INSTRUCTIONS FOR USE

Dental unit

DIPLOMAT ADEPT

CONTENTS: Instructions for Operation
Instructions for Assembly and Installation
Packing List
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**Annex:** SIRIUS dental operating light
This manual describes how to use the **DIPLOMAT DA 110, 110A, 110B, 110C** dental unit.

Please read this manual thoroughly before attempting to operate the unit.

The unit is allowed to be operated only by the dentist who has been made familiar with the present manual and dental applications that can be done by means of the dental unit.

In order for you to be satisfied with the dental unit the following must be observed:

Installation, setting and/or modifications must be made by the qualified authorized service personnel of an organization that has licence for such activity.

Conditions for the use of media and installation given in the **DIPLOMAT DA 110, 110A, 110B, 110C** Instructions for Use must be met.

**DIPLOMAT DA 110, 110A, 110B, 110C** dental unit is part of dental equipment, formed by interconnected subassemblies of dental equipment, which forms a function unit for dental treatment. It complies with the EU directions and requirements on electromagnetical compatibility and with the requirements on safety.
symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>🩱</td>
<td>type B equipment</td>
<td>sterilizable up to the temperature given</td>
</tr>
<tr>
<td>🌬️</td>
<td>alternating current</td>
<td>Attention, consult the accompanying documentation</td>
</tr>
<tr>
<td>🧲</td>
<td>spray cooling</td>
<td>reversing</td>
</tr>
<tr>
<td>➕</td>
<td>increasing of the set parameter value</td>
<td>decreasing of the set parameter value</td>
</tr>
<tr>
<td>🥂</td>
<td>cup filling</td>
<td>bowl flushing</td>
</tr>
<tr>
<td>🚧</td>
<td>illumination – negatoscope</td>
<td>Note</td>
</tr>
</tbody>
</table>

Not to be disposed of within the communal waste!!! Waste material can be handed at destined places, e.g. electrowaste !!!

INDICATION OF CONDITION:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>🌬️</td>
<td>spray</td>
<td>yes, no</td>
</tr>
<tr>
<td>🔄️</td>
<td>direction of rotation</td>
<td>clockwise, anticlockwise</td>
</tr>
<tr>
<td>🚧️</td>
<td>warning</td>
<td>OK, error condition</td>
</tr>
<tr>
<td>📊</td>
<td>bargraph</td>
<td>revolutions, output</td>
</tr>
</tbody>
</table>

Note: 0 revolutions, 0 output
1. Spittoon block with saliva ejector
2. Control panel
3. Foot controller
4. Control panel arm
5. Light pantograph
6. Dental operating light
7. Dental chair $\text{DM10E(or other)}$
8. Chair foot controller (integral part of the chair)
The \textbf{DA110, 110A, 110B, 110C} dental unit is designed as a stationary one. DIPLOMAT DM 10E, DM 10, or other chair can be used with the unit. The foot-operated controller of the chair forms an integral part of the chair. The table arm with the control panel with instruments, maximum number of which is 4 and the light pantograph with dental operating light are fitted at the upper part of the bearing pillar of the spittoon block. Sirius dental operating light is delivered as a standard. The instruments are controlled by the foot controller, except for the syringe and the saliva ejector. On the face surface of the control panel with instruments is a keyboard with control buttons, bargraph and negatoscope. The handles serve for re-positioning of the control panel. X-ray images are attached to the negatoscope by means of a clamp furnished. The spittoon block is delivered with a glass bowl. Stainless dish for the control panel is delivered upon special order. The main switch is located in the bottom part of the spittoon block. One power mains fuse of T 3,15A rating is built in the bottom part by the transformer after opening the left cover of the spittoon block. On the F 4249-B6 module of electronics are 4 fuses of T 6,3A rating and 2 fuses of T8A. The dental light is protected with two fuses of T 6,3A rating. The dental unit is always equipped on the control panel with a syringe.

\textbf{Unpacking the unit and inspection of the delivery}

Inspect the transport packages for damage. If a defect of the transport package is found, do not open the consignment, report the defect to the forwarding agent or seller immediately.

