# DENTAL UNIT

# CLESTA II

## Rod Type

# OPERATING INSTRUCTIONS

**IMPORTANT**

- **This manual provides operating instruction for CLESTA II ROD TYPE.**
- **The instructions contained in this booklet should be thoroughly read and understood before operating the unit.**
- **After the installation is completed, file this manual and refer back to it for future maintenance.**
- **If you have any questions about this Manual or this product, please contact us.**
  **If manual becomes unreadable or is lost, please request a new manual by contacting your dealer.**
- **Installation should be conducted by authorized personnel only. Follow instructions on installation manual.**

Belmont

CE 0197

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Intended Use of the Product

This product is an active therapeutic device intended for the exclusive use for diagnoses, treatments and relative procedures of dentistry.

The product must be operated or handled by the qualified dentists or by dental staffs under the supervision of the dentist. Such dentists or dental staffs should instruct and/or assist the patients to approach to and leave from the product. Patients should not be allowed to operate or handle the product unless he/she is so instructed.

The product is supplied together with the handpieces like electric micromotor, air turbine and/or motor, scaler and so on.

Environmental Requirements

| | | | | | |
|---|---|---|---|---|---|
| Ambient Temperature | Operating | +5 ℃ - | +40 ℃ | Storage | -10 ℃ - +50 ℃ |
| Humidity | 10 % - 80% | | | | |
| Atmospherical Pressure | 600 hPa - 1060 hPa | | | | |

Compatibility of Handpieces

Use the compatible handpieces as shown on the attached list for this unit. (List of compatible handpieces).

Important Notes

In case of the troubles, please contact Takara Belmont offices or your dealers.
Do not disassemble or attempt to repair.
Disassembly, repair or modifications shoud only be done by a qualified repair technician.
Attempts at disassembly, repair or modifications may lead to abnormal operation and accidents.

In case of disposal of equipment

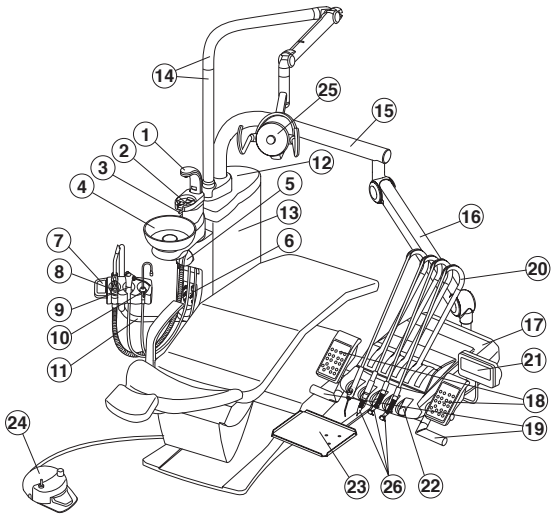
In case of disposal of equipment or of components dismounted from the unit, take full infection preventing measures, and carry out appropriate steps in accordance with the legal regulations at that time.

## SYMBOLS

In this manual, on the labels or on the control panel of CLESTA II ROD TYPE, following symbols are used.
Confirm the meaning of each symbol.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
|  | alternating current |  | Protective earth (ground) |  | ON (power) |  | OFF (power) |
| LP | Chair last position | 0 | Chair auto return | 1 | Chair preset1 | 2 | Chair preset2 |
|  | Chair auto control |  | Chair manual control |  | To raise the chair |  | To Recline the backrest |
|  | To lower the chair |  | To raise the backrest |  | Fiber optic handpiece light on//off |  | Handpiece coolant spray on/off |
|  | Rotation mode select |  | Micro motor Forward/Reverse select | F | Function |  | Store |
|  | Rotation speed contol |  | Scaler power control |  | Syringe |  | Bowl flush |
|  | Cupfiller |  | Dental light on/off |  | Dental light mode selection |  | Minus |
|  | Plus |  | Service outlet (water) |  | Service outlet water flow control |  | Service outlet (air) |
| W | Water | A | Air |  | Water heater | SN | Serial number |
|  | Manufacturer |  | Date of manufacture |  | Type B Applied Parts |  | Non-ionizing radiation |
|  | Caution<br>It means “caution, warnings, or possibility to danger”.<br>Refer to operating instructions |  | Separate collection for electrical and electronic equipment |  | Authorized representative in the European community | | |

## 1. OVERALL VIEW AND MAJOR PARTS




① Cupfiller Nozzle
② Cupfiller Base
③ Bowl Flush Nozzle
④ Spittoon Bowl
⑤ Solid Collector
⑥ Cuspidor Unit Control Panel
⑦ Assistant Instruments Holder (With Membrane Switch)
⑧ Vacuum Handpiece
⑨ Assistant Side Syringe
⑩ Saliva Ejector Handpiece
⑪ Assistant Holder Arm
⑫ Cuspidor Top
⑬ Cuspidor Body
⑭ Light Pole
⑮ First Arm (Horizontal Arm)
⑯ Balance Arm
⑰ Table Housing
⑱ Main Control Panel
Right Hand Side : Standard
Left Hand Side : Option
⑲ Handle
Right Hand Side : Standard
Left Hand Side : Option
⑳ Rod
㉑ Dental Size Film Viewer
㉒ Handpiece Rest
㉓ Sub Tray Holder
㉔ Foot Controller
㉕ Dental Light
㉖ Handpieces (Micromotor, Air Turbine/Motor, Scaler and etc.) Manufacturers recommend to use the handpieces with CE markings

**Fig.1-1** Overall View and Major Parts

## 2. DIMENSIONS & SPECIFICATIONS

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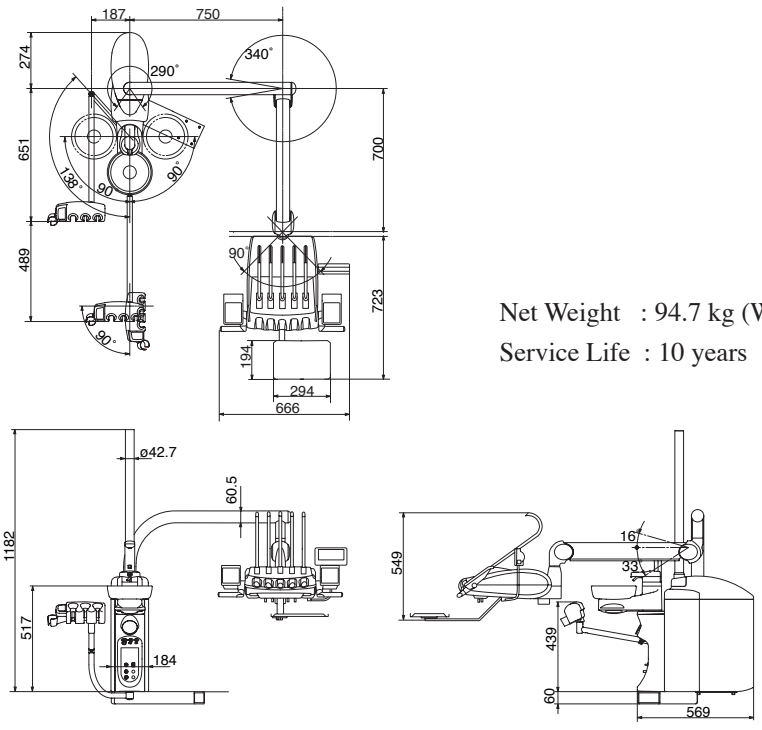


