

DENTAL CHAIR AND UNIT

Voyager

OPERATING INSTRUCTIONS

IMPORTANT

This manual provides operating instruction for BELMONT VOYAGER. The instructions contained in this booklet should be thoroughly read and understood before operating the chair and unit. File this manual and refer back to it for future maintenance.

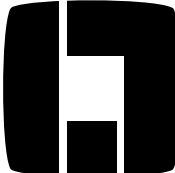
 **Belmont**

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1. OVERALL VIEW AND MAJOR COMPONENTS

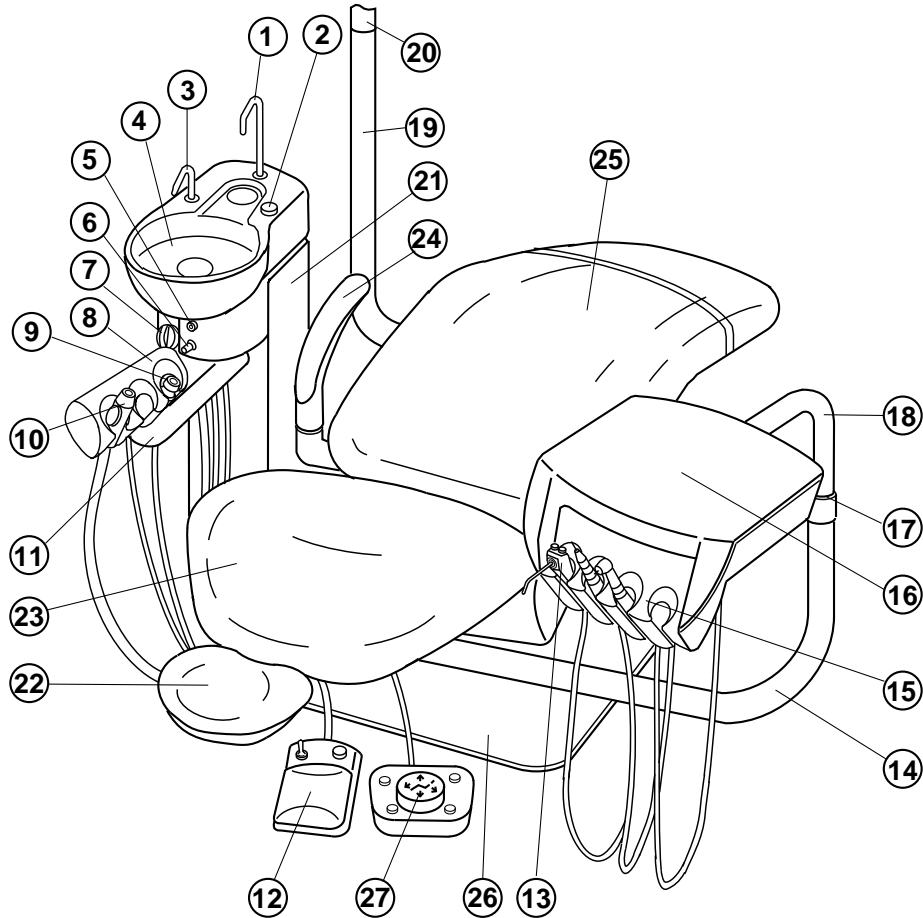


Fig.1-1 Overall View and Major Parts

MAJOR PARTS

Unit Section

- ① Cupfiller Nozzle
- ② Cupfiller Button
- ③ Bowl Flush Nozzle
- ④ Cuspidor Bowl
- ⑤ Master Switch Indicator
- ⑥ Bowl Flush Knob
- ⑦ Solid Collector
- ⑧ Assistant Instrument Holder
- ⑨ Saliva Ejector
- ⑩ Vacuum Handpiece
- ⑪ Assistant Instrument Holder Bar
- ⑫ Foot Control
- ⑬ 3-Way Syringe
- ⑭ Lower Swing Arm

