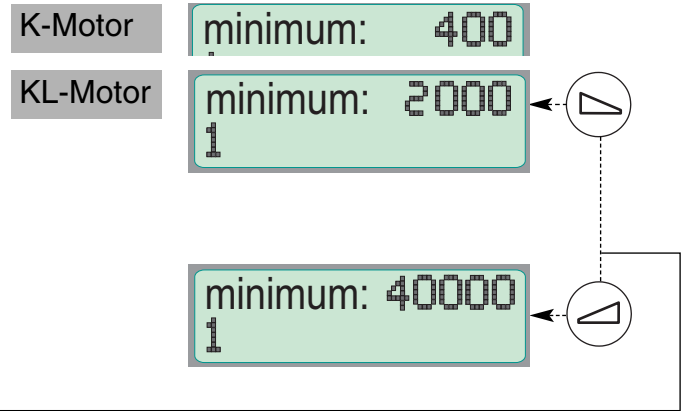
i Maximum settable speed range:
K motor: 400 min⁻¹ to 40000 min⁻¹ KL motor: 2000 min⁻¹ to 40000 min⁻¹

Press the level selection key until a signal is heard.

The lower limit of the speed range is shown as the *minimum*.

Change the lower limit using the plus and minus keys.

Press the level selection key briefly.

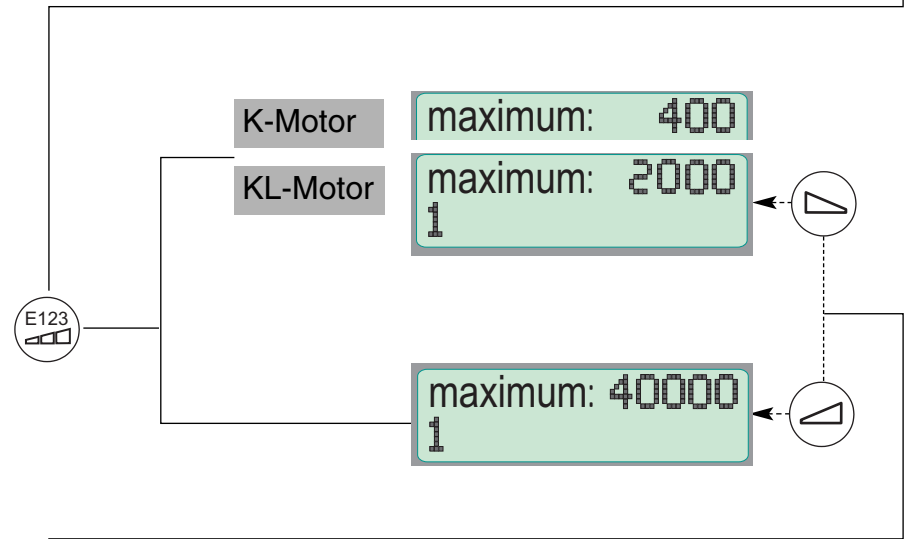


The upper limit of the speed range is shown as the maximum.

Change the upper limit using the plus and minus keys.

Press the level selection key briefly.

The system switches to setting of the cold light intensity.



Setting the cold light intensity

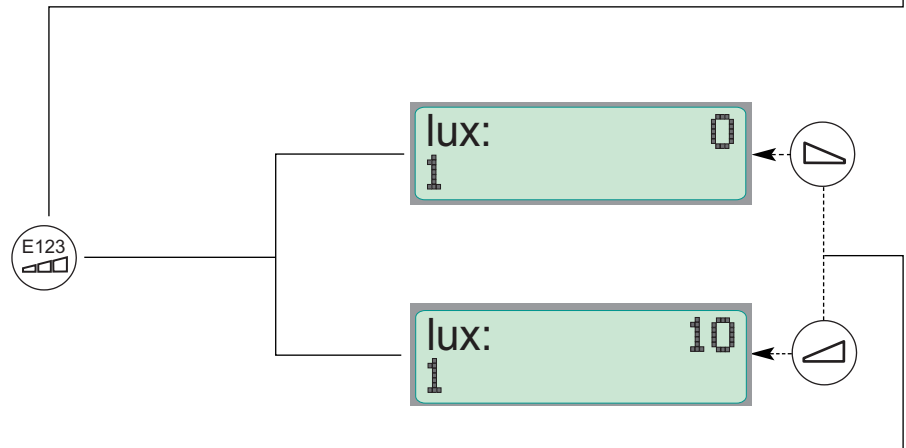
The cold light intensity can be set in 10 steps.

In order to reach the next highest or next lowest level, press the plus key or minus key.

From level 10, the user is returned to level 0.

To switch off the cold light completely, select intensity 0.

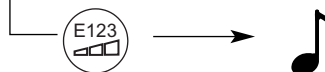
Set the cooling state and motor counter-clockwise operation as described above.



Saving settings

Press the level selection key until a signal is heard.

All settings, including cooling state and motor direction, are saved.



A 7.4 Settings on the PIEZOlux



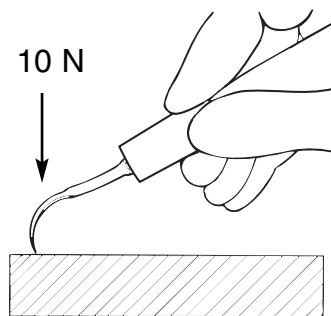
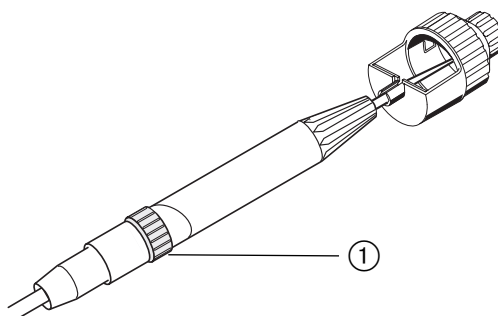
■ Screw instrument insert into the hand-piece using the torque wrench supplied in the accessories and tighten until the maximum torque has been reached (torque wrench clicks on). The torque wrench is subject to natural wear and should be replaced if its function is impaired.

Torque wrench Mat. No. 1.000.4887

■ Check instrument insert for proper condition.

■ To avoid injuries, it is essential to leave the wrench attached during periods of non-operation.

■ For additional safety, the instrument inserts should be tested with a mechanical load of approx. 10 N each time before use (see drawing). 10 Newton = 1 kg.



Setting and saving of the settings for cooling state and cold light are performed in the same way as for the turbine (see A 7.2 Settings on the turbine)

The water can be regulated on the ring ① on the handpiece (only with appropriate setting in the service mode, group 9, water on).

Settings on the PIEZOlux with Memospeed

Remove PIEZOlux handpiece from the support.

The display for the PIEZOlux appears on the Memospeed.

Select memory level (except for level E) (see A 7.1 Selecting the memory level with Memospeed).

Setting the intensity

Press the level preselection key until a signal is heard.

Adjust the intensity using the plus and minus keys. The step size is 0.25.

Press the level selection key briefly.