Net Weight : 94.7 kg (Without Dental Light)
Service Life : 10 years

## 3. OPERATING INSTRUCTIONS

### 3-1. DOCTOR TABLE SECTION

(1) Master Switch (Fig.3-1)

Turn on the master switch located on the right hand side (facing) under the doctor table,the power indicator on the main control panel illuminates in green.

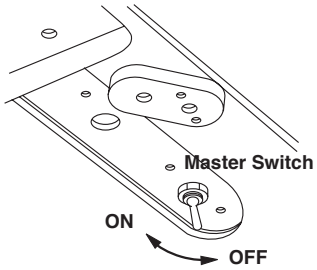


Fig.3-1 Master Switch and Indicator

**Note** : E Type

Fig.3-2 is indicated and it turns to Fig.3-3 after seveal seconds on the indicator.

Wait operation until Fig.3-2 is changed to Fig.3-3 on the indicator.

Indicator


Fig.3-2 Fig.3-3

(2) Main Control Panel

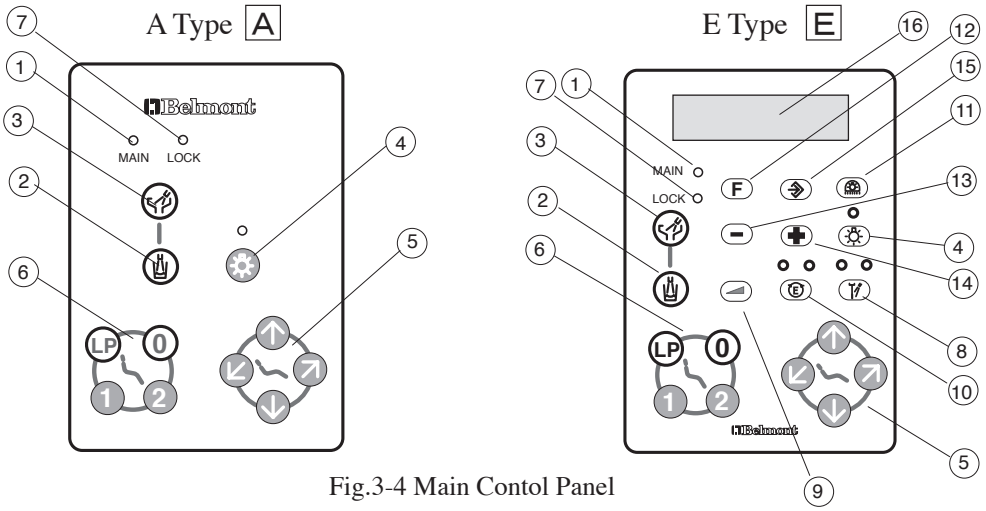


Fig.3-4 Main Contol Panel

① Power Indicator
② Cupfiller Switch
③ Bowl Flush Switch
④ Light Pack Switch
⑤ Chair Manual Control Switch
⑥ Chair Auto Mode Control Switch
⑦ Safety Lock Indicator
⑧ Spray Water ON/OFF Switch
⑨ Micro Motor Maximum Speed Setting Switch
⑩ Micro Motor Direction Control Switch
⑪ Dental Light ON/OFF Switch
⑫ Function Switch
⑬ Decreasing Switch
⑭ Increasing Switch
⑮ Store Switch
⑯ Indicator

② Cupfiller Switch(Fig.3-5) A E

Momentarily press the cupfiller switch , water will come out from the cupfiller nozzle for 3 seconds and stops automatically.

Also the bowl flush starts and will run for 6 seconds and stops automatically.

While the cupfiller is working, by momentarily pressing the cupfiller switch the cupfilling will cancel.

Also, when the cupfiller starts, the spittoon water flushes 6 seconds and stops automatically.(Synchronized Bowl Flush)

Note : The cupfiller water volume can be adjusted by the cupfiller flow control knob located inside the cuspidor body. Refer to 3-2.(3).

**Fig.3-5** Cupfiller Switch

③ Bowl Flush Switch (Fig.3-6) [A] [E]

Momentarily press the bowl flush switch, water flushes for about 5 seconds and stops automatically. (Timer mode)
Keep pressing the bowl flush over 2 sec.,water flushes continuously until the bowl flush switch is pressed again. (Continuous mode)
While the bowl flush is working by momentarily pressingthe bowl flush switch the bowl flush will stop.

Note 2 : Clesta-2 unit can be set to timer mode (standard setting) and continuius mode for bowl flush.
The bowl flush water volume can be adjusted by the bowl flush flow control knob located inside the cuspidor body. Refer to 3-2.(3).

**Fig.3-6** Bowl Flush Switch

④ Light Pack Switch (Optional)(Fig.3-7) [A] [E]

Pick up the fiber optic handpiece from the holder, momentarily press the light pack switch, and the LED illuminates in green and the fiber optic power turns on until the light pack switch is pressed again.


Fig.3-7 Light Pack Switch

⑤ Chair Manual Control Switches (Fig.3-8) [A] [E]

a. Seat Lifting : Keep pressing ↑ switch until the seat is lifted up to the desired position.
b. Seat Lowering : Keep pressing ↓ switch until the seat is lowered to the desired position.
c. Backrest Reclining : Keep pressing ↙ switch until the backrest is reclined to the desired position.
d. Backrest Raising : Keep pressing ↗ switch until the backrest is raised up to the desired position.

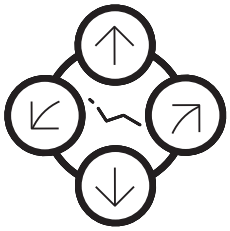

Fig.3-8 Chair Manual Control Switch

⑥ Chair Auto Mode Control Switches(Fig.3-9) [A] [E]

a.Momentarily press the preset-1 switch (**1**), the chair moves to the preset 1 position and stops automatically.
Preset 2 position operated by the preset switch (**2**).
Note : For preset position adjustment refer to chair Manual.

b. Auto-return Operation
Momentarily press (**0**) switch, the chair returns to the initial position (The seat is the lowest and the backrest is the upright position.) and stops automatically.

