

USER MANUAL PERFORMANCE TABLE



R_x only



Attention: Carefully read this manual
before operating the Olsen's equipment!

Olsen
Equipment made to last

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1 - Introduction

Congratulations on the great choice!

You have acquired an equipment developed for the clinical and outpatient environment, aiming to provide maximum comfort to the patient and facilitate the performance of procedures by the professional.

This manual is supplemented to the *Performance Table Quick Operation Guide* provided with your equipment and provides all the information you need to get the most out of your equipment, so read them carefully before using it.

2 - Package Contents

Check out the equipment package contents:



Equipment Box

Standard Items:

- 1 Performance Table
- 1 Auxiliary Pillow
- 1 Performance Table Quick Operation Guide
- 1 Interchangeable Armrests

Optionals Items:

- 1 Multiarticulated Headrest
- 1 Wrist Rest Support
- 1 Articulating Armboards
- 1 Knee Crutches
- 1 Instrument's Tray
- 1 Paper Roll Holder
- 1 Operating Light

Operating Light Box



The operating lights models are described in section 3.2.1.



The operating light is an optional Performance Table item. The box is provided only upon purchase one of the available operating light models.

3 - Equipment Presentation

3.1 - Standard Items

- Automatic Table with 6 Commands
- 6 Programmable Work Positions
- Automatic Zero Position
- Removable Headrest without Clipping
- Auxiliary Pillow
- Remote Foot Pedal Commands
- 2 Swivel Castors with Individual Locking
- 2 Fixed Castors
- 3 Oil-Free Bosch Motors
- Interchangeable Armrests



3.2 - Optional Items

Leather Upholstery
 Headrest with Clipping
 Multi-articulated Headrest
 Wrist Rest Support
 Hand Control
 Articulating Armboards
 Armrest for Blood Donation
 Knee Crutches
 Paper Roll Holder
 Instrument's Tray

Additional Motor for Seat Tilt
 Serum Support
 Water Unit
 Cup Filler
 Venturi Saliva Ejector
 High Power Vórtice Saliva Ejector
 Vacuum Pump Adapter
 3-Way Syringe
 Emergency Battery

3.2.1 - Operating Lights (Optional)

Premium LED Operating Light 8.000 to 30.000 Lux
 Surgical LED Operating Light 30.000 Lux

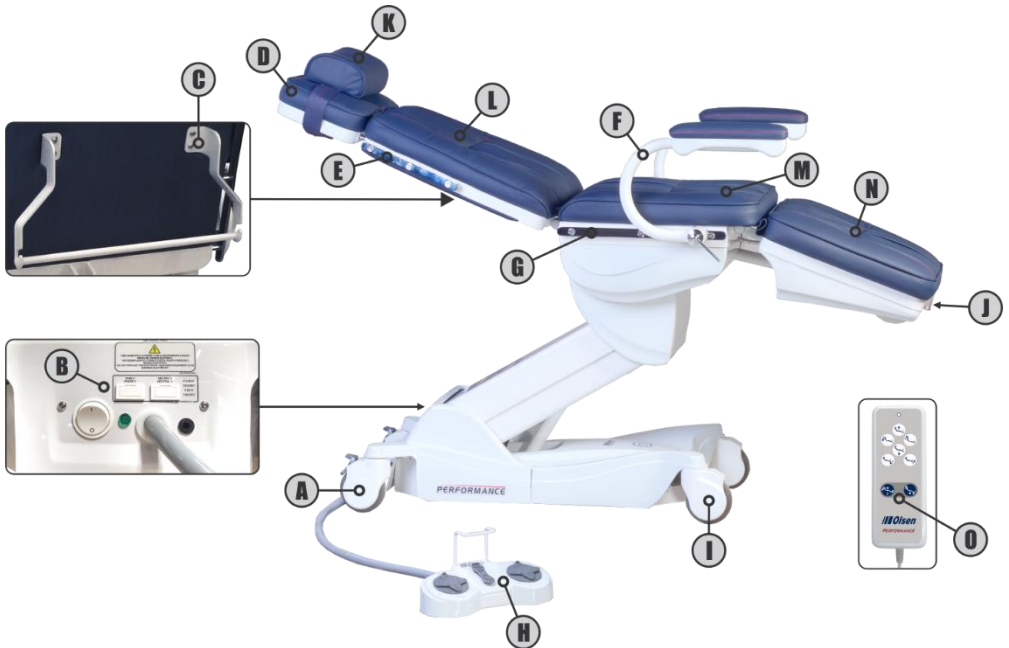


The operating lights can be coupled or for fixing to the floor or ceiling.