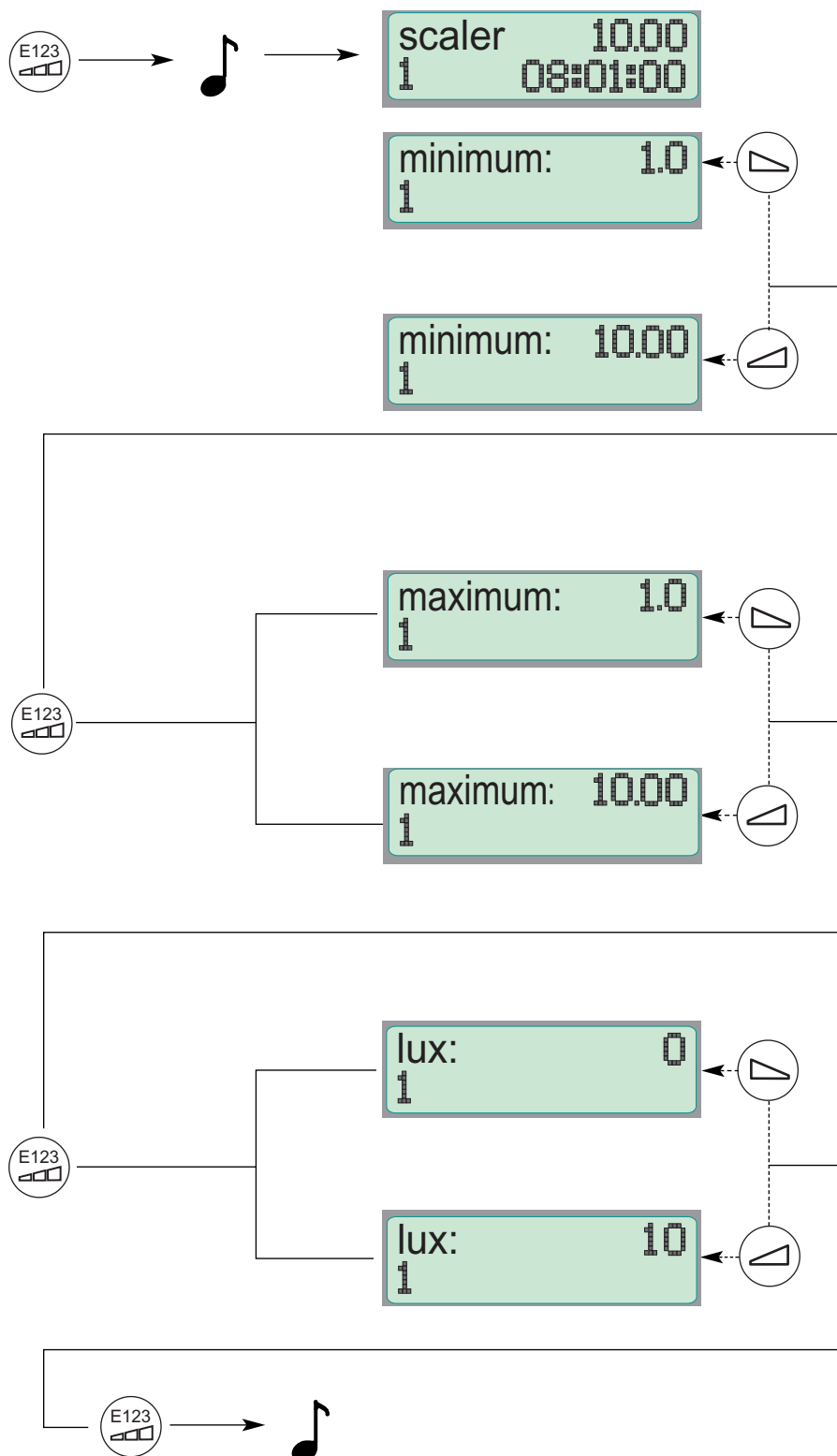
The system switches to setting of the cold light intensity.

The cold light intensity is set in the same way as for the turbine (see A 7.2 Settings on the turbine).

Saving settings

Press the level selection key until a signal is heard.

All settings, including cooling state, are saved.



Changing the high pressure lamp



Switch of the main switch.

Unscrew the tube sleeve ① from the handpiece. Pull off handpiece from the tube coupling ②.



The lamp may be hot.
- Danger of injury -

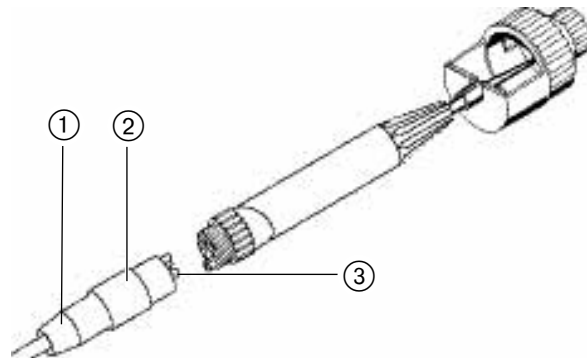
Pull the high pressure lamp ③ out of the holder and replace by a new one.

High pressure lamp **Mat. No. 0.553.3881**



Ensure correct position of the contacts.

Connect tube coupling to the handpiece.
Screw handpiece to the tube sleeve.



A 8 Handling of the three- and multi-function handpiece



- Do not use the multifunction handpiece to push away the cheek.
- Extended contact between the multifunction handpiece and mucous membrane is to be avoided in order to prevent possible tissue irritation.
- The duty cycle of the multifunction handpiece is 5 min of operation with 3 min of rest.
- Replace the multifunction handpiece in its holder after use.
- Verify media passage through the nozzle before use on patients.
- For safety reasons, only original KaVo nozzles ⑤ may be used.
- Snap in nozzle and check for firm seat.
- The passage of the medium through the nozzle should be checked prior to use on the patient.
- The nozzles can be rotated through 360°.

Handling

Remove 3-function syringe from the support.

Air

Press key ④.

The air stream emerging can be continuously regulated by greater or lesser pressure on the control key.

Water

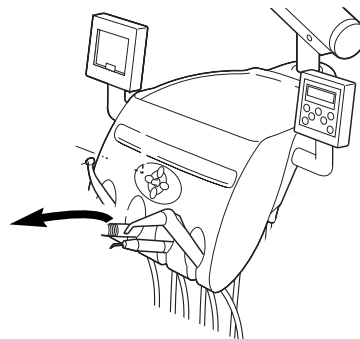
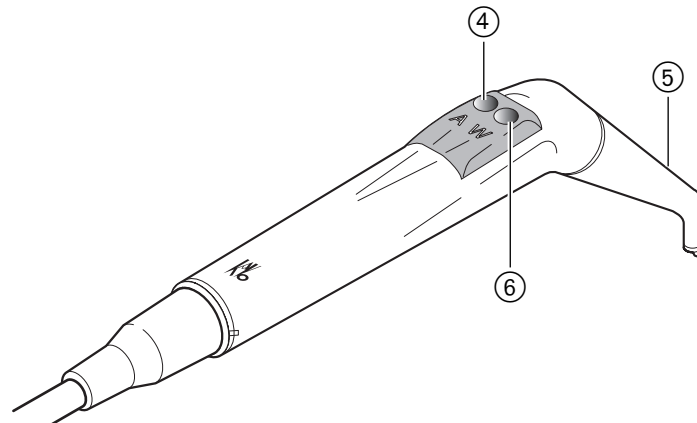
Press key ⑥.

The water jet emerging can be continuously regulated by greater or lesser pressure on the control key.