- ⑮ Handpiece Holder
- ⑯ Doctor Table
- ⑰ Stopper Ring
- ⑱ Upper Swing Arm
- ⑲ Light Post
- ⑳ Light Pole
- ㉑ Cuspidor Body

Chair Section

- ⑳ Headrest
- ㉑ Backrest
- ㉒ Armrest
- ㉓ Seat
- ㉔ Base
- ㉕ Foot Switch

2. DIMENSIONS AND SPECIFICATIONS

2-1. DIMENSIONS

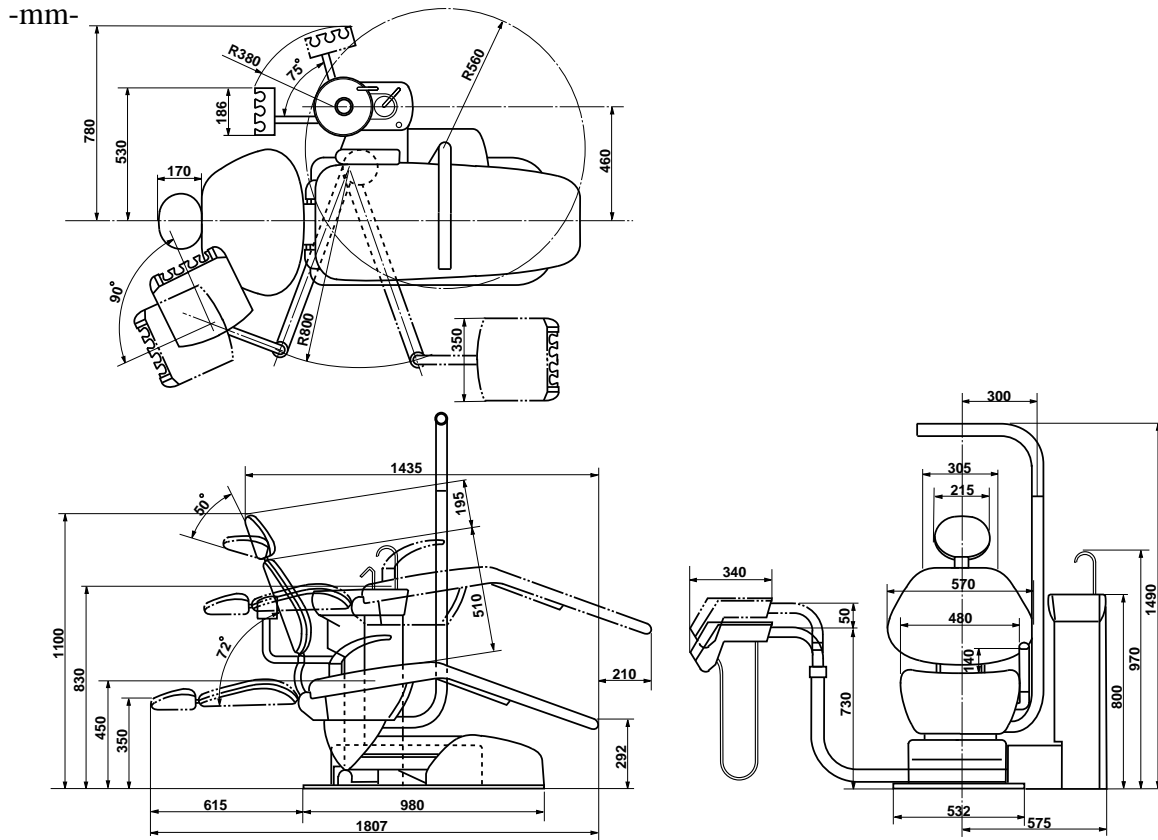


Fig.2-1 Dimensions

2-2. SPECIFICATIONS

Chair Section

Seat initial Height -----	450mm
Seat Lifting Stroke -----	380mm
Backrest Movement -----	0° ~ 72° above Horizontal
Auto Movements -----	2 Preset, 1 Last Position Memory and 1 Auto Return
Control Voltage -----	DC12V
Power Consumption -----	115V, 50/60Hz, 500/490W 220/230V, 50/60Hz, 510/530W 240V, 50/60Hz, 650/680W
Net Weight -----	160 kg