When the customer is purchasing the Performance Table, he/her can choose the articulating armboards or the knee crutches in place of the armrests.

4 - Parts Identification



A - Rear Castor with Lock
B - Electrical Panel
C - Paper Roll Holder
D - Headrest with Clipping
E - Backrest Side Rail
F - Armrest
G - Seat Side Rail
H - Remote Foot Pedal

I - Fixed Front Castor
J - Anti-Crush Sensor
K - Auxiliary Pillow
L - Backrest
M - Seat
N - Leg Rest
O - Hand Control

4.1 - Applied Parts

The following items are considered applicable to the patient:

Standard Items:

- Upholstery;
- Auxiliary pillow;
- Armrests.

- Articulating armboards;
- Armrest for blood donation;
- Knee crutches;
- Wrist rest support;
- 3-way syringe;
- Venturi saliva ejector;
- High power Vórtice saliva ejector
- Vacuum pump adapter.

Optional Items:

- Multi-articulated headrest;
- Headrest with clipping;

4.2 - Accessories and Detachable Parts

The following items are considered detachable parts or accessories:

Detachable Parts:

- Headrest without clipping;
- Auxiliary pillow;
- Armrest.

Accessories:

- Left and right bracket lock;
- Articulating armboards;
- Armrest for blood donation;
- Knee crutches;
- Instrument's tray;
- Serum support;
- Multi-articulated headrest;
- Headrest with clipping;
- Wrist rest support;
- Water unit;
- Vacuum pump set;
- Venturi saliva ejector;
- 3-way syringe;
- Premium LED operating light;
- Surgical LED operating light.

5 - Equipment Description and Operating

Technical Name: Examination Table / **Trade Name:** Performance

The Examination Table Performance is automated equipment designed to accommodate patients for clinical and outpatient exams and maxillofacial procedures. It is equipped with up to 4 electric motors to perform up to 8 individual movements, controlled by remote foot pedal or hand control.

It allows the user to program up to 8 work positions according to his needs in addition to the automatic Zero Position and also has anti-crush sensor.

It performs clinical positioning for emergency condition, allowing brain's irrigation by gravity, with slow movements to the maximum negative scale (up to -10° from horizontal).

It can easily be moved because it has high resistant castors manufactured with molded polyurethane. These castors protect the floor and have a very low noise when they are on displacement.



This equipment should not be used to patient transport.

Before starting use your equipment make sure that it is properly installed, connected to the mains, the circuit breaker is on and the mains is energized.

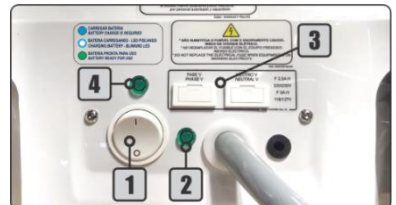
5.1 - Turning On the Equipment

On the control panel press the On/Off switch (1) to the "I" position. The LED (2) next to the On/Off switch (1) will turn green while the unit beeps with a long beep.

To turn Off the equipment: press the On/Off switch (1) to the "O" position.

The fuse holders of the equipment (3) is also located on the electrical panel.

The Performance Table has the optional emergency battery (section 5.14), which when available adds a battery charge indicator LED (4) above the On/Off switch (1).

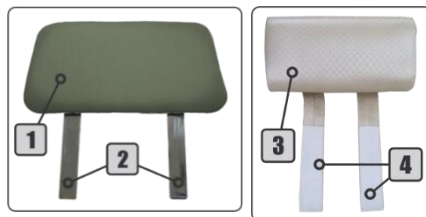


5.2 - Headrest

5.2.1 - Headrest without Clipping and Auxiliary Pillow

The headrest (1) was designed to be easily removed from the backrest according to the procedure need. It has 2 fixing rods (2) for the fitting.