Spray

Press both keys ④ and ⑥.

The spray emerging can be continuously regulated by greater or lesser pressure on the control keys.



mf-syringe
08:01:00

ON/OFF functions of heating and cold light on the multifunction handpiece

Setting on dentist's element

i The cold light intensity is constant.

Remove multifunction handpiece from the holder.

Holder switch is operated.

Press spray preselection key on the multifunction foot control.

LED lights up: heating and cold light for multifunction handpiece on dentist's element are preselected.

Saving

Press the joystick with the instrument picked up until a signal is heard.

Setting on assistant's element

i The cold light intensity is constant.

Remove multifunction handpiece from the holder.

Press air or water key briefly.

Press spray preselection key on the multifunction foot control.

LED lights up: heating for multifunction handpiece on assistant's element is preselected

Move the intermediate switch to the left.
LED lights up: Cold light **on**

Saving

Press the joystick with the instrument picked up until a signal is heard.

Replacing the high-pressure lamp

⚠ Switch off the main switch

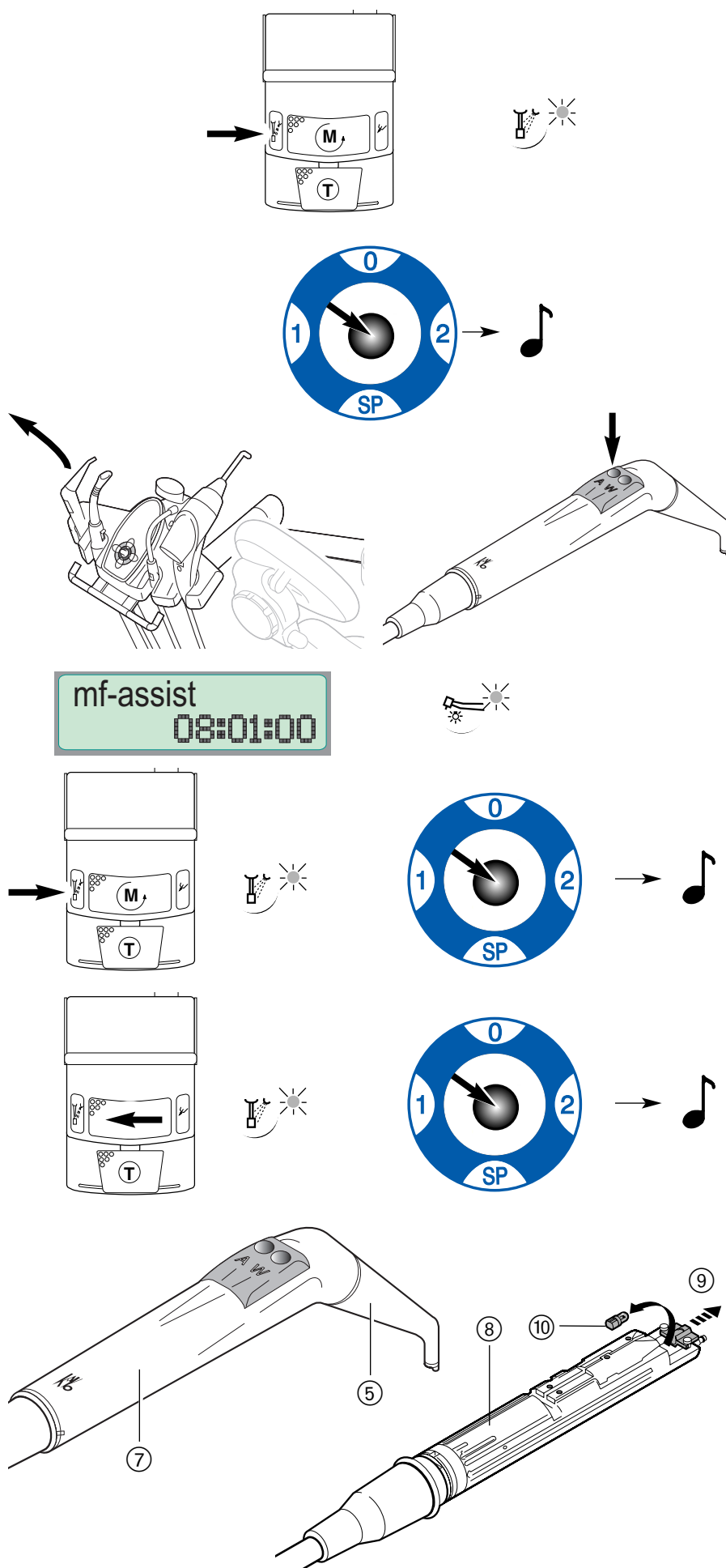
Pull the gripping sleeve ⑦ and nozzle ⑤ off the handpiece body ⑧.

⚠ Allow the lamp to cool down after extended use. - **Risk of injury** -

Push forward on the holder ⑨, pull the high-pressure lamp ⑩ out of its socket and replace with a new lamp. Order no. 553 3881

⚠ Make sure contacts are positioned correctly.

Slide the gripping sleeve ⑦ and nozzle ⑤ back on until they latch in audibly.




A 9 Handling POLYlux II

For operation, see the POLYlux II operating instructions supplied separately.

A 10 Time settings and function keys on the Memospeed

A 10.1 Setting the time

 *The time settings on the Memospeed can be performed only if all instruments have been replaced.*

Press the clock key until a signal is heard.

Set hours using the plus and minus keys.

Press the clock key briefly.

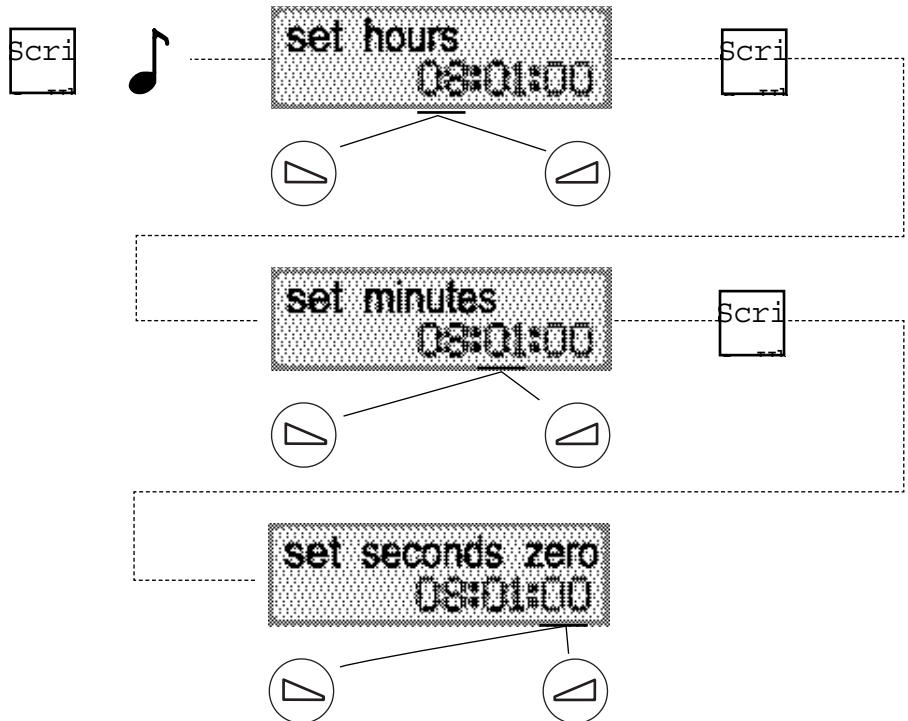
Set minutes using the plus and minus keys.