Unit Section

Doctor Side Handpiece -----	1 x High Speed Turbine 1 x Low Speed Air Motor 1 x 3-Way Syringe
Assistant Side Handpiece -----	Saliva Ejector (Central Type) Vacuum (Central Type)
Bowl Flush -----	Manual Control (Needle Valve)
Cupfiller -----	Manual Control (Push Button)
Dental Light -----	048 Type
Net Weight -----	50 kg (With Dental Light)

3. OPERATING INSTRUCTIONS FOR Unit

Note : Before operation, confirm that air compressor is fully charged.

The chair can be operated only when both the chair main switch and the master switch are ON.

Refer to 4-1.

3-1. MASTER SWITCH (Fig.3-1 and Fig.3-2)

Turn on the master switch located under the doctor table, the master switch indicator located on the front side of the cuspidor unit turns to green.

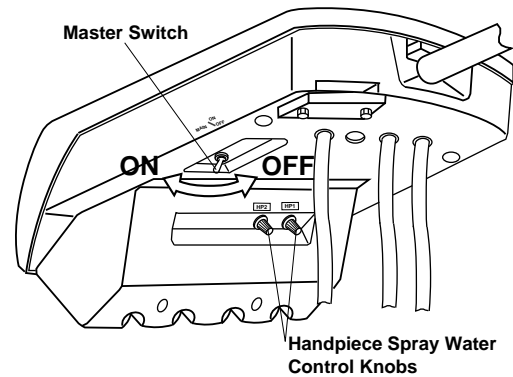


Fig. 3-1 Master Switch and Handpiece Spray Water Control Knobs

⚠ CAUTION

Turn off the master switch after daily operation.

3-2. DOCTOR TABLE SECTION

(1) Handpiece Spray Water Flow Control Knobs (Fig.3-1)

The handpiece spray water flow control knobs located under the doctor table provide for individual adjustment.

Each handpiece spray water flow control knob is lined up from the facing left hand side HP1, HP2... Turning a flow control knob counterclockwise increases flow volume and turning clockwise decreases.

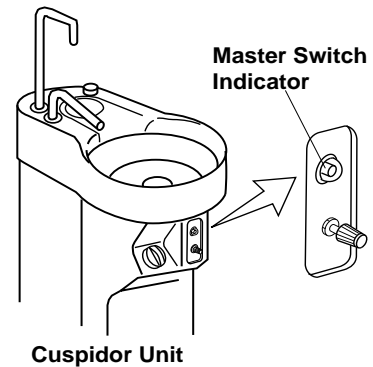


Fig. 3-2 Master Switch Indicator

(2) 3-Way Syringe

A. 3-Way Syringe Operation (Fig.3-3)

Depressing either or both buttons, this syringe offers air, water and spray.

Syringe tip can be rotated freely.

To remove syringe tip : Keep depressing the lock ring and pull out the syringe tip.

To set syringe tip : Keep depressing the lock ring, insert the syringe tip and release the lock ring.

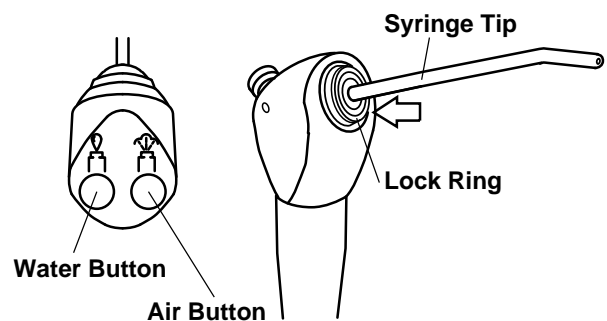


Fig. 3-3 3-Way Syringe

B. 3-Way Syringe Flow Control Screws (Fig.3-5)

Air and/or water flow of 3-way syringe can be adjusted by the flow control screws located bottom of the table.