The auxiliary pillow (3) has 2 strips (4) with Velcro® for easy positioning and removal for cleaning.



5.2.2 - Headrest with Clipping (Optional)

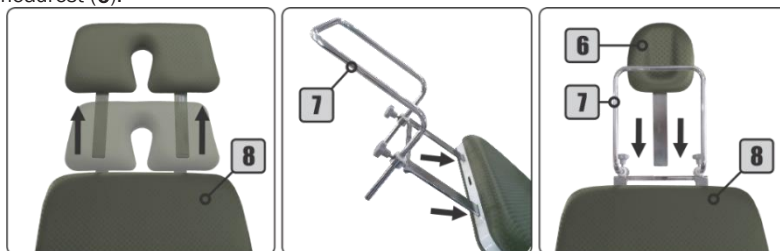
Headrest with clipping (5) provides more versatility by allowing equipment to position the patient in ventral decubitus with clipping to fit the face. It can be easily removed from the backrest according to the procedure needs. It has 2 fixing rods (2) for the fitting.



5.2.3 - Wrist Rest Support with Multi-Articulated Headrest (Optional)

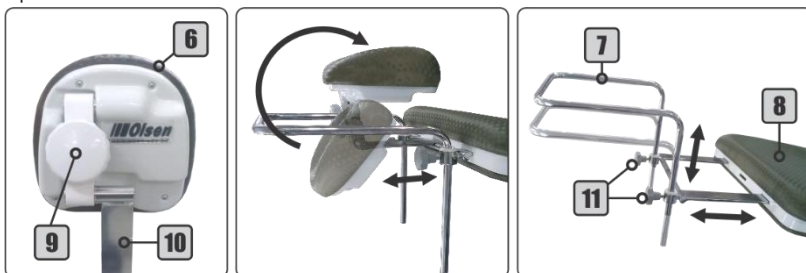
The multi-articulated headrest (6) allows different adjustments for accommodation of the patient's head. The wrist rest support (7) offers height adjustment, allowing the professional to rest the wrists during procedures.

To replace the current headrest for the wrist rest support (7) and the multi-articulated headrest (6): pull the headrest away from the backrest (8), then insert the wrist rest support (7) and then the multi-articulated headrest (6).



To adjust the multi-articulated headrest (6): turn the knob (9) counterclockwise enough to loosen it, and then position it as desired. Turn the knob (9) clockwise to lock it. To remove the headrest from the backrest (8) simply pull it by sliding the bar (10) as necessary.

To adjust the wrist rest support (7): turn the knobs (11) counterclockwise until you loosen it to adjust the height, and then turn the knobs (11) clockwise to lock it. Pull or push the support to adjust the distance from the stop.



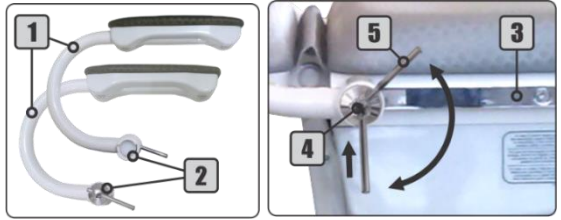
5.3 - Armrests

The armrests (1) have upholstery in the same color and characteristics as the Performance Table. It has adjustable rods (2) that allow the movements on side rails (3) for depth adjustment. It can also be used to assist in patient's lateral containment.

The armrest is a detachable item.

To adjust the armrest (1): pull the metal lever (5) counterclockwise to loosen it. Position the armrest (1) and turn the metal lever (5) clockwise to secure it to the rail.