If the consignment is intact, carefully open the package and unpack individual parts of the dental unit. Check the completeness of the delivery according to the Packing List.

\textbf{The following is fitted as a standard:}

\begin{itemize}
  \item syringe MINIAssistant
  \item turbine hose
  \item micromotor hose
\end{itemize}

It is possible to order a micromotor, handpiece and turbine to these hoses.

\textbf{The following can be fitted:}

\begin{itemize}
  \item max. 3 rotary instruments (micromotor, turbine)
  \item max. 3 instruments with light
  \item max. 2 turbines
  \item max. 2 micromotors
  \item 1 syringe
  \item 1 scaler
\end{itemize}

Sequence of instruments – according to the customer’s order: the syringe is usually fitted on the left side.

\textbf{DA 110, 110A, 110B, 110C} types differ only in instrumentation. For detailed differentiation of individual models of the units see the current price list of your dealer of the dental units.

\textbf{The spittoon block contains:}

\begin{itemize}
  \item connection to distilled water
  \item saliva ejector (pneumatic)
\end{itemize}

\textbf{technical parameters}

\begin{itemize}
  \item supply voltage: 230V ± 10%
  \item frequency: 50 Hz ± 2 %
  \item max. power input at 50 Hz: 315 VA + 10%
  \item input pressure of air: from 0,45 to 0,8 MPa
  \item input pressure of water: from 0,3 to 0,6 MPa
  \item unit weight: 52 kg ± 5 kg
  \item type of protection against electric shock: Class I equipment
  \item degree of protection against electric shock: type B equipment
  \item temperature of water for cup: 36 ± 5 °C (with fitted boiler)
  \item max. loading capacity of the side table: 0,5 kg
  \item environment acc.to STN EN 60601-1
    \begin{itemize}
      \item ambient temperature range: from +10°C to +40°C
      \item relative humidity range: from 30% to 75%
      \item atmospheric pressure range: from 700 hPa to 1060 hPa
    \end{itemize}
\end{itemize}

operation mode is continuous with intermittent loading, corresponding to the common dental practice.
The customer chooses and clarifies the following in the order form: instruments, instrument handpieces, dental operating light. The colour shade of the components of the unit is not identical with the colour shade of the chair upholstering.

**the most common optional equipment**

**CONTROL PANEL**

**Instruments**

- syringe MINIMATE LUZZANI DENTAL / three-function without light /
- syringe MINILIGHT 3F, 5F, 6F LUZZANI DENTAL
- syringe MINILIGHT L (6F LIGHT) LUZZANI DENTAL
- ultrasonic scaler
  AMDENT Bi 11f, Bi 11f LIGHT, Amdent
- ultrasonic scaler
  SUPRASSON SP 4055, SATELEC (without light)
- micromotor MC 2 40 IR, Bien Air (without light)
- micromotor ISOLITE 300 E INTRAmatic LUX, Bien Air (with light)
- micromotor MC 3 IR E INTRAmatic, Bien Air (without light)
- micromotor MC 3 LK E INTRAmatic LUX, Bien Air (with light)
- turbine Bora L, Bien Air
  (with light, push-button clamping, quick coupling)
- turbine Black Pearl Eco with push-button clamping, Midwest, Bien Air (without light)

**Handpieces**

- straight handpiece PM 1:1, blue, without light, Bien Air
- angle handpiece CA 1:1, blue, button clamping, w/o light
- angle handpiece CA 1:1L, blue, button clamping, with light
- angle handpiece CA 10:1, green, without light, Bien Air
- angle handpiece CA 10:1L, green, with light, Bien Air
- angle handpiece CA 1:5, red, without light, Bien Air
- angle handpiece CA 1:5L, red, with light, Bien Air

**Stainless dish** (for the control panel)

**Dental operating light**

- Sirius – colour version: white, blue, green
- and/or other lights acc.to current offer
CAUTION

The manufacturer does not grant guarantee for any other equipment not installed by him. The manufacturer does not grant guarantee for any other instruments not given in the list above. The instruments not given in the list above that are completed by the manufacturer with the dental unit form an exception!