Facing right hand side screw controls air and left hand side controls water.

Turning a flow control screw counterclockwise increases flow volume and turning clockwise decreases. Use the hex key wrench supplied.

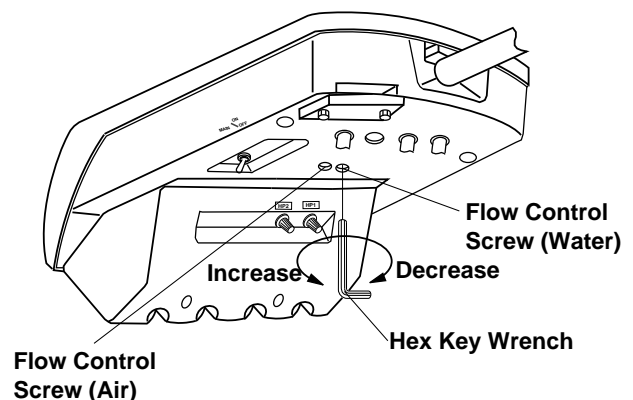


Fig. 3-4 3-Way Syringe Flow Control Screws

(3) Removing Table Top (Fig.3-5)

Loosen 4-screws from the table bottom and remove the table top.

The auto select valve and the handpiece pressure gauge are located in the table.

(4) Handpiece Drive Air Adjustment Screws (Fig.3-6 & Fig.3-7)

Adjustment of drive air of each handpiece can be made by the screw on the auto select valve.

It is important to set the drive air pressure in according with the handpiece manufacturer's recommendation.

Drive air pressure is indicated by the handpiece pressure gauge.

Note : Refer to 3-5 for handpiece control

Setting The Optimum Condition (Fig.3-7)

Turn the appropriate drive air screw fully clockwise, then depress the drive air pedal of the foot control fully (maximum foot pressure) and turn the screw counterclockwise slowly. Stop turning the screw immediately when the handpiece pressure gauge shows the desired drive air pressure.

(5) Handpiece Coolant Air Adjustment Screws (Fig.3-6 & Fig.3-7)

Handpiece coolant air adjustment screws are provide for individual adjustment of handpiece coolant air. Turning a handpiece coolant air adjustment screw counterclockwise increases flow volume and turning clockwise decreases.

3-3. CUSPIDOR SECTION

(1) Cupfiller (Fig.3-8)

Keep pressing the cupfiller button until a cup is filled with water.

(2) Bowl Flush (Fig.3-8)

Turn the bowl flush control knob counterclockwise, water flushes into the cuspidor bowl.

Further turning counterclockwise, increases the amount of flush water.