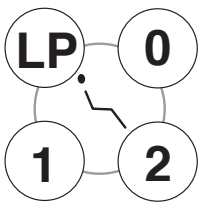


Fig.3-9 Chair Auto Mode Control Switch

c. Last Position Memory Operation
Momentarily press (**LP**) switch at the reclined backrest position (treatment position), the backrest goes up to the mouth rinsing position and stops automatically. Momentarily press (**LP**) switch again, the backrest returns to the previous treatment position and stops automatically.

d. Emergency Stop (Safety Stop)
During automatic procedure (preset, auto-return and last position memory), momentarily pressing any chair control switch will cancel the automatic movement immediately.

⑦ Safety Lock Indicator (Fig.3-10) [A] [E]

The safety lock indicator illuminates amber when the safety lock device is working.

Note:Please refer to page 13 4. Safety Lock Device.


Fig.3-10 Safety Lock Indicator

⑧ Coolant Water ON/OFF Switch (Fig.3-11) E

When a handpiece is picked up and this switch is pressed, both LED A (air) and LED W (water) lights up, the coolant water and air comes outfrom the handpiece. In case of air motor or air turbine, switching between spray (both of LED A and LED W are lit) and OFFoccurs when this switch is pressed.
In case of electric scaler, switching between water only (LED W is lit) and OFF occurs when this switch is pressed, regardless of the mode.
In case of micromotor, either the 2-mode or the 4-mode can be selected by mode select setup.When this switch is pressed in the 2-mode setup, switching between spray and OFF occurs. In case of 4-mode setup, switching occurs in the sequence indicated below each time when this switch is pressed: Spray to Water only to Air only to OFF
As for the mode setting, Please refer to 3-1.(3) h.

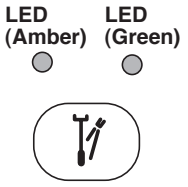


**Fig.3-**11 Coolant Water ON/OFF Switch

⑨ Electric Motor Speed Set Switch (Optional) (Fig.3-12) E

Two different modes, limit mode and preset mode, are available as micromotor rotation speed modes. Pressing this switch each time changes the speed mode: Limit speed -> SET1 -> SET2 -> SET3 -> Limit speed.
The indicator indicates the selected mode.

Fig.3-12 Electric Motor Speed Set Switch

1) Switching to limit rotation speed (limit mode)
Pick up the micromotor from the holder, and press this switch to select limit mode. For selecting the upper limit in the limit mode, press either plus switch or minus switch. The upper limit of the micromotor rotation speed changes in three steps (or 5 steps).
- Upper limit of rotation speed in case of 3 steps: 10000/20000/40000 $min^{-1}$(rpm)
- Upper limit of rotation speed in case of 5 steps: 5000/10000/20000/30000/40000 $min^{-1}$(rpm)

See item g. on page 7 for setting in 5 steps.
The micromotor rotation speed can be varied in the range of up to the selected upper limit by sliding the foot controller pedal right or left. The rotation speed range varies by the micromotor type.

2) Switching to preset rotation speed (preset mode)
Pick up the micromotor out of the holder, press this switch, and then select preset mode (SET1 to 3).
The rotation speed in this mode can be changed by pressing plus switch or minus switch. Press store switch for storing the changed rotation speed.When the foot controller is depressed upon selection of preset mode (SET1 to 3), the micromotor runs at the fixed rotation speed indicated on the indicator.

⑩ Electric Motor Rotation Direction Switch (Optional) (Fig.3-13) E

After picking up the electric motor from the holder, the electric motor rotation direction can be changed by momentarily pressing this switch the rotation direction will be indicated by the amber and green LEDs.
Indicator in green : Forward Rotation
Indicator in amber : Reverse Rotation

Note: Do not change the electric motor direction while the motor is running. When the electric motor with setting Reverse Rotation is returned the holder and picked up again, a buzzer sounds.

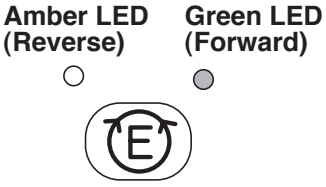


Fig.3-13 Electric Motor Rotation Direction Switch

⑪ Dental Light ON/OFF Switch (Fig.3-14) E

Switch for on/off the dental light.

Fig.3-14 Dental Light Switch

⑫ Function Switch (Fig.3-15) E

Use this switch for setting various working conditions.

As for the setup procedures, please refer to 3-1.(3) a-i.


Fig.3-15 Function Switch

(3) Function Swicth Setup Procedure E

a. Timer

Timer can be set maximum 90 mins. 50 secs. in 10 secs. segment.


1) To set a timer

Momentarily press the function switch, and set the time by pressing decrease switch and increase switch.

(+) … Minimum setting time by switch is 10 seconds.

(−) … Minimum setting time by switch is 1 minute.

The setting time is indicated on the function indicator.

Momentarily press the start switch to start timer. The end of setting time is informed by electronic sounds.

Example: Setting time 3 minutes 30 seconds is indicated as 03:30 in the function ndicator.

2) Preset time setting


Four preset time can be set. (0) (1) (2) (LP)

Momentarily press function switch, and set the time by pressing decrease switch and increase switch.

Press the store switch, then press the (0)(1)(2) or (LP) switch to store in memory.

3) Preset time operation


Press the function switch, then press the (0)(1)(2) or (LP) switch to choose desired preset number.

Press start switch to start timer.

4) Cancel the timer during time countdown


Momentarily press function switch, then press start switch to cancel timer.

b. Group Selection Mode

The group selection mode is a convenient function for the dental clinic where a multiple (up to four groups) of dentists work with one unit. The following functions can be set for each group.

Preset position for chair. / Preset rotation speed for micro motor.

To set the group.

1) Momentarily press the function switch twice on main control panel, and the function indicator will indicate group number.

2) Momentarily press the 0,1, 2 or LP switch on main control panel to set one of 4 group.

0 ; Group1 / 1 ; Group2 / 2 ; Group3 / LP ; Group4

c. Flush out system (Optional)

The CLESTA II is equipped with two types of flush out system.

Short time flush out is for cleaning handpiece water lines.

Long time flush out is for handpiece water lines, bowl flush water line and cupfiller water line.


Function Switch Decrease Switch Increase Switch

1) Short time flush out

Momentarily press the function switch three times and momentarily press the decrease switch.

Pick up the handpieces from the holder and set them in the cuspidor bowl.

By momentarily pressing the foot controller this starts short time flush out. Water comes out from the handpiece and stops automatically after 40 seconds.

During flush out, by momentarily pressing any one of unit control switch or foot controller will cancel flush out immediately.

2) Long time flush out

Momentarily press the function switch three times and momentarily press the increase switch.

Pick up the handpieces from the holder and set them in the cuspidor bowl.