Ask your dealer about the possibility to install other equipment.

supplementary equipment

- LUBRIFLUID 500 ml, lubricating spray, Bien Air
- LUBRIMED, 6 pcs, cartridges, Bien Air
- SPRAYNET 500 cleaning spray, Bien Air
- side table, lubricating stand
- sealing for the bottle (in the spittoon block)
- saliva ejector tip
- UOZK scaler tips acc. to the current price list
- cleaning agent INCIDIN FOAM, disinfecting agent ALPRON, BILPRON

CAUTION

Supplementary equipment is not included in the price of the product and is supplied upon special order only!

operation of the product DIPLOMAT DA 110, 110A, 110B, 110C

The dental unit is allowed to be operated only by the dentist who has been made familiar with the present manual.

WARNING

It is forbidden to interfere with the internal parts of the dental unit!

The operation consists of the setting of parameters and the control of the following:

- functions of instruments
- negatoscope and dental operating light
- operation of the spittoon block
- replenishing of distilled water to the bottle on the spittoon block (if fitted)
- re-positioning of the position of the control panel by means of the arm of the control panel and/or the light by means of the light pantograph

NOTE

The table arm is not vertically adjustable (optional). The pantograph of the dental operating light is adjusted so that it remains in the new position after re-positioning.
INSTRUCTIONS FOR USE                    DIPLOMAT ADEPT, DA 110 A
control of the dental unit DA 110, 110A, 110B, 110C

putting into operation

- switch on the compressor and let it get pressurized
- turn on /open/ the central water supply
- turn on the main switch located on the cover of the spittoon block — position I, the indicator light of the main switch goes on, thus indicating the readiness of the unit for operation. The unit is connected to water and air from distributions. After approx. 5 s both the unit and the chair are ready to work if the chair is supplied from the unit. Otherwise, it is necessary to turn on also the main switch of the chair.
In turning the unit on no instruments should be taken, the foot controller should be in the rest position and the buttons of the keyboards should not be depressed.

CAUTION

When lifting the back rest of DM 10E chair, the arm of the table with the control panel must not be in the position above the back rest.
Besides the saliva ejector and the syringe (on the control panel with instruments) only one instrument can be used (taken) simultaneously!
control panel with instruments

Indicators of condition:
- indication - spray
- indication - reversing
- indication - caution

negatoscope illumination
spray cooling
reversing
cup filling
flushing (spittoon bowl)
button -
button +

bargraph
**Button – negatoscope illumination**

Press the button to turn the negatoscope illumination on. To turn the illumination off, press the button again. The negatoscope turns off automatically after **ca 20 s**, or after an instrument has been activated by the foot controller.

**Button – spray cooling**

After the main switch has been turned on, the basic condition is as follows:

- **SPRAY NO!** Indicator off (green colour).
  - By taking the turbine and pressing the button the following condition is selected:
  - **SPRAY YES!** The indicator goes on, thus indicating the condition.
  - By taking the micromotor and pressing the button the following condition is selected:
  - **SPREJ NO!** Indicator off (green colour).

**Button - reversing**

By pressing the button the direction of the rotation of the spindle of the micromotor is changed. After turning the main switch on, the clockwise rotation is selected. The indicator (green colour) is off. After pressing the button the direction of rotation is changed and the indicator light goes on. **When pressing the „reversing“ button, the pedal of the foot controller must not be depressed but the instrument must be taken out of the holder!**

Last selected condition is remembered until the dental unit has been switched off.

**Button „Cup filling“**

The function of the button for the control of cup filling after the dental unit has been switched on.

Press the button for a short time (for less than **1 second**) to put the cup filling into operation for **5 seconds** (standard pre-set time).

To stop the activity while the cup is being filled with water, press the button for a short time.

**Programming of the time of the „Cup filling“ function**

Keeping the button (cup filling) depressed for more than **2 seconds causes that the „Cup filling“ function is set to the value for which the button has been kept depressed. This time for the „Cup filling“ function is **max. 10 seconds**. The „Cup filling“ function remains turned on while the button is being kept depressed.