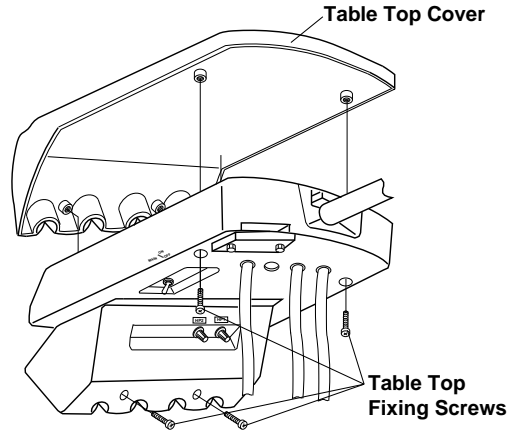


Fig. 3-5 Removing Table Top Cover

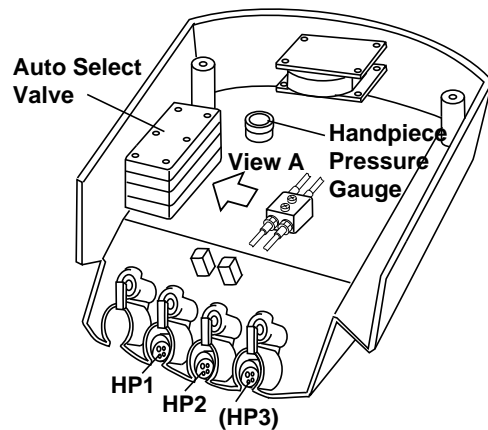


Fig. 3-6 Auto Select Valve and Pressure Gauge

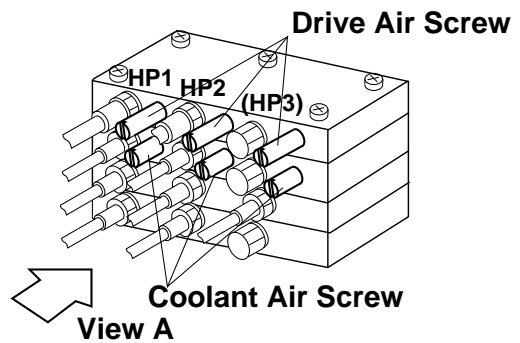


Fig. 3-7 Auto Select Valve

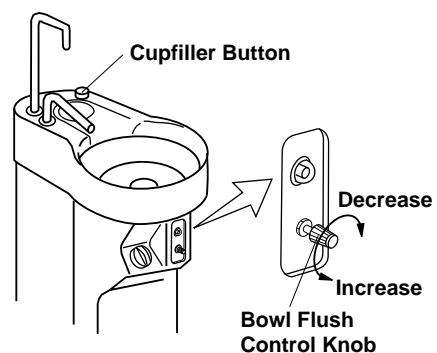


Fig. 3-8 Cupfiller and Bowl Flush

3-4. ASSISTANT INSTRUMENT HOLDER SECTION

Pick up an instrument (Saliva Ejector or Vacuum Handpiece) from the assistant instrument holder, it starts working automatically. Returning the instrument to the assistant instrument holder stops it automatically.

3-5. FOOT CONTROL SECTION (Fig.3-9)

(1) Drive Air Pedal

Depressing the drive air pedal controls handpiece rotation speed and coolant air on/off.

(2) Spray Water ON/OFF Switch

Spray water ON/OFF switch allows water to be turned on or off. Refer to 3-2 (1) of this manual for adjusting water of each handpiece.

(3) Chip Blower Button

By depressing the chip blow button, chip blower comes out from handpiece without bur turning.

(4) Safety Device by Foot Control

When the drive air pedal is being depressed and handpiece is running, all the chair control switches are inactivated.

This is to prevent the chair from unexpected movement by any switch being touched accidentally.

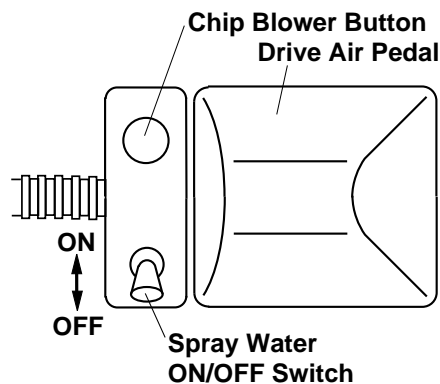


Fig. 3-9 Foot Control

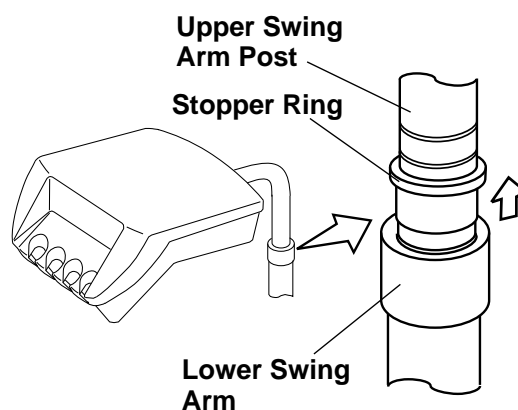


Fig. 3-10 Swing Arm

3-6. SWING ARM SECTION

Table Height Adjustment (Fig.3-10)

Hold and slightly lift up the doctor table, stopper ring will come up on upper swing arm post. Slide up or down the stopper ring to appropriate groove on upper swing arm post. Lower the doctor table to fix it at that height.