By momentarily pressing the foot controller this starts long time flush out for 5 minutes. Then, cupfiller and bowl flush out starts and stops automatically in another 5 minutes.

During flush out, momentarily pressing the any one of unit control switch or foot controller will cancel flush out immediately.

d. Control panel switching sound on/off

Pressing a switch on the control panel makes an electronic sound.

This sound can be eliminated as follows;


Function Switch Decrease Switch Increase Switch

Momentarily press the function switch four times and momentarily press the decrease switch.

To return to original setting.

Momentarily press the function switch four times and momentarily press the increase switch.

e. Fiber optic handpiece lighting mode (Optional)

In case that fiber optic handpiece is installed, the fiber optic turns on when the handpiece is taken out of the holder, and turns off when the handpiece is returned to the holder.

This could be changed to fiber optic turns on when the handpiece is taken out of the holder and drive air pedal of foot control is activated.


Function Switch Decrease Switch Increase Switch

Momentarily press the function switch five times and press the decrease switch.

To return to original setting.

Momentarily press the function switch five times and press the increase switch.

f. Electronic sound for timer

Electronic sound for timer can be changed.


Function Switch  Chair Auto Mode Switch

Momentarily press the function switch six times.

Momentarily press one of chair auto mode switch (0,1,2,LP ) then the new electronic sound is to be memorized.

g. Micro motor maximum speed setting (Optional)

The maximum rotation speed of the micro motor can be selected in 3 steps (10000,20000,40000 $min^{-1}$(rpm)).

This function can be changed to 5 steps (5000,10000,20000,30000,40000 $min^{-1}$(rpm) as follows:


Function Switch  Decrease Switch  Increase Switch

Momentarily press the function switch seven times and press the increase switch.

To return to original setting.

Momentarily press the function switch seven times and press the decrease switch.

h. Coolant Water ON/OFF Switch

In case of micromotor, either the 2-mode or the 4-mode can be selected by mode select setup.

When this switch is pressed in the 2-mode setup, switching between spray and OFF occurs.

In case of 4-mode setup, switching occurs in the sequence indicated below each time when this switch is pressed: Spray to Water only to Air only to OFF


Function Switch  Decrease Switch  Increase Switch  Coolant Water ON/OFF Switch

To set 2 mode

Momentarily press the function switch eight times and press the decrease switch.

To set 4 mode

Momentarily press the function switch eight times and press the increase switch.

i. Cupfiller and bowl flush

Cupfiller and bowl flush are set to operate together (when the cupfiller switch is activated, bowl flush also starts).

To make these operate independently.


Function Switch  Decrease Switch  Increase Switch

Momentarily press the function switch nine times and press the decrease switch.

To return to original setting.

Momentarily press the function switch nine times and press the increase switch.

(4) Scaler for SATELEC SP4055 (Optional)

The setting range of ultrasonic scaler can be selected in 3 ranges (Scaling, prosthesis removal, amalgam, plugging / Ultrasonic endodontic treatment / Ultrasonic periodontal treatment).

Pick up the handpiece of scaler and set the range by pressing increase switch or decrease switch.

(5) Doctor Table Chassis (Fig.3-16)

A.The handpiece spray water control knobs are located under the doctor table.

Each handpiece spray water control knob is marked 1-4 from the left side HP1,HP2,HP3,...

The handpiece spray water volume can be controlled independently.

*The HP4 is optional.

B. Doctor's Syringe Flow Control Knobs (Fig.3-16)

Doctor's syringe flow control knobs are located under the doctor table.

The flow control knobs adjust the doctor's syringe air and water flow volume.

The yellow capped knob is the air flow control knob, the blue capped knob is the water flow control knob.

Note : Turning the control knob counterclockwise will increase the flow volume and turning clockwise will decrease.

C. Handpiece Air Pressure Gauge (Fig.3-16)

During a handpiece is working, the handpiece drive air pressure is shown in the pressure gauge.

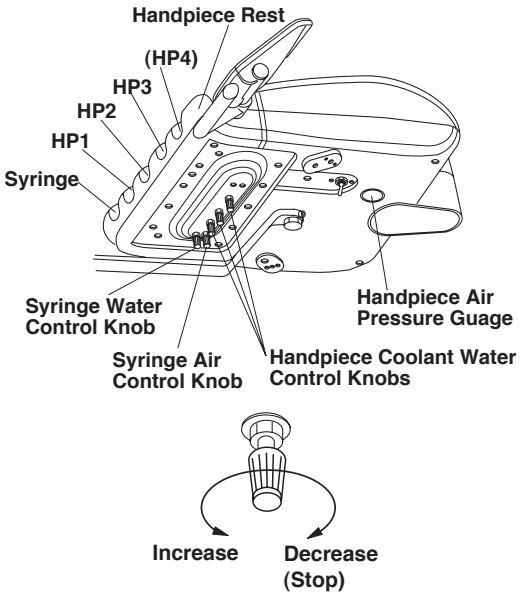


Fig.3-16 Doctor Table Section Control Knobs

(6) Balance Arm Air Brake (Fig.3-17)

When the master switch is ON, the balance arm is locked by the air brake.

Hand the handle and press the air brake release button to adjust the table height. At the desired table position, release the air brake release button and the balance arm is locked.

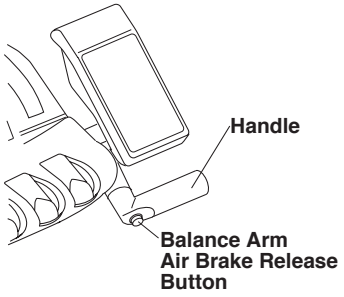


Fig.3-17 Balance Arm Air Brake

(7) Dental Size Film Viewer (Fig.3-18)

Film viewer ON/OFF switch is located on right-hand side of the film viewer.

Press the switch and the film viewer turns on.

Press again and the film viewer turns off.

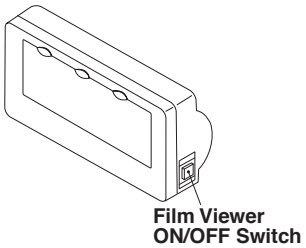


Fig.3-18 Dental Size Film Viewer

## ⚠CAUTION

Handpieces

Refer to handpiece manufacturers operating instructions.