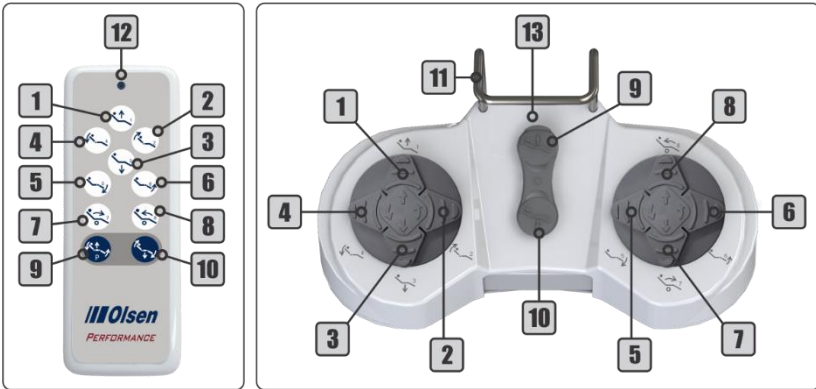
Note: the metal lever (5) moves only in the area indicated in the figure above. To turn it the metal lever (5) clockwise, push it upwards causing the lever to pass through the metallic knob's axis (4), and then rotate it again.



5.4 - Performance Table Commands

The Performance Table can be controlled via remote foot pedal (13) or hand control (12). Both can display 6 to 8 motion commands in addition to the Zero Position and Work Position commands.

The remote foot pedal is produced in accordance with the concepts of ergonomics and biosafety and features a metal handle (11) that allows its movement to be done with the feet, minimizing the risks of cross contamination.



- 1 - Seat Up (1)
- 2 - Bacrest Up (2)
- 3 - Seat Down (3)
- 4 - Bacrest Down (4)
- 5 - Leg Rest Down (5)
- 6 - Leg Rest Up (6)

- 7 - Recline Seat (7)
- 8 - Incline Seat (8)/Stretcher Position
- 9 - Zero Position
- 10 - Work Position
- 11 - Metal Handle



Seat tilt/strecher controls (7 and 8) are optional and are not available for equipment that has a water unit.

5.4.1 - Zero Position and Disembarkation Position

Used for loading and unloading of the patient, the Zero Position command has 2 positioning stages, Disembarkation Position and Zero Position, that make the equipment automatically adjust the seat, backrest and legrest.



To activate the Disembarkation Position: press the button once. Considering initially the table in stretcher position, the backrest will rise up to 60° (relative to the floor) and the seat will lower simultaneously. Then the footrest will lower by the end of your course.

To activate the Zero Position: press the button again. The backrest will rise to its highest position. Note that to activate the Zero Position you will need to finish moving the Disembarkation Position.

This command is also used to start and stop recording work positions. Whenever this command is activated the equipment will emit 2 short beeps.

Note: at the end of each treatment activate the second stage of the Zero Position.

5.4.2 - Work Position

The Performance Table may perform from 6 to 8 automatic working positions with simultaneous movement of backrest, seat, leg rest and seat tilt, optimizing the patient positioning for procedures start.



To save a work position:

1° - Press the Zero Position button;

2° - Adjust the equipment on the desired position;

3° - Press the Work Position button for 5 seconds. The equipment will emit a long beep;

4° - Press command 1 (*Seat Up*) while the equipment beeps; The equipment will emit 2 short beeps to confirm the procedure;

5° - Press the Zero Position button.

By pressing the Zero Position button, the work position 1 will be recorded. Repeat the above steps by replacing in *step 4*, command 1 by any command of the other available numbers.

If the equipment has 4 motors, the command 8 is preset at the factory, setting the equipment on a stretcher position. This command is not available for recording.

Note: the time to set up a work position is approximately 3 seconds, between the steps 3 and 4, when you hear a long beep (*step 3*) then press one of the available commands to record the working position. If neither of the commands is pressed during this period, the equipment will emit the second long beep, ending the process followed by 3 short beeps indicating that the operation has been canceled.

When you press the Work Position button to set up a work position, do not hold it down after hearing the first long beep, since this action will cancel the procedure.

To perform a work position:

1° - Press the Work Position button;

2° - Press the button for the requested work position; the equipment will position the backrest, seat and leg rest according to the position previously recorded.