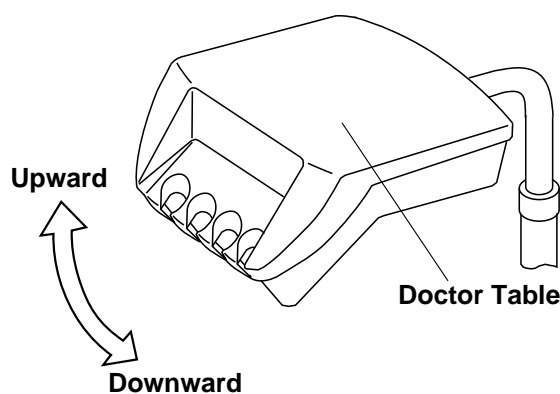


Fig. 3-11 Doctor Table Safety Lock Device

3-7. DOCTOR TABLE SAFETY LOCK DEVICE (Fig.3-11)

If excess pressure (upward or downward) is applied to the doctor table by the movement of chair, safety device stops the chair movement to protect the table from being damaged.

4. CHAIR OPERATING INSTRUCTIONS

4-1. MAIN SWITCH (Fig.3-1 & Fig.4-1)

Turn on the master switch located at the left side of the pump cover, main switch illuminates in green.

Note : Chair main switch will not activate unless master switch of unit is turned on.

Refer to 3-1.

⚠ CAUTION

**Operate the main switch only by hand.
Turn off the main switch after daily operation.**

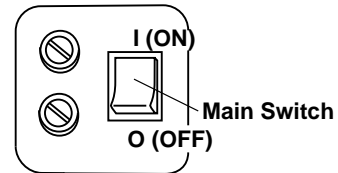


Fig.4-1 Main Switch

4-2. CONTROLS (Fig.4-2)

⚠ CAUTION

**Before operating the chair, confirm safety
for the patient and the operator.**

All chair electrical movements can be controlled by the foot switch.

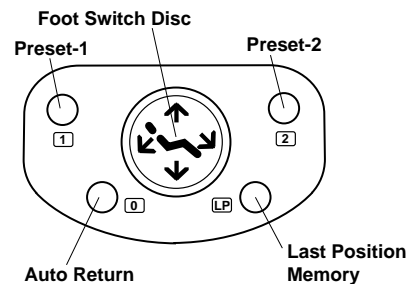


Fig.4-2 Foot Switch

(1) Manual Mode Control

A. Seat Lifting

Keep depressing (**↑**) side of the foot switch disc until the seat is lifted up to the desired position.

B. Seat Lowering

Keep depressing (**↓**) side of the foot switch disc until the seat is lowered to the desired position.

C. Backrest Reclining

Keep depressing (**↙**) side of the foot switch disc until the backrest is reclined to the desired position.

D. Backrest Raising

Keep depressing (**↗**) side of the foot switch disc until the backrest is raised up to the desired position.

(2) Auto Mode Control

E. Preset Control

VOYAGER chair has two preset positions. (Preset-1 and Preset-2)

Momentarily depress (**1**) button on the foot switch, the chair will move to the preset-1 position automatically. (Preset-2 is operated by (**2**) button.)

F. Auto Return

Momentarily depress (**0**) button on the foot switch, the chair will return to the initial position (The seat is fully lowered and the backrest is upright position.),

G. Last Position Memory

Momentarily depress (**LP**) button at reclined backrest position (treatment position), the backrest will raise to the mouth rinsing position automatically.

Momentarily depress (**LP**) button again, the backrest will recline to the previous treatment position automatically.