### 3-2. CUSPIDOR UNIT SECTION

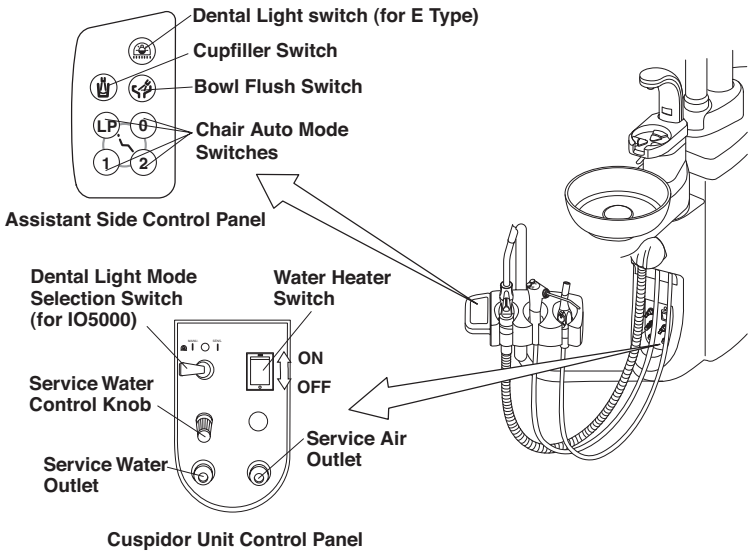


Fig.3-19 Assistant Side Control Panel and Cuspidor Unit Control Panel

(1) Assistant Side Control Panel (Fig.3-19)

Cupfiller switch, bowl flush switch, dental light switch and chair auto mode switches are located on the assistant side control panel. Refer to 3-1.(2) Main Control Panel

(2) Cuspidor Unit Control Panel (Fig.3-19)

A. Dental Light

a . IO 5000 Dental Light

Dental light can be operated (ON/OFF) either by the touchless sensor switch located on the light head or by the manual switch on the cuspidor unit control panel.

To operate by the touchless sensor switch --- Set the switch lever to Left side(SENSOR Side)

To operate manually ---------- Set the switch lever to Right side (Manual Side)

Set the switch lever to Centre for OFF.

B. Water Heater Switch (Fig.3-19)

Water heater switch is located on the cuspidor unit control panel.

Turn on the water heater switch and the cupfiller water will warm up.

C. Service Water Outlet (Fig.3-19)

The service water outlet provides a quick-connection for water.

D. Service Water Outlet Control Knob (Fig.3-19)

The water volume from the service water outlet can be adjusted by the service water outlet control knob.

Turning the knob counterclockwise will increase the flow volume and turning clockwise will decrease.

E. Service Air Outlet (Optional) (Fig.3-19)

Service air outlet provides a quick-connection for air.

(3) Cuspidor Unit Body

A. Assistant's Syringe Flow Control Knobs (Fig.3-20)

Assistant's syringe flow control knobs are located in the cuspidor unit body.

The yellow capped knob is to adjust the assistant's syringe air flow volume, and the blue capped knob is to adjust water flow volume.

B. Cupfiller Flow Control Knob (Fig.3-20)

Cupfiller flow volume can be controlled by the cupfiller flow control knob. (Pinch valve system)

Loosen the lock nut and adjust cupfiller water flow volume by turning the knob.

Tighten the lock nut after adjustment.

C. Bowl Flush Flow Control Knob (Fig.3-20)

Bowl flush flow volume can be controlled by the bowl flush flow control knob. (Pinch valve system)

Loosen the lock nut and adjust bowl flush water flow volume by turning the knob.

Tighten the lock nut after adjustment.

Note : Turning a knob counterclockwise increase flow volume and turning clockwise will decrease.

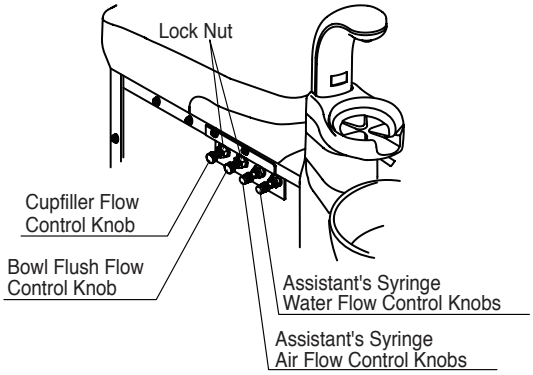


Fig.3-20 Flow Control Knobs in Cuspidor Unit Body

(4) Assistant Instrument Holder (Fig.3-21)

When picked up an instrument (Saliva ejector or Vacuum handpiece) from the assistant holder this starts the instrument working automatically.

Returning the instrument to the holder stops automatically.

Saliva ejector handpiece and vacuum handpiece have stop valves to close and adjust suction power.

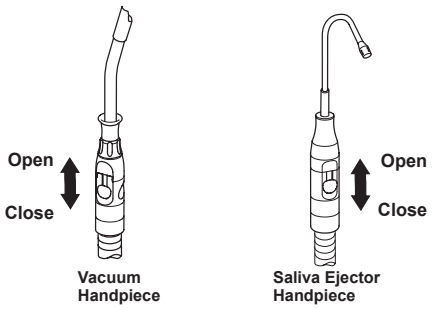


Fig.3-21 Vacuum Handpiece and Saliva Ejector Handpiece

(5) Sensor Cupfiller (Optional) (Fig.3-22)

Place the cup (paper cup) on the cupfiller base and water comes out from the cupfiller nozzle fills up the cup and stops automatically.

When cupfiller starts, the bowl flush also starts, and will run for about 6 sec. and it stops automatically. While filling the cup, momentarily press the cupfiller switch,and this will cancel the cup fillerwater flow. During bowl flush, momentarily press the bowl flush switch and this will cancel the boul flush water flow.

Note: Use only suitable disposable paper cup (dental paper cup).

Use only an empty cup. A cup with some water in could cause an over flow.

The sensor cupfiller needs over 2 seconds interval between cup filling.

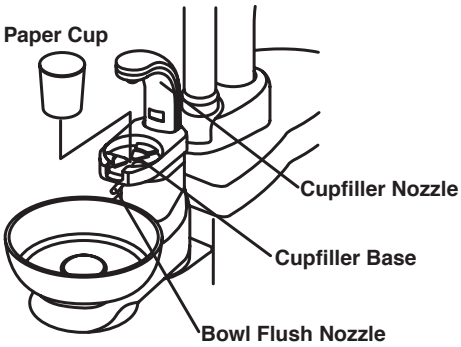


Fig.3-22 Sensor Cupfiller

(6) Cuspidor Bowl Rotation (Optional) (Fig.3-23)

The cuspidor bowl can be rotated 90˚ each. (inside & outside)

**⚠CAUTION**

Do not hold the cupfiller nozzle when rotating the cuspidor bowl; be sure to hold the bottom of the spittoon bowl. Rotating via the cupfiller nozzle may result in damage to the cupfiller nozzle.