**„Bowl flushing“ button**

The function of the button for the control of spittoon bowl flushing after the dental unit has been switched on.

Press the button for a short time (for less than **1 second**) to put the spittoon bowl flushing into operation for the period of **15 seconds** (standard pre-set time).

To stop the activity while the bowl is being flushed with water, press the button for a short time.

**Programming of the time of the „Bowl flushing“ function**
INSTRUCTIONS FOR USE                    DIPLOMAT ADEPT, DA 110 A

Keeping the button (bowl flushing) depressed for more than 2 seconds causes that the time of the „Bowl flushing“ function is set to the value for which the button has been kept depressed. This time for the „Bowl flushing“ function is max. 30 seconds. The „Bowl flushing“ function remains turned on while the button is being kept depressed.

+ (plus) button
By pressing the button the following is made gradually:
• micromotor speed is increased up to maximum. The instrument must be taken out of the holder.
• Scaler output is increased. The instrument must be taken out of the holder.
The above mentioned is indicated by the BARGRAPH indicator.

- (minus) button
It has reverse function to that of the + (plus) button.

INDICATION

<table>
<thead>
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<th>Spray function indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>indicator off</td>
</tr>
<tr>
<td>indicator on</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reversing function indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>indicator off</td>
</tr>
<tr>
<td>indicator on</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Warning indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>indicator off</td>
</tr>
<tr>
<td>indicator on</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BarGraph</th>
</tr>
</thead>
<tbody>
<tr>
<td>One illuminated box represents ca 10% of revolutions /speed/ for the micromotor 10% of the output of the scaler. All illuminated boxes represent 100% of revolution and/or output.</td>
</tr>
</tbody>
</table>

**setting of the parameters of the instruments**

After the unit has been switched on, the electrical instruments are set to ca 30% of their output and/or revolutions /speed/ (micromotor without cooling with clockwise rotation, turbine with cooling). For turbine neither output nor revolutions /speed/ are controlled, i.e. only on/off condition, without the indication on the bargraph.

**Water amount regulating valve**
It is located on the bottom side of the control panel with instruments and serves to adjust the amount of water for the cooling of rotary instruments and the scaler.
When the valve is turned fully clockwise, the supply of water for the rotary instruments and the scaler is stopped.
foot controller

Take the instrument (turbine, micromotor and scaler) out of the holder and press the pedal plate of the foot controller to put it into operation.

CAUTION

It is not possible for this unit to control speed and/or output continuously from the foot controller. The foot controller is only single-function without chipblower.

dental operating light

It is controlled by means of the lever of the selector switch directly on the dental operating light. In the middle position the dental operating light is switched off. By switching over to the extreme position the light gives 2 different levels of luminous intensity.

SPITTOON BLOCK

Bottle with water
It is located in the front part of the spittoon block. Distilled water from the bottle cools the instruments (turbines, micromotor and UOZK scaler) and is fed to the syringe.

How to replenish distilled water in the bottle

- turn off the main switch - position „0”
- unscrew the bottle
- replenish distilled water in the bottle
- screw the bottle firmly to avoid compressed air leak during the work
- turn on the mains switch, position „I”
- check the bottle for air leakage

In the event that the distilled water has been spent so that air has entered the water distributions, it is recommended to deaerate the water paths of the instruments which use water by letting water flow from them until water without air bubbles flows from the instruments.

CAUTION

When replenishing the distilled water, care must be taken not to allow foreign substances penetrate into the water or cause changes in its quality or composition. Distilled water for medical purposes must be used, not distilled water for industrial purposes!!!
Control of the water amount for cup filling
(it is located behind the door of the spittoon block). Max. water amount is set by the manufacturer.

Control of the water amount for bowl flushing
(it is located behind the door of the spittoon block). Max. water amount is set by the manufacturer.

**NOTE**

The amount of water for cup filling and bowl flushing in the spittoon block is set by the service technician in installing the unit.

**operation of individual instruments**

**CONTROL PANEL**

It is necessary, in addition to what is given below, to follow the instructions of the manufacturers of the instruments and accessories.