Press clock key briefly.


Set seconds to zero using the plus and minus keys.

Save the time

Press the clock key until a signal is heard.



A 10.2 Setting the timer

 *A period of max. 8:30 minutes can be set with the timer.*

Setting the timer

Press the timer key until a signal is heard.

Set the desired period using the plus and minus keys.

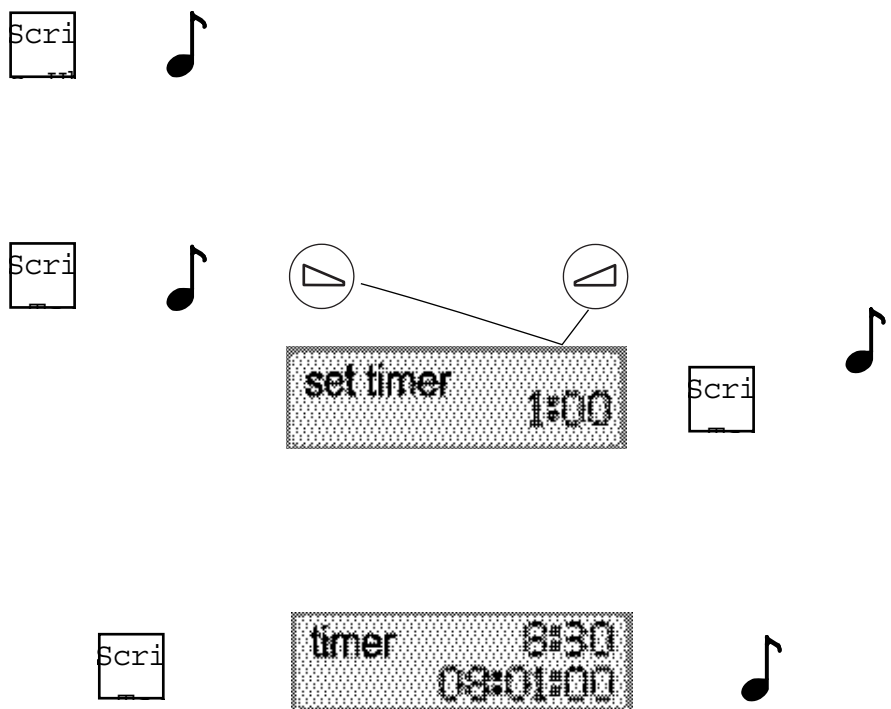
Save the period

Press the timer key until a signal is heard.

Starting the time

Press the timer key.

After expiry of the set period, a signal is heard.



A 10.3 Handling function keys

Setting a function

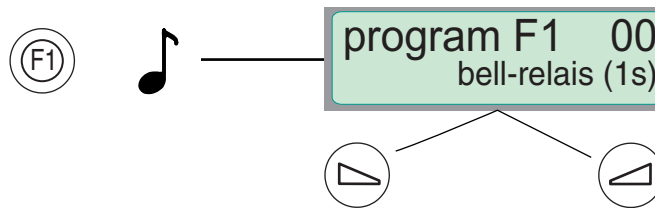
Press key F1 or F2 until a signal is heard.
The programming mode is started.

i 14 functions are preprogrammed.

Select the function using the plus and minus keys on the Memospeed.

Save the function:

Press key F1 or F2 until a signal is heard.



Calling up the function

The saved function is triggered if the F1 or F2 key is pressed briefly.



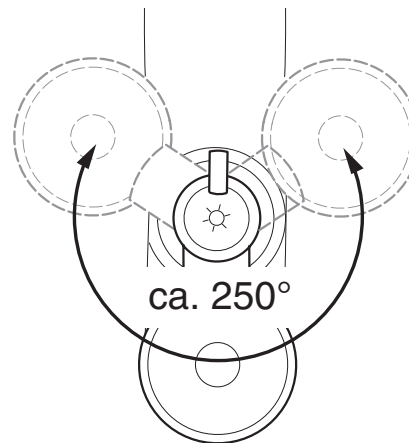
A 11 Assistant's element with patient's part

A 11.1 Moving the patient's part and assistant's element

Patient's part

The patient's part is rotatable through 250°.

i If the patient's part is swivelled over the dental chair, the safety cut-out is activated.

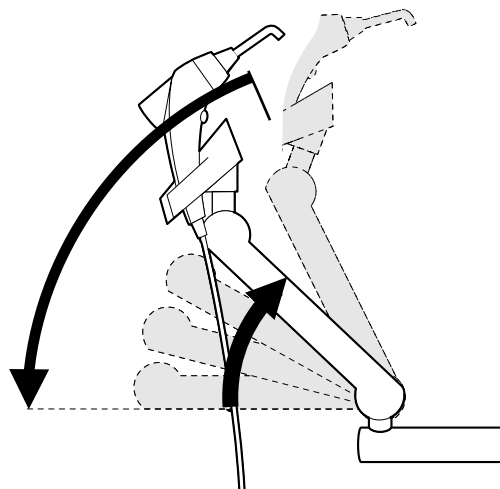


Adjustment of height for assistant's element

The assistant's element can be positioned vertically at three levels.

Pull assistant's element gently upwards until the desired position is reached (audible snapping-in).

Lift assistant's element fully upwards until the lock is released and then move downwards to the horizontal position.

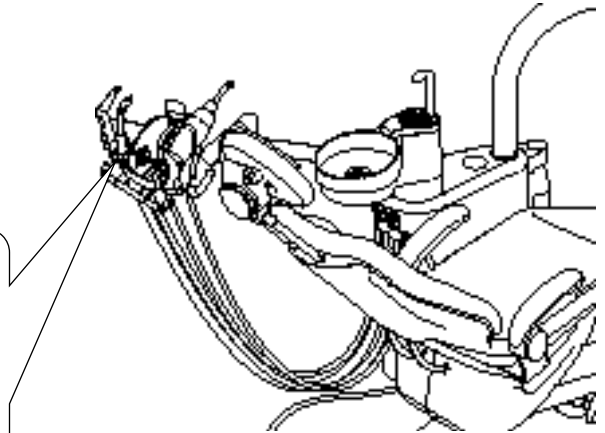
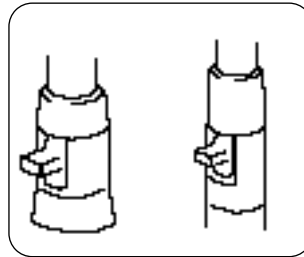


A 11.2 Handling of the suction tubings

Spray mist ejector and saliva ejector

These functions are switched on automatically when the ejectors are removed from their holders.

The suction stream of the saliva ejector and of the HV suction system can be reduced or shut off at the gate valves integrated in the conical sections.