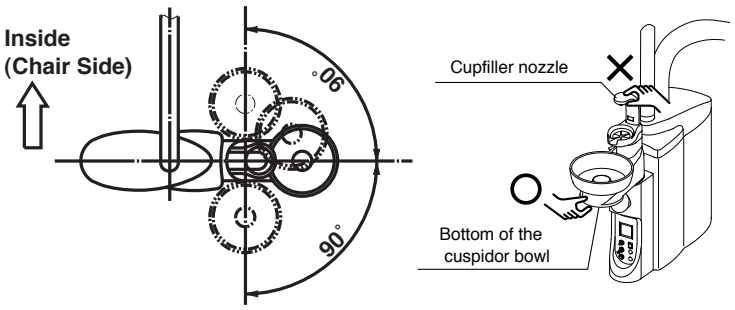


Fig.3-23 Cuspidor Bowl Rotation

(7) Height Adjustable Assistant Arm (Optional) (Fig.3-24)

Press the lock release button and raise arm to adjust the assistant holder height.

Position at desired height and release the lock button after that.

Note: Support the arm with your hand until it is positioned at the desired height.

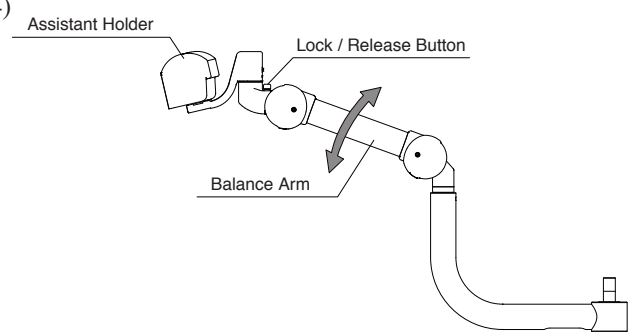


Fig.3-24 Height Adjustable Assistant Arm

(8) Dental Light (Fig.3-25)

Please refer to operating instruction for dental light.

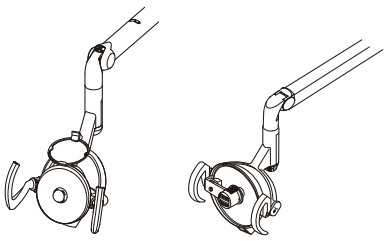

Fig.3-25 Dental Light

## 3-3. FOOT CONTROL SECTION

(1) Foot Control (Type A2) (Fig.3-26 & 3-27) A

A. Drive Air Pedal

Pick up a handpiece from the handpiece rest (pull the rod about 10 degrees to forward) and depress the drive air pedal, the handpiece starts running.

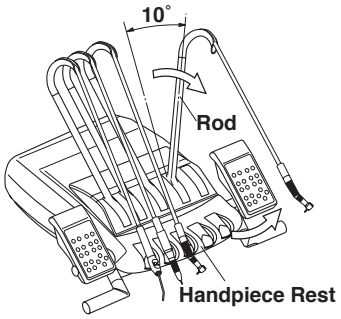


Fig.3-26 Handpiece Rest & Rod

B. Coolant Water Switch

Coolant water switch allows handpiece coolant water to be turned on or off.

C. Chip Blower Pedal

By depressing the chip blower button, the chip air will come out from handpiece without the bur rotating.

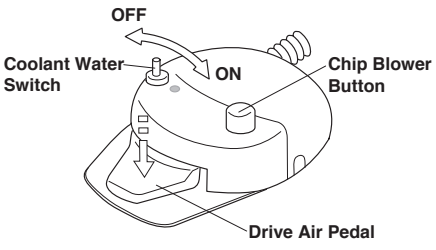


Fig.3-27 Type A2 Footcon

(2) Electric Motor Foot Control (Type SE) (Fig.3-26 & 3-28) E

A. Drive Air Pedal

Pick up a handpiece from the handpiece rest (pull the rod about 10 degrees to forward) and depress the drive air pedal, the handpiece starts running.

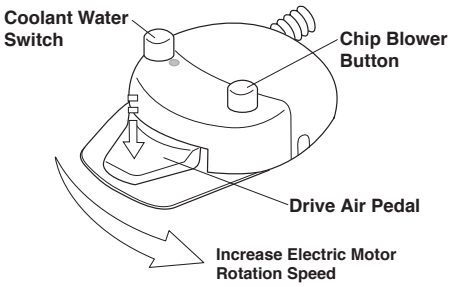


Fig.3-28 Type SE Footcon
(Electric Motor Footcon)

B. Coolant Water Switch

Momentarily depressing the coolant water switch is changed handpiece coolant water and air situation.
The situation is shown on the main control panel.
Refer to page 4, H. Coolant Water ON/OFF Switch.

C. Chip Blower Button

By depressing the chip blower button, the chip air will come out from handpiece without the bur rotating.

D. Electric Motor Rotation Control (Optional)

Pick up the electric motor from the handpiece holder and while pressing down slide drive air pedal horizontally to right, and the electric motor will start running.
The rotation speed increases by sliding the drive air pedal further to the right.
The speed control by the foot control is within the limits of the electric motor speed setting.

E. Coolant Water Switch / Electric Motor Rotation Direction Switch (Optional)

The coolant water switch can be changed for electric motor rotation direction switch.
To change to electric motor rotation direction switch.
Keep depressing the coolant water switch until buzzer sound (about 2 sec.).
To return to original (coolant water switch) setting.
Keep depressing the coolant water switch until buzzer sound (about 2 sec.).
The electric motor rotation direction is indicated on the control panel by LED.
Please see page 4 ⑩ Electric Motor Rotation Direction Control Switch.

**4. SAFETY LOCK DEVICE**

In the following cases the safety lock device to lock the chair movement is activated.

1. When the pedal of the foot controller is depressed.
2. When any switch on the doctor control panel or the assistant control panel is dpressed while the chair is moving.
3. During setting with the function switch on the doctor control panel.
4. When the cupidor bowl is rotated toward the patient side.

Note: Please refer to page 3 ⑦ (Fig3-10).

## 5. CARE AND MAINTENANCE

**⚠CAUTION**

Turn off the master switch at the initial position after daily operation or in long term iterval.

Cleaning Unit

**⚠CAUTION**

All surfaces can be cleaned with DURR FD333 cleaner.
Spray the cleaner (DURR FD333) on cloth and wipe the surfaces with the cloth.
Do not drench the chair and unit. Wipe all surfaces dry after cleaning.

(1) Cuspidor Bowl (Fig.5-1)

Take out the drain cap and the basket strainer located in the centre of cuspidor bowl and clean them.
Remove the cupfiller base and pull out the cuspidor bowl and clean it.
After cleaning, secure the cuspidor bowl firmly.

**⚠CAUTION**

Turn off the main switch before removing the cuspidor bowl.