**Syringe**

It is already prepared for the operation in the holder. For air blowing press the right lever, for water rinsing press the left one and for water mist (spray) press both levers simultaneously.

**Turbine**

To put the turbine into operation, take it out of the holder and press the pedal plate of the foot controller. Cooling with spray is turned on and off with the „Spray cooling“ button. After the spray cooling has been selected, the amount of cooling water is set, if needed, with the knob for adjustment of water amount located at the lower right side of the control panel with instruments. When the knob is turned fully clockwise, water cooling is put out of operation and only air cooling remains in operation, the amount of air is not changed.

- To stop the operation, release the pedal plate of the foot controller.

**NOTE**

The light of the turbine with light goes on after the turbine has been taken out of the holder. After the turbine has been replaced in its holder, the light goes off immediately. Always replace the turbine in the holder only after the end of the activity (the pedal plate of the foot controller is released).

**Micromotor**

To put the micromotor into operation take it out of the holder and press the pedal plate of the foot controller. Cooling with spray is turned on and off with „Spray cooling“ button. After the spray cooling has been selected, the amount of cooling water is set, if needed, with the knob for adjustment of water amount located at the lower right side of the control panel with instruments. When the knob is turned fully clockwise, water cooling is put out of operation and only air cooling remains in operation, the amount of air is not changed.

- Speed is controlled with + and - buttons
- Change of the direction of the rotation (reversing) is controlled with the reversing button
- To stop the activity, release the pedal plate of the foot controller
- Always replace the micromotor in its holder only after the end of the operation (the pedal plate of the foot controller is released).
NOTE

- The light of the micromotor with light goes on after the micromotor has been taken out of the holder.
- After the micromotor has been replaced in its holder, the light goes off immediately.

Scaler
To put the scaler into operation, take it out of the holder and press the pedal plate of the foot controller. Output is set while the instrument is taken out of the holder or the scaler is in operation by means of the + and - buttons. The amount of cooling water is adjusted, if needed, by means of the knob of the water amount adjustment at the lower right side of the control panel with instruments. When the knob is turned fully clockwise, the supply of water is stopped – it is not allowed – see the caution.
To stop the activity, release the pedal plate of the foot controller.

CAUTION

- In adjusting the output and cooling, follow the manufacturer’s instructions!
- Turning the cooling water on for UOZK scaler is not indicated on the control panel and the „spray cooling“ button cannot be switched off.
- It is not allowed to turn off water for UOZK scaler.

SPITTOON BLOCK
Saliva ejector
It is put into operation automatically after having been taken out of the holder. Replace the saliva ejector tip after each patient!

Completion of work
The following is necessary:
- turn off the main switch - position 0, thus disconnecting the supply of electric power, water and air and the whole dental unit is depressurized.
- close the main water supply (at the work place) to the dental unit
- switch off the compressor – open the sludge valve

Maintenance
Maintenance of instruments and handpieces should be carried out according to the instructions of their manufacturers. In case of inserted filter of drinkable water, check it for cleanliness.

Instructions for maintenance

Inspections during the guarantee period
During the guarantee period the user is obliged in regular three-month intervals to invite authorized service technician for preventive periodical inspection.

The inspection is focused on the following:
- check of input filters (with regard to the cleanliness of input media)
- check of the suction system
- check of the waste hose
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- providing additional information and practice advice concerning the dental unit
- check of the proper use and maintenance of the dental unit and its instruments (according to the Instructions for Use and training)
- the manufacturer determines the range of above-mentioned work to be 1 to 1.5 hours
  - check and/or adjustment of all media (input, turbine setting and the like)
  
Authorized service technician is obliged to confirm the periodical inspection carried out in the guarantee card.

Inspection and audit /revision/ after the guarantee period

Periodical inspection of the product must be carried out by authorized service technician 6- month intervals.

It consists of the following:

- general inspection of the dental unit and functional parts thereof
- check and adjustment of working pressures of water and air
- check of water and air filters in the spittoon block
- check of the integrity of electropart and electric wiring (electric safety)

Audit /revision/ of electric safety

It is carried out according to the regulations of the country in which the dental unit is installed.