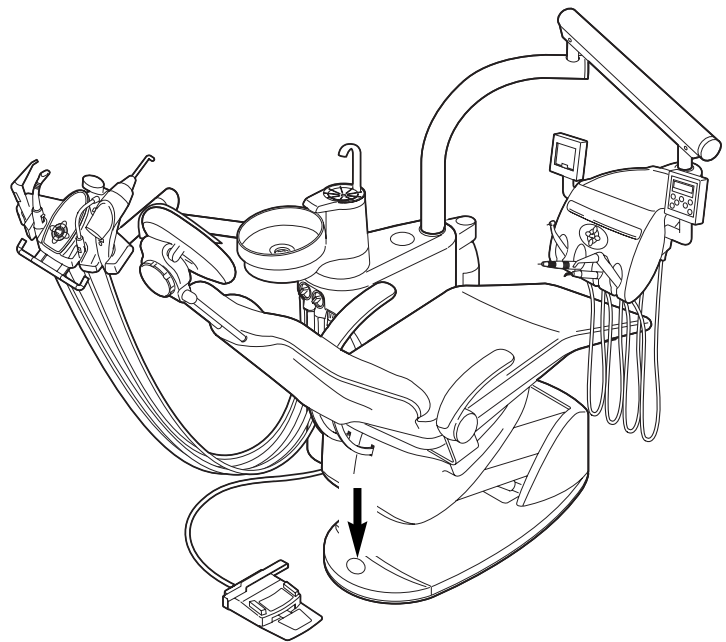


A 11.3 Vacu-Stop

When the suction tube is removed and Vacu-Stop is operated, the suction is interrupted.

A 11.4 Spittoon bowl and tumbler filler

See A 6.3 Spittoon bowl and tumbler filler.



A 12 Elimination of faults

i *This part of the instructions is intended to be an aid to self-help. If faults cannot be localized with the aid of this troubleshooting scheme, an engineer specially trained by KaVo must be contacted for assistance.*

Fault	Cause	Rectification
Nothing functions	Main switch off	Switch on main switch
	Main fuse blown	Check main fuse and if necessary replace Microfuse T 6.3 H Mat. No. 0.223.2783 The main fuse is located next to the main switch
Cold light does not function	Cold light not preselected	Preselect cold light (see A 6.7)
	High-pressure lamp faulty	Replace high-pressure lamp (see the instructions supplied with the instruments)
No spray at the instruments	No spray preselected	Preselect spray (see A 6.7)
	Spray regulation on the instruments closed	Open spray regulation ring
	Main tap in practice closed	Open main tap
	Compressor not switched on	Switch on compressor
Turbine makes loud noises when running	Turbine rotor faulty	Replace turbine rotor Follow turbine instructions
Poor spray at the instruments	Spray nozzles soiled or coated with limescale	Clean spray nozzles according to instrument instructions supplied
Leak in the instruments	O-rings on Multiflex / motor coupling damaged	Replace O-rings
Water in return-air filter	O-rings of Multiflex coupling damaged	Replace all O-rings of the Multiflex coupling
Suction hoses do not operate	Slides on the conical pieces are closed	Open slides
	Filters in extraction connector are blocked	Clean filters
	Vacu-Stop foot switch has been actuated	Release foot switch
	Suction machine does not run	Check fuse of the suction machine
	Amalgam separator does not run correctly	Follow operating instructions of the amalgam separator

Fault	Cause	Rectification
Buzzer sounds (continuous signal) and service LED (yellow) flashes	Amalgam separator warning	Refer to the separate amalgam separator instructions for an explanation
Buzzer sound every 10 seconds.	Oxygenal container is empty	Fill Oxygenal container
Buzzer sounds 10 times	Oxygenal container overfilled	Do not continue filling Oxygenal container
PolyLUX 2 does not work	Halogen lamp defective	Replace halogen lamp Do not touch the halogen lamp reflector (see separate PolyLUX 2 instructions) Follow safety instructions.
Results of polymerisation unsatisfactory	Light emitting surface on light conductor soiled	Clean light emitting surface
	Light conductor damaged	Replace light conductor (see separate PolyLUX 2 instructions)
	Bulb is old and used up	Replace halogen lamp (see separate PolyLUX 2 instructions)
Dental chair does not move	Safety cutout activated (display on control panel)	Check safety cutouts and eliminate cause of shutoff (see section A 5.5)
Dental chair does not move up or down	Spittoon too close to dental chair	Swivel spittoon bowl to rest position.
LEDs unit on (green) flashes	Caution in the unit	Call technician
LEDs service (yellow) flashes	Fault of the amalgam separator	Call technician
	Emergency suction of bowl valve if external suction is assembled	Call technician
Buzzer sounds at one second intervals and LED unit (green) on and service LED (yellow) flash alternately	Water leak in the unit base (only when DVGW water block is installed)	Shut off water supply. Call technician
LEDs AP0, AP1, AP2 and SP lights up 3 sec. after the chair has been moved	Position pickup defective	Call technician

A 13 Adaptable accessories and kits

A 13.1 Unit base

DVGW (German Gas and Water Authority) authorisation water block, with electronic monitoring of the disinfection tank

Water block compact without DVGW (German Gas and Water Authority) authorisation

with water filter and shutoff-valve

DVGW water bottle with compact water block with DVGW (German Gas and Water Authority) authorisation, for independent water supply from the water mains

Installation kit for intensive disinfection

Chair mounting plate for mounting left or right

X-ray viewer In eXam

The KaVo Primus 1058 can be installed using the kit Mat. no. 1.001.0140 with an eXam x-ray machine mounted on the light mount pole.



The installation instructions for the eXam kit must be followed.

A 13.2 Patient's chair

Second arm rest

The arm rest can be swivelled upwards for easier entry and exit.

A 13.3 Patient's part with unit body and assistant's element

Connection for external devices

Used for connecting and supplying external devices, e.g. Airflow via fast-action coupling.

Separation systems:

Metasys Compact Dynamic Eco

Dynamic separation system with heavy particle collector.

Dürr automatic separation system

Solids collector

External extraction system

Monitor support

The monitor support serves as a rotatable support surface for a monitor directly on the treatment unit.

KAVOLUX 1415/KAVOLUX 1410

If desired, the treatment unit can be equipped with a treatment lamp which can be connected to the unit.

PolyLUX 2

3-function handpiece

MF handpiece

Tray support small for instruments

Boiler for tumbler filler

Reduced pressure controller

A 13.4 Dentist's element

Multiflex-LUX hose for connection of turbine, SONICflex,

LUX motor tube and INTRA K or INTRA KL motor electronics for connecting motor 200, 700 KL

3-function handpiece

3-function handpiece upright

Ultrasonic Sonosoft scaler PIEZOlux

X-ray viewers

The X-ray viewer for small 5 x 5 cm films can be installed alternatively on the left or right side of the dentist's element 1058 TM (1058 S only in the middle)

Memospeed

Display showing the time of day, timer and instrument-specific settings countdown.

Spray heater for instruments

Tray holder for standard tray/US tray

Tray holder for two norm trays

Can be connected either on the left or right

ERGOCam 3 a

Technical date

Drilling template No.

Right-hand version Mat.-No. 1.001.4755 Bl. 001
Left-hand version Mat.-No. 1.001.4755 Bl. 002
with COMPACTchair Mat.-No. 1.003.6767 Bl 001/002

Installation plan No.