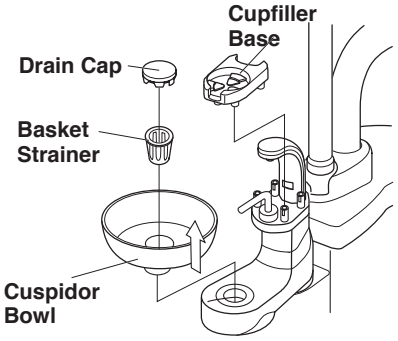


Fig.5-1 Cuspidor Bowl, Drain Cap and Basket Strainer

(2) Solid Collector (Fig.5-2)

Pull out the solid collector filter and clean it.
After cleaning, refit the solid collector firmly.

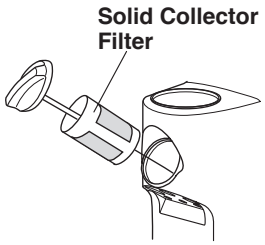


Fig.5-2 Solid Collector Filter

(3) Handpiece

1-1.Vacuum Handpiece and Saliva Ejector (Fig.5-3)

Pull and remove the top parts of each handpiece and clean strainer.

**Washing**

Remove dirt with tap water before sterilization.

**Sterilization**

Vacuum Tip/Saliva Ejector Tip/Vacuum Cap/Vacuum Handpiece Body/Saliva Ejector Handpiece Body can be autoclave.Vacuum handpiece body and saliva ejector body have to assemble before autoclave.
A. Insert the handpiece in a sterilization pouch and seal it.
B. Autoclave for 20 min. at 121°C

**Storage**

After cleaning the vacuum tip and saliva ejector tip, keep it in the clean place.

**Note** : The slide knob can be autoclave 100 times and is expendable supplies.

**⚠CAUTION**

Skip the drying process if the temperature is to exceed 135°C.
If damage occurs to the sterilization pouch, discard, and sterilize again using a new pouch.

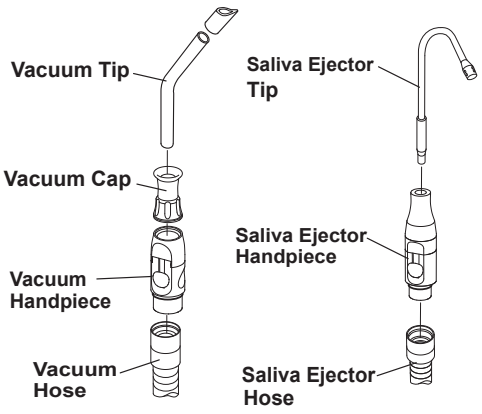


Fig.5-3 Vacuum Handpiece and Saliva Ejector Handpeice

1-2.Vacuum hose and saliva ejector hose are detachable from the cuspidor unit.(Fig.5-4)
Turn the hose connector 90˚ counterclockwise the hose can then be removed from the cuspidor unit.
Insert the hose connector and turn through 90˚ clockwise to re connect.
Note: After daily operation, run two cup of clean water through handpieces to clean inside.

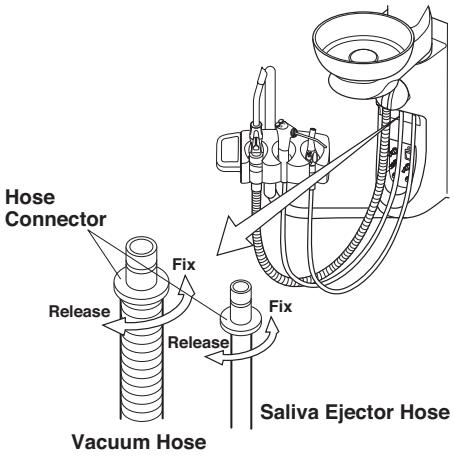

Fig.5-4 Vacuum Hose and Saliva Ejector Hose

2. Micro Motor / Turbine / Scaler
Sterilize the handpiece according to manufacturer's operating manual.

3. Belmont 77 Syringe (Fig.5-5)
Remove the nozzle from syringe and clean it.

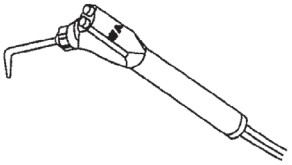
**Fig.**5-5 Belmont 77 Syringe

**Washing**
Remove dirt with tap water before sterilization.

**Sterilization**
The nozzle can be sterilized with autoclave.
A. Insert the handpiece in a sterilization pouch and seal it.
B. Autoclave for 20 min. at 121°C

**Storage**
After cleaning the nozzle, keep it in the clean place.

**⚠CAUTION**

Skip the drying process if the temperature is to exceed 135°C.
If damage occurs to the sterilization pouch, discard, and sterilize again using a new pouch.

(4) Tubings and hoses
Tubings and hoses can be cleaned with DURR FD333 cleaner.

(5) Air Filter Drain Valve (Fig.5-6)
Air filter drain valve is located under the maintenance lid.
Once a week open the drain valve and drain off water from the air line.

(6) Main Water Valve (Optional)(Fig.5-6)
Main water valve is located under the maintenance lid.
Turn off the main water valve after daily operation and for long term intervals.

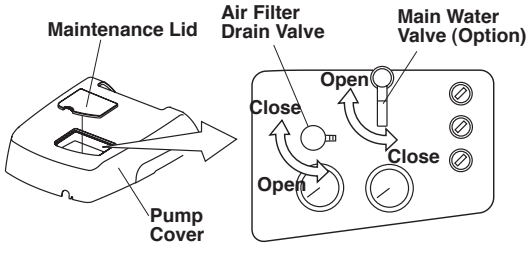

Fig.5-6 Air Filter Drain Valve and Main Water Valve

(7) Filter Replacement (Fig.5-7)
The water filter in the junction box needs to be replaced at least once a year.
The air filter in the junction box needs to be replaced at least once every three years.
Contact your local service representative for replacement.

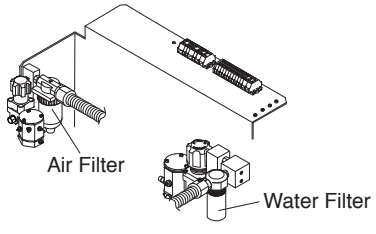

Fig.5-7 Filter

## 6. ELECTROMAGNETIC COMPATIBILITY(EMC)

Medical electrical equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in this manual.

Portable and mobile RF communications equipment can affect medical electrical equipment.