Cleaning, disinfecting and sterilization

Cleaning and disinfecting

Disinfecting of water in the dental unit

It is recommended to use Alpron agent in 1% concentration with distilled water. The solution is poured into the reservoir for distilled water and can be used permanently. With regular use the cooling system is maintained in cleanliness and it is not necessary to use other disinfecting agents.

CAUTION

The disinfecting must be carried out with the regulating valve of cooling water fully opened.

Solutions Alpron is the product of the company Alpro (Germany). Contact your dealer for details about the possibilities of the purchase and use of the said products.

Operating personnel must check the condition of the sieve of the catcher of rough particles in the spittoon bowl and clean it, if needed. When the saliva ejector has been used, clean the hose thereof by rinsing it with ca 200 ml after each patient and replace the saliva ejector tip.

Clean the following once a day at least:

- sieve of the saliva ejector
- sieve in the spittoon bowl

Perform the disinfecting of the suction system and the spittoon bowl at least once a day (e.g. after the completion of work) by means of SAVO Prim agent in 1% concentration in the volume of min. 200ml of diluted solution by pouring into the spittoon bowl and sucking through the tip of the saliva ejector.
Cleaning of other parts of the dental unit

Clean the external surfaces of the dental unit with a wet cloth. **At least once a year** and/or when the surface of the product is contaminated with biological material incidentally, use **INCIDIN FOAM – spray (HENKEL – ECOLAB)** agent according to the Instructions for Use of the said agent.

**CAUTION**

When cleaning the floor (PVC floor covering) with disinfecting agent, it is forbidden to place the foot controller onto the still wet floor covering. It is forbidden to use agent with detrimental effects on the structure of the varnish and plastic materials (agents based on phenols and aldehydes).

**Sterilization:**

The following is sterilizable:
- nozzles of syringes,
- turbines and micromotors handpieces,
- UOZK scaler tips

**Instruments and handpieces**

Cleaning, disinfecting and sterilization of instruments and their handpieces should be carried out according to the instructions of their manufacturer, furnished with the instrument.

**disposal**

In the disposal of the dental unit the legislation of individual country should be observed.

Before dismantling the unit, it should be decontaminated – clean the surface, rinse the suction and waste system. It is recommended to appoint the expert company with the disposal of the unit.

**Dangerous waste must be disposed of according to the applicable legislation!**

<table>
<thead>
<tr>
<th>PART</th>
<th>BASIC MATERIAL</th>
<th>RECYCLEABLE MATERIAL</th>
<th>MATERIAL TO BE PLACED IN WASTE DUMPING GROUNDS</th>
<th>DANGEROUS MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame and covers:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- metal</td>
<td>- steel X</td>
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<tr>
<td></td>
<td>- aluminium X</td>
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<tr>
<td>- plastic materials</td>
<td>- PUR X</td>
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<td>X</td>
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<td>- PVC X</td>
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<td>- PA, ABS X</td>
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<td>- laminated glass X</td>
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<td>- other plastic X</td>
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<td></td>
<td></td>
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<tr>
<td>- rubber</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>- ceramic</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Instruments</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Electronics</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Cables, transformer</td>
<td>copper X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Packaging</td>
<td>wood X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>cardboard X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>paper X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PUR X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**REPAIR SERVICE**

In the event of a failure of the dental unit contact your dealer who will give you information about the service network.
INSTRUCTIONS FOR USE

Pre-installation requirements

Environmental conditions

Not to be installed in the premises with explosion hazard!

Floor
The floor must have a concrete foundation of at least 100mm thickness. The slope of the floor shall not exceed 1%.
The use of antistatic floor is recommended.