Note : Seat height can not be changed by (**LP**) button.

H. Emergency Stop

During automatic procedure (Preset, Auto return and Last position memory), depressing any side of disc or button on the foot switch will cancel the automatic movement immediately.

Note : Do not keep depressing auto mode button (**1**)(**2**)(**0**)(**LP**) over 3 seconds.
Memorized position in auto mode may be changed.

4-3. SAFETY LOCK DEVICE (Fig.4-3)

All chair movements can be stopped automatically by the safety lock device when pressure is detected between the base and the lower link cover.

In case working the safety lock device, lift up the seat and remove a cause of pressure.

Note : Seat lifting and backrest raising can be operated when the safety lock device is working.

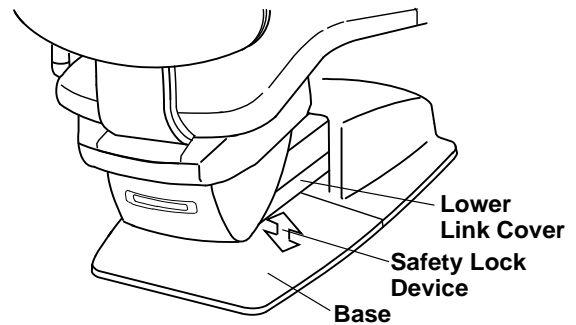


Fig.4-3 Safety Lock Device

4-4. HEADREST (Fig.4-4)

(1) Height Adjustment

Press down or pull up the headrest to the desired height.

(2) Angle Adjustment

Push the headrest forward as required.
Lift the headrest lever to rotate backward and release the lever at the desired angle.

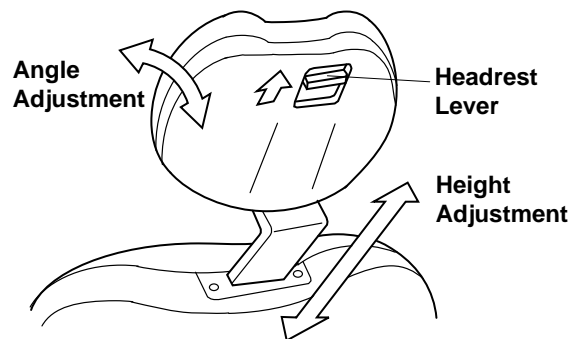


Fig.4-4 Headrest

4-5. AUTO MODE POSITION ADJUSTMENT

(1) Preset position Adjustment (Fig.4-5)

Two preset positions can be set.

- A. Set the seat and the backrest to the desired preset position by manual control.
- B. Keep depressing (**1**) button until buzzer sounds (in about 3 seconds), then release it.
- C. The position is memorized in Preset-1.
- D. Preset-2 can be memorized by depressing (**2**) button as following A to C.

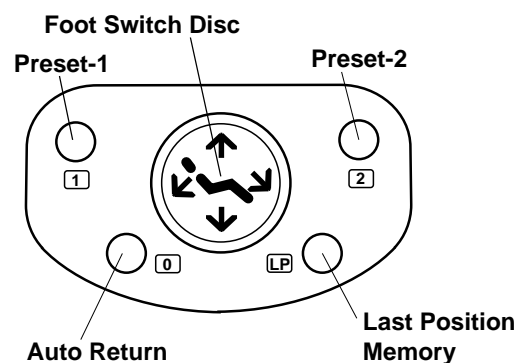


Fig.4-5 Foot Switch

(2) Mouth Rinsing Position Adjustment (Fig.4-1)

Mouth rinsing position in last position memory movement can be adjusted.

- A. Set the backrest to the desired mouth rinsing position by manual control.
- B. Keep depressing (**LP**) button until buzzer sounds (in about 3 seconds) and release the button.
- C. This backrest position is memorized as mouth rinsing position.

5. CARE AND MAINTENANCE

⚠ CAUTION

Turn off the master switch and the main switch after daily operation or in long term interval.