The equipment or system should not be used adjacent to or stacked with other equipment. If adjacent or stacked use is necessary, the equipment or system should be observed to verify normal operation in the configuration in which it will be used.

| **Guidance and manufacture's declaration – electromagnetic emissions** | | |
|---|---|---|
| The CLESTA II Unit is intended for use in the electromagnetic environment specified below. The customer or the user of the CLESTA II Unit should assure that it is used in such an environment. | | |
| **Emissions test** | **Compliance** | **Electromagnetic environment - guidance** |
| RF emissions<br>CISPR 11 | Group 1 | The CLESTA II Unit uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment. |
| RF emissions<br>CISPR 11 | Class B | The CLESTA II Unit is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes. |
| Harmonic emissions<br>IEC 61000-3-2 | Class A | |
| Voltage fluctuations/<br>Flicker emissions<br>IEC 61000-3-3 | Complies | |

| **Guidance and manufacture's declaration – electromagnetic immunity** | | | |
|---|---|---|---|
| The CLESTA II Unit is intended for use in the electromagnetic environment specified below. The customer or the user of the CLESTA II Unit should assure that it is used in such an environment. | | | |
| **Immunity test** | **IEC 60601 test level** | **Compliance level** | **Electromagnetic environment - guidance** |
| Electrostatic discharge (ESD)<br>IEC 61000-4-2 | ±6 kV contact<br>±8 kV air | ±6 kV contact<br>±8 kV air | Floors should be wood, concrete or ceramic file. If floors are covered with synthetic material, the relative humidity should be at least 30%. |
| Electrical fast transient/burst<br>IEC 61000-4-4 | ±2 kV for power supply lines<br>±1 kV for input/output lines | ±2 kV for power supply lines<br>±1 kV for input/output lines | Mains power quality should be that of a typical commercial or hospital environment. |
| Surge<br>IEC 61000-4-5 | ±1 kV differential mode<br>±2 kV common mode | ±1 kV differential mode<br>±2 kV common mode | Mains power quality should be that of a typical commercial or hospital environment. |
| Voltage dips, short interruptions and voltage variations on power supply input lines<br>IEC 61000-4-11 | <5% $U_T$<br>(>95% dip in $U_T$)<br>for 0.5 cycle<br>40% $U_T$<br>(60% dip in $U_T$)<br>for 5 cycle<br>70% $U_T$<br>(30% dip in $U_T$)<br>for 25cycle<br><5% $U_T$<br>(>95% dip in $U_T$)<br>for 5 s | <5% $U_T$<br>(>95% dip in $U_T$)<br>for 0.5 cycle<br>40% $U_T$<br>(60% dip in $U_T$)<br>for 5 cycle<br>70% $U_T$<br>(30% dip in $U_T$)<br>for 25cycle<br><5% $U_T$<br>(>95% dip in $U_T$)<br>for 5 s | Mains power quality should be that of a typical commercial or hospital environment. If the user of the CLESTA II Unit requires continued operation during power mains interruptions, it is recommended that the CLESTA II Unit be powered from an uninterruptible power supply or a battery. |
| Power frequency (50/60 Hz) magnetic field<br>IEC 61000-4-8 | 3 A/m | 3 A/m | Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment. |
| NOTE $U_T$ is the a.c. mains voltage prior to applications of the test level. | | | |

| Guidance and manufacture's declaration – electromagnetic immunity | | | |
|---|---|---|---|
| The CLESTA II Unit is intended for use in the electromagnetic environment specified below. The customer or the user of the CLESTA II Unit should assure that it is used in such an environment. | | | |
| **Immunity test** | **IEC 60601 test level** | **Compliance level** | **Electromagnetic environment - guidance** |
| | | | Portable and mobile RF communications equipment should be used no closer to any part of the CLESTA II Unit, including cables, than the recommended separation distance calculated from the equation applications to the Frequency of the transmitter.<br><br>**Recommended separation distance** |
| Conducted RF<br>IEC 61000-4-6 | 3 Vrms<br>150 kHz to 80 MHz<br>outside ISM bands[a] | 3 Vrms | $d = 1.2\sqrt{P}$ |
| Radiated RF<br>IEC 61000-4-3 | 3V/m<br>80 MHz to 2.5 GHz | 3 V/m | $d = 1.2\sqrt{P}$ 80 MHz to 800 MHz<br>$d = 2.3\sqrt{P}$ 800 MHz to 2.5 GHz<br><br>Where $P$ is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and $d$ is the recommended separation distance in metres (m).<br><br>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,[a] should be less than the compliance level in each frequency range.[b]<br><br>Interference may occur in the vicinity of equipment marked with the following symbol:<br><br>  |

NOTE 1 At 80 MHz and 800MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by adsorption and reflection from structures, objects and people.

a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the CLESTA II Unit is used exceeds the applicable RF compliance level above, the CLESTA II Unit should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the CLESTA II Unit.

b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3V/m.

**Essential performance (purpose of IMMUNITY testing)**

Unless operated by the switches for chair control, the chair connected toCLESTA II does not make any movements, except for sounding a buzzer and switching on/off the indicator.

**Recommended separation distances between**
**Portable and mobile RF communications equipment and the CLESTA II Unit**

The CLESTA II Unit is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the CLESTA II Unit can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the CLESTA II Unit as recommended below, according to the maximum output power of the communications equipment.

| **Rated maximum output power of transmitter** W | **Separation distance according to frequency of transmitter** m | | |
|---|---|---|---|
| | **150 kHz to 80 MHz** $d = 1.2\sqrt{P}$ | **80 MHz to 800 MHz** $d = 1.2\sqrt{P}$ | **800 MHz to 2.5 GHz** $d = 2.3\sqrt{P}$ |
| 0.01 | 0.12 | 0.12 | 0.23 |
| 0.1 | 0.38 | 0.38 | 0.73 |
| 1 | 1.2 | 1.2 | 2.3 |
| 10 | 3.8 | 3.8 | 7.3 |
| 100 | 12 | 12 | 23 |

For transmitters rated at a maximum output power not listed above, the recommended separation distance $d$ in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where $P$ is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by adsorption and reflection from structures, objects and people.

**7. List of Compatible Handpieces**

| | DESCRIPTION |
|---|---|
| Syringe | LUZZANI(3-way ) Minilight w/Light |
| | LUZZANI(6-way ) Minilight w/Light |
| | DCI (3-way) |
| Turbine | BIEN AIR BORA S36L / UNIFIX with LIGHT |
| | NSK Ti-Max X |
| Air motor | BIEN AIR Aquilon 830 / UNIFIX with LIGHT /PM1132 |
| | NSK EX-203 / EX-6 |
| Micromotor | BIEN AIR MC3LK / PLMP021PCB. / PM1132 |
| | BIEN AIR MC3LK / PL970 PCB. / PM1132 |
| | BIEN AIR MX / DMX PCB. / PM1132 |
| | BIEN AIR ISOLITE(LK 40 IR E) / PLMP021PCB. / PM1132 |
| | BIEN AIR ISOLITE(LK 40 IR E) / PL970. / PM1132 |
| | NSK NL-400 / NL-400SB.PCB / EX-6 |
| | NSK TIM-40J / DA-290N PCB. / EX-6 |
| Scaler | SATELEC SP4055 w/Light |
| | NSK VARIOS VA 150 LUX(w/light) |
| | EMS SCALER |

# NOTE

EC REP

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