Right-hand version Mat.-No. 1.001.4755 Bl. 007
Left-hand version Mat.-No. 1.001.4755 Bl. 008
with COMPACTchair Mat.-Nr. 1.003.6767 Bl 009/010

Electric supply cable 3 x 1.5 mm²
Free end above floor 1000 mm

Input voltage 110/110/120 V AC
130/220/230/240 V AC

Frequency 50/60 Hz

Factory-set input voltage See rating plate

Max. power consumption
(incl. KAVOLUX 1415)
at 100 - 130 V 30 - 800 VA
at 220 - 240 V 30 - 1000 VA
depending on mode

Fuse (supplied by customer) Automatic C16 or
screw-type fuse 10 A

Potential equilibration line See VDE 0100-710
Above floor 1000 mm

Heat output
at 100 - 130 V 162 - 1675 kJ/h
at 220 - 240 V 162 - 2689 kJ/h

Approval symbols CE / DVGW / VDE

Multifunction foot control Protection class IPX 1

Water supply Free outflow according to
DVGW certificate DW-0402BL0465:
DVGW water block
DVGW water bottle

Further information can be found under: www.dvgw.de/

For the water block kit, the national regulations are applicable

Otherwise, DIN EN 1717/DIN 1988 T4 and the twin 6 issue 01/94 are applicable.

A safety device BA (three-chamber system) should be connected before each unit.

Water quality Drinking water

pH-value 7,2 - 7,8

Water hardness
Total hardness: 1.5 - 2.14 mmol/l
△ 8,4 - 12 dH

In the event of high water hardness of 12 dH or more, a water softening unit must be installed in the ion exchange process with disinfection system.

An excessively low water hardness may promote algal growth.

Water supply filtration 80 µm

Water connection R 1/2
above floor min. 40 mm/max. 75 mm
Areas with brackish stagnant water should be excluded.

Water inlet pressure 2.0 - 6.0 bar
Water inlet flow rate 5 l/min

Drain connection Ø 40 mm
above floor 20 mm

Drainage rate max. 5 l/min
Gradient of water drain pipe
from unit at least
10 mm per meter

Air connection R 1/2
above floor min. 40 mm/max. 75 mm

Air inlet pressure 5.2 - 7 bar
Air inlet flow rate max. 80 l (S.T.P.)/min

Suction connection Ø 40 mm
above floor 20 mm

Suction vacuum
Static max. 180 mbar at unit inlet
dynamic > 45 mbar
recommended 60 mbar

Suction vacuum rate 500 l (S.T.P.)/min
Values applicable
for KaVo measuring set,
Order No. 411 8500

Weight gross/net

1058 P ca. 280 kg / 224 kg
with steel support base and ERGOcom ca. 345 kg / 289 kg

1058 P COMPACTchair ca. 244 kg / 200 kg
with steel support base and ERGOcom ca. 309 kg / 265 kg

For further information on the packages, see assembly instructions, Section B 3.

Floor finish

The floor finish quality must comply with DIN 1055, sheet 3 regarding design loads for buildings and must be pressure resistant to DIN 18560 part 1.

Ambient conditions

Operating environment/temperature +10 to +40 °C
Relative air humidity 30 to 75%
Air pressure 700 hPa to 1060 hPa

Transport environment/temperature min -20 °C max +70 °C
Relative air humidity min 5% max 95%
Air pressure 700 hPa to 1060 hPa

Storage environment/temperature min -20 °C max +70 °C
Relative air humidity min 5% max 95%
Air pressure 700 hPa to 1060 hPa

Safety checks for Primus 1058

i Information in the operating instructions, Sections A 1.2 to A 1.5, should be observed.

According to VDE 0751-1:

- Safety checks two-yearly
- Device type IIa (without HF)
- fixed on device
- Type BF generally
- Measurement according to EUD/EPD

KaVo provides a medical product book for keeping of an inventory and for acquisition of the essential master data of the medical product.

The medical product book is required only in Germany and is therefore available only in German, **Mat. No. 0.789.0480**.

The measurements described below must be documented, for example in the medical product book.

- Visual inspection of medical product and accessories.
- Checking of fuses accessible from the outside with respect to the nominal data
- Protective conductor tests according to VDE 0751
- Discharge current measurements according to VDE 0751
- Function test of the medical product on the basis of the accompanying documents

! The main switch of the unit must be switched on during the measurement.

Measuring aid: e.g.

KaVo measuring cable **Mat. No. 0.411.8811**

EPD measuring cable **Mat. No. 1.001.9904**

Measurement of earth resistance

Limit: < 0,3 Ω

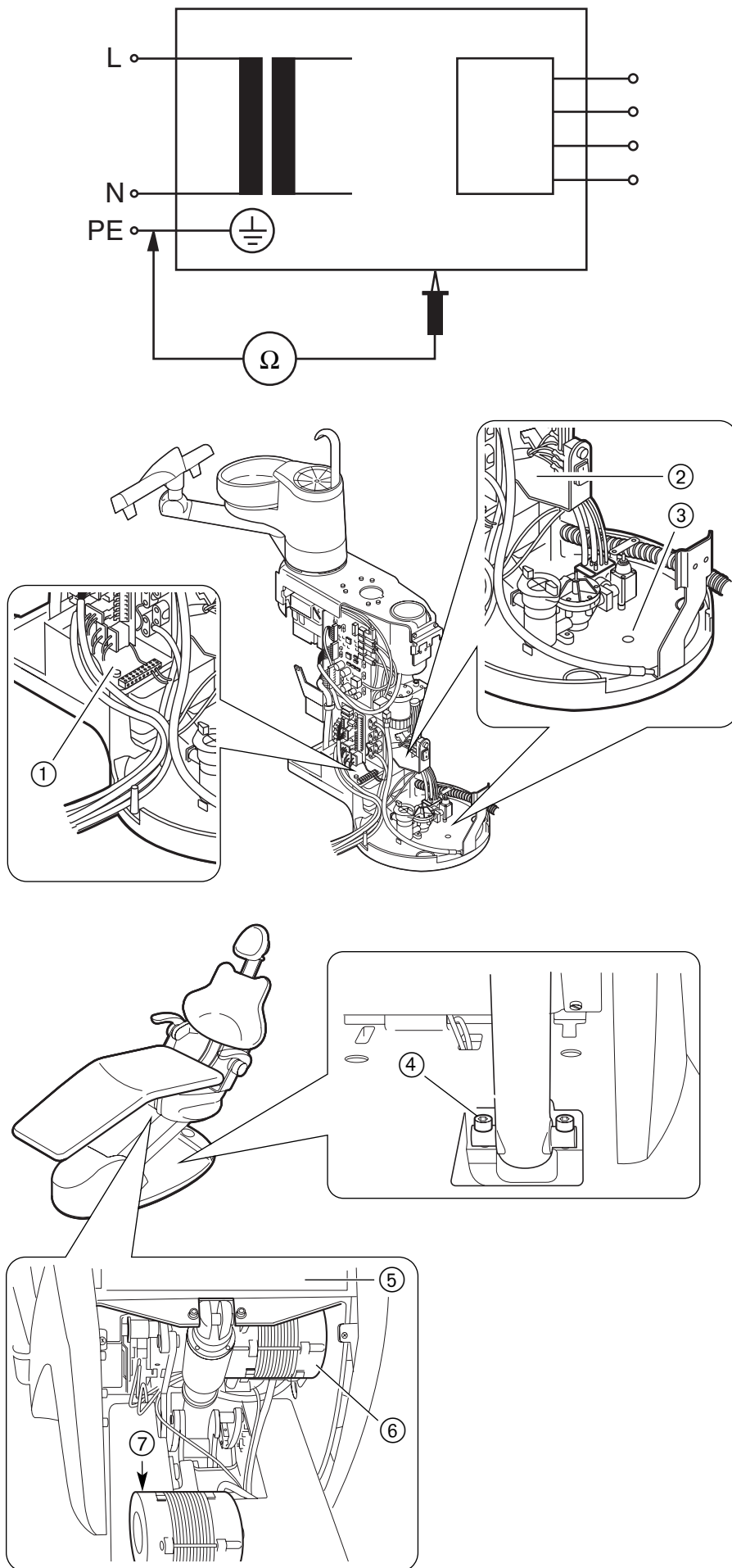
Scanning with test tip

! Before the start of the measurement, raise the dental chair

Measuring points:

- ① Environment of equipotential bonding terminal
- ② Main switch retaining plate
- ③ Baseplate of pedestal
- ④ Baseplate of dental chair
- ⑤ Support plate of upper part of chair
- ⑥ Spindle motor for backrest
- ⑦ Spindle motor for lifting movement
- ⑧ Power supply for chair

! Take into account additional measuring points in the case of additional equipment
X: e.g. connection of external devices, treatment light, multimedia system, etc.



Measurement of earth resistance

Limit: < 0,3 Ω

Scanning with test tip



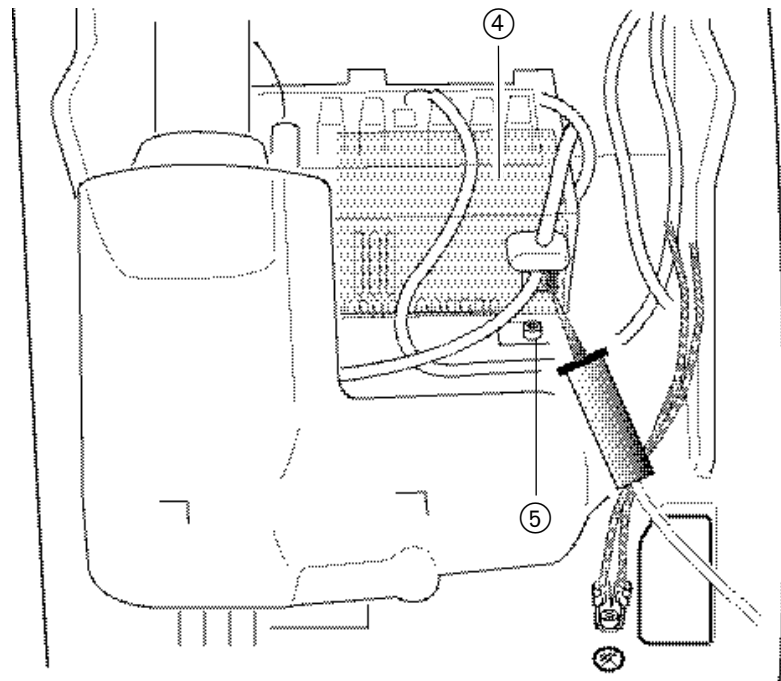
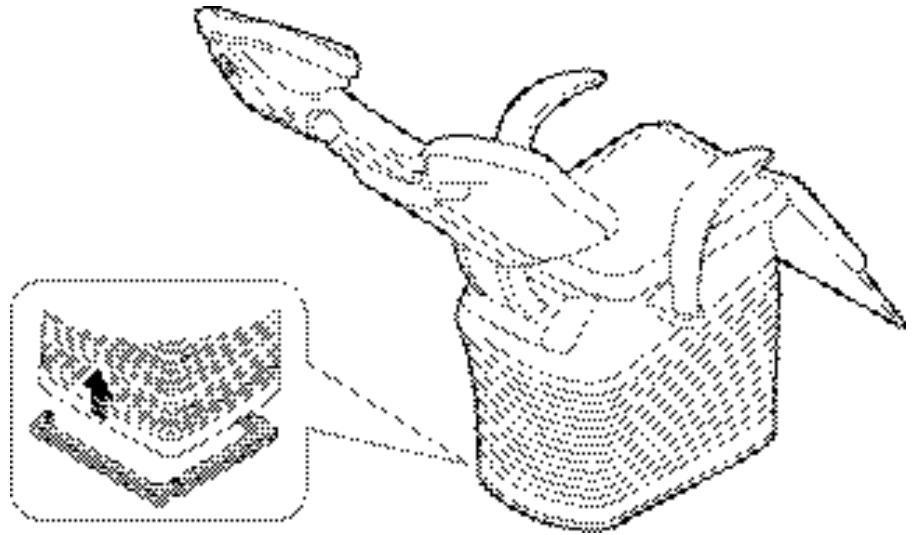
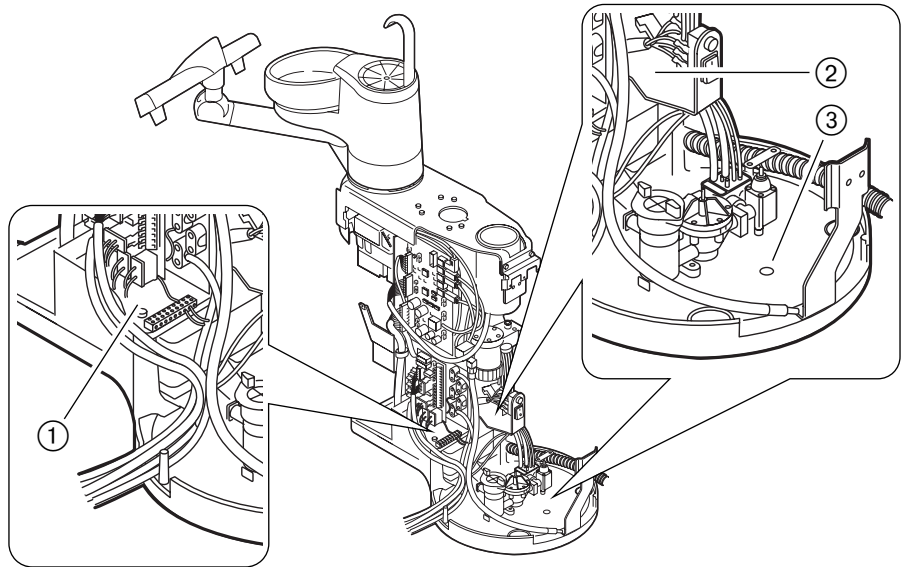
Before the start of the measurement, raise the dental chair

Measuring points:

- ① Environment of equipotential bonding terminal
- ② Main switch retaining plate
- ③ Baseplate of pedestal
- ④ Power supply for chair
- ⑤ Support plate of upper part of chair



*Take into account additional measuring points in the case of additional equipment
X: e.g. connection of external devices, treatment light, multimedia system, etc.*



Measurement of backup device leakage current

Limit: < 10 mA

⚠ Disconnect device L + N from the mains or connect measuring cable 0.411.8811 to X 2.