5-1. CARE AND MAINTENANCE FOR CHAIR

Other than cleaning, no scheduled maintenance of the chair is required.

⚠ CAUTION

Do not drench the chair for cleaning.
Do not use polishing powder, solvents and strong disinfectant for cleaning.

Upholstery can be cleaned with a neutral detergent.

Painted parts, metal parts and plastic parts can be cleaned with a weak ethanol.

5-2. CARE AND MAINTENANCE FOR UNIT

(1) Cleaning Unit

⚠ CAUTION

Do not drench the unit for cleaning
Do not use polishing powder, solvents and strong disinfectant for cleaning.

(2) Basket Strainer (Fig.5-1)

Take out the drain cap and the basket strainer in centre of the cuspidor bowl and clean them.

(3) Solid Collector (Fig.5-1)

Pull out the solid collector with filter and clean it.

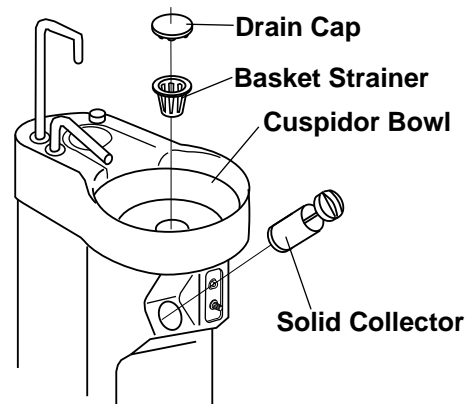


Fig.5-1 Basket Strainer and Solid Collector

(4) Vacuum Handpiece and Saliva Ejector (Fig.5-2)

A. Unscrew and remove the top part of each handpiece and clean the strainer.

B. After daily operation, run two cups of clean water through handpieces to clean inside of hoses.

Note : After cleaning the handpieces, apply a white vaseline lightly on the rubber parts (O-Ring) and screws for long life.

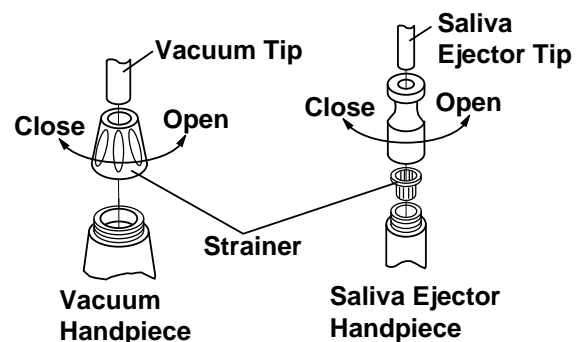
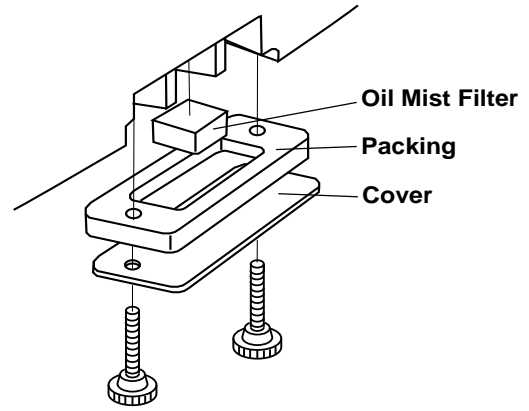


Fig.5-2 Vacuum Handpiece and Saliva Ejector

(5) Disinfection

- A. Vacuum tip, saliva ejector tip, syringe tip and vacuum silicon rubber tip are autoclavable.
- B. All tubings and hoses can be cleaned with a weak ethanol.

Note : Refer to 3-2 (2) to remove and to set syringe tip.



(6) Cleaning Oil Mist Separator (Fig.5-3)

Handpiece oil mist separator is located rear side of the doctor table. Once a week open the oil mist separator and clean the oil mist filter.

Fig.5-3 Cleaning Oil Mist Separator

NOTE



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