Environment - according to STN EN 60601-1 standard

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature range</td>
<td>from +10°C to +40°C</td>
</tr>
<tr>
<td>Relative humidity range</td>
<td>from 30% to 75%</td>
</tr>
<tr>
<td>Atmospheric pressure range</td>
<td>from 700 hPa to 1 060 hPa</td>
</tr>
</tbody>
</table>

Storage

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative humidity</td>
<td>to 75%</td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>from -25°C to +50°C</td>
</tr>
</tbody>
</table>

Requirements for the installation of media

Water
Drinkable water with input pressure of 0,3 MPa to 0,6 MPa with the minimum flowrate of 4 l/min., without particles bigger than 50 µm, which might clog the small cross sections of the pipes of the dental unit, must be used. If the water contains particles bigger than 50 µm, there must be introduced 50 µm advance filter /strainer. The material must be either Cu or PVC.

In installation it is necessary to install a device to prevent the backflow at the point of the connection to the supply of municipal tap water. The device is not part of the dental unit.

Air
Supply of at least 55 l/min. of air at the pressure of 0,45 to 0,8 M Pa, oilless, clean and dry, must be ensured. The material must be either Cu or PVC.

Waste
Waste branch must have continuous slope of at least 1% with the minimum flowrate of 10 l/min, and must be free of sharp bends and conditions that might cause backflow. Do not use the same waste branch with another dental unit or basin! It is allowed to use the tubes made of fire-retardant polypropylene or cured flame-resistant polyethylene.

CAUTION

Pre-installation and installation must be performed according to the applicable standards of the particular country and in accordance with the valid documentation of the manufacturer, which is owned by each authorized representative of Chirana- Dental s.r.o.
Electrical requirements

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>supply voltage</td>
<td>230 V ± 10%</td>
</tr>
<tr>
<td>frequency of supply voltage</td>
<td>50 Hz ± 2 %</td>
</tr>
</tbody>
</table>

**Recommended mains fuse rating**

Recommended rating of the fuse of the supply main is 10 A. **No other equipment should be connected to the supply main in question!** Max. power input of the dental unit at the nominal frequency of 50 Hz is 315 VA. The supply main must comply with the respective national standard.

Pre-installation requirements having been met, assembly and installation of the dental unit is carried out and it is connected to the media.

**guarantee**

The manufacturer gives guarantee on the product according to the guarantee card. The guarantee does not cover defects arisen from incorrect or improper storage, operation and handling, defects arisen during the transport, caused by external influences and defects arisen from normal wear and tear.

The danger of damage on the goods passes from the seller to the buyer by the moment of passing over the goods to the first forwarding agents for the transport for the buyer or by the moment of taking over the goods directly by the buyer.

The manufacturer reserves the right for changes within the innovation of the product.

**packing list**

**Transport package – DIPLOMAT DA 110, 110A, 110B, 110C**

<table>
<thead>
<tr>
<th>Package</th>
<th>Code</th>
<th>Dimensions</th>
<th>Weight</th>
<th>Total weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Package DA110A pallet</td>
<td>V605.36-00-00</td>
<td>1,370 x 860 x 580 mm</td>
<td>30 ± 5 kg</td>
<td>89 ± 10 kg</td>
</tr>
<tr>
<td>Dimensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit weight netto</td>
<td>52 ± 5 kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total weight brutto</td>
<td>89 ± 10 kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case DA130-DA140 difference</td>
<td>V605.36-01-00 upon special order</td>
<td>1,370 x 860 x 610 mm</td>
<td>62 ± 5 kg</td>
<td>121 ± 10 kg</td>
</tr>
</tbody>
</table>

If the regulations of the country in which the installation is carried out require an amalgam catcher, the dental unit with the spittoon block without the amalgam catcher must be connected to an external amalgam catcher. **Installation of the external amalgem catcher must be carried out according to the instructions of its manufacturer!**
INSTRUCTIONS FOR USE

THE CONTENTS OF THE CARTON

- cap of the bearing pillar 1
- arm with the control panel 1
- spittoon block, complete 1
- glass bowl 1
- foot controller 1
- dental operating light 1
- light pantograph 1
- instruments, accessories, small parts and completion sheet, sealed in a paper carton 1

ACCOMPANYING DOCUMENTATION

- Instruction for Use
- Guarantee Card
- Inspection Card
- Manuals from subcontractors
- Completion Sheet (placed in the sealed carton with the instruments).

NOTE

The plate for installation (acc.to the order) is packed separately in the shipping package.