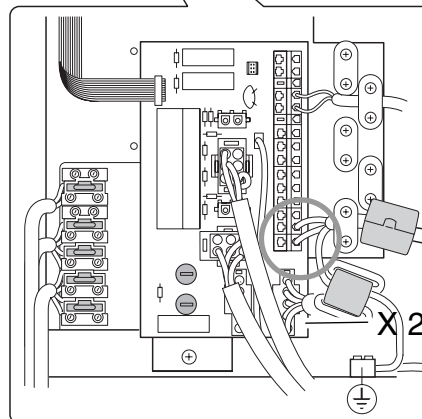
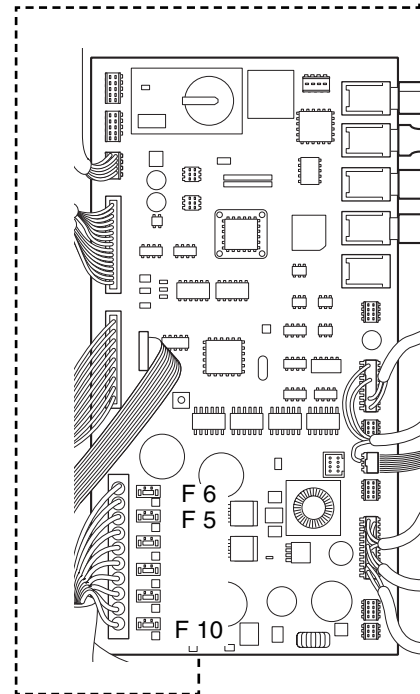
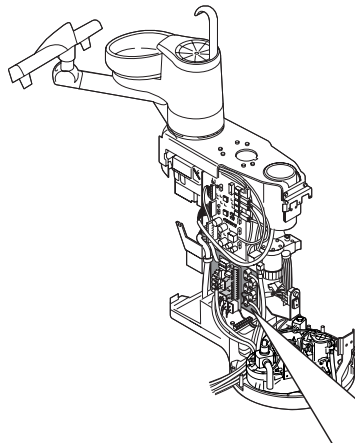
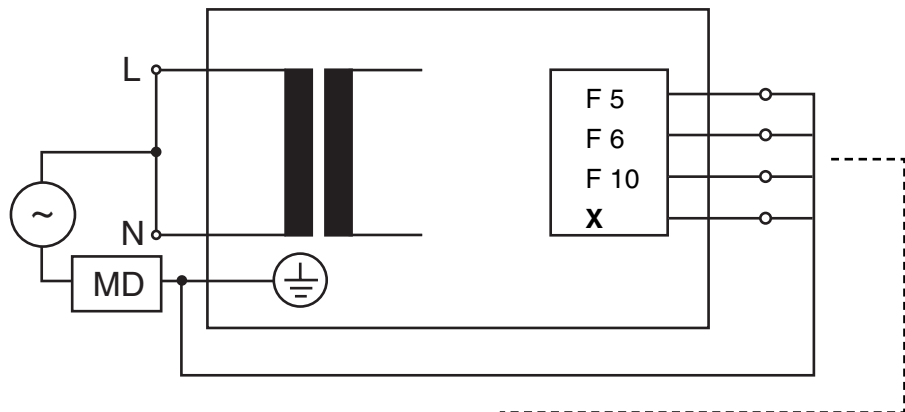
Measuring points patient's part:

Fuses

- F 5
- F 6
- F 10
- X

or with
EPD measuring cable **Mat. No. 1.001.9904**

⚠ Take into account additional measuring points in the case of additional equipment X: e.g. connection of external devices, treatment light, multimedia system, etc.



Measurement of equivalent patient discharge current

Limit: < 5 mA

⚠ Disconnect device L + N from the mains or connect measuring cable 0.411.8811 to X 2.

Measuring points patient's part:

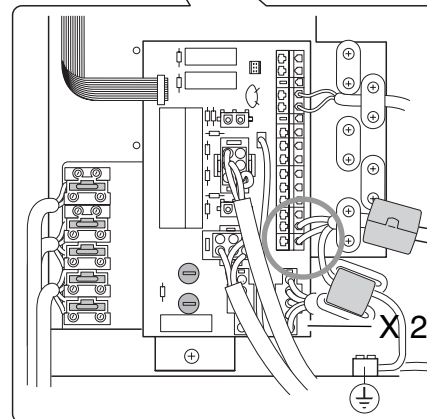
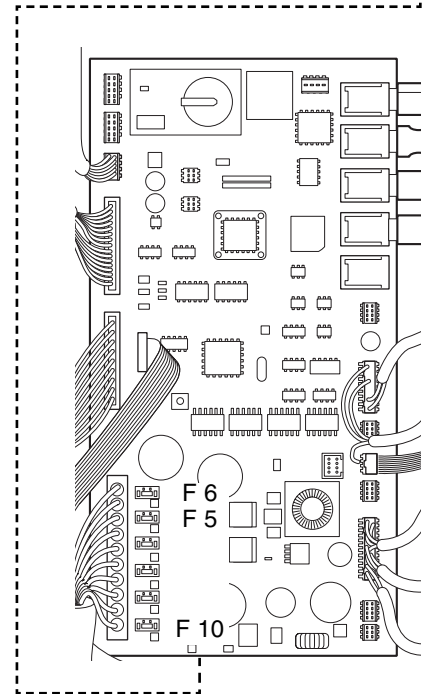
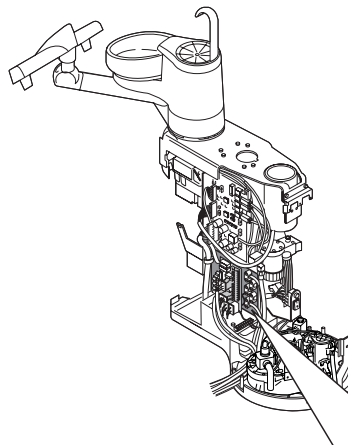
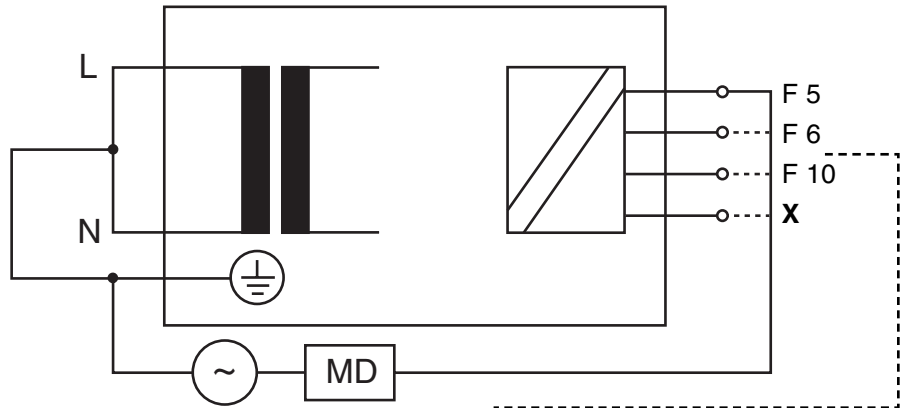
Fuses

- F 5
- F 6
- F 10
- X

or with

EPD measuring cable **Mat. No. 1.001.9904**

⚠ Take into account additional measuring points in the case of additional equipment X: e.g. connection of external devices, treatment light, multimedia system, etc.





KaVo. Dental Excellence.

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