The time to call the position is 3 seconds. If within this period none of the commands buttons are pressed, the equipment cancels the operation and delivers 3 short beeps in sequence.

5.4.3 - Stretcher Position

The command 8 also enables the stretcher position, where the equipment will lower the backrest up to 180 ° to the seat and the footrest will be raised to its higher position.

To activate the stretcher position: press the Work Position command and then command 8 on the remote foot pedal.

5.4.4 - Movements Interruption

All the equipment's automatic commands may be interrupted during their execution with a simple touch of any of the chair's movement commands. For example, when calling a work position or performing the Zero Position command, when pressing one of the chair commands, the movement will stop.

When you cancel an automatic movement, the equipment emits 3 short beeps.

5.4.5 - Anti-Crush Sensor

Installed at the end of the leg rest, the mechanical pressure sensor (1) acts to prevent accidents caused by the presence of any obstacle in the movement of the leg rest.

When the anti-crush sensor is activated, the equipment emits a continuous beep and locks all equipment commands, except the *Seat Up* command. Raise the seat to deactivate the sensor and then check and remove the obstacle in the area that activated the sensor.



5.4.6 - Operational Warning Sounds

The Performance Table beeps to identify some operations. Check out the warning sounds and their applications in the table below:

Aviso Sonoro	Aplicação
1 long beep	- When turning on the equipment
1 short beep	- When selecting a work position
2 short beeps	- When selecting or recording a work position - When pressing the Zero Position command - When reaching the light intensity limits (minimum and maximum) of the operating light Premium LED
3 short beeps	- Error command* - End of the interval for work position selection or recording - End of positioning of a working position and Zero Position when the seat is already in the Zero Position
4 short beeps	- When cancelling a continuous or automatic movement
2 long beeps	- Interval for setting up a working position or switching operating mode
1 continuous beep	- The anti-crush sensor is activated

*Error command: command that the equipment cannot perform; for example, press the command *Seat Up* when the seat is already in the highest position.

5.4.7 - Positioning of the Patient and the Operator

During the equipment's movement, the operator and other persons close to him/her should position themselves on the equipment sides, respecting the minimum distance of 50 centimeters, remaining out of the movement area of the equipment and its components.

To ensure safe and proper patient positioning, the operator should advise him to keep his hands at sight during the entire equipment movement, on the equipment upholstery or on the specific accessories for performing the procedure. The operator must advise the patient to remain in this position during the whole equipment movement. If the operator sees any situation that may generate any kind of risk to the patient, the chair must be stopped immediately.



The presence of the operator, persons or objects in the movement areas of the equipment and its components may cause damage to the equipment and / or impair its correct operation.



All equipment's automatic movements must be supervised by the operator. If the operator sees any situation that may generate any kind of risk to the patient, the chair must be stopped immediately.

5.4.8 - Emergency Position

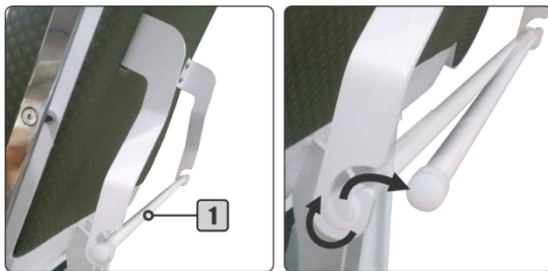
Press the Backrest Down command (*section 5.4*) until the end of the course. The equipment will adjust the position of the backrest by -5° (for Performance Table with 3 motors) in relation to the floor. If the equipment has an Incline Seat command, press it by tilting the seat for back to the end of the course to adjust the incline by -10° .

5.5 - Paper Roll Holder (Optional)

Positioned on the back of the backrest, this holder can receive rolls up to 100 mm in diameter.

To place the sheet roll on the stand: turn the holder's shaft (1) clockwise, by pulling it in the opposite direction to the backrest. No need to remove the 2 shaft ends. Just remove one side only to put the disposable sheet roll.

Note: the disposable sheet roll does not accompany the stand.



5.6 - Instrument's Tray (Optional)

Fixed to the metal frame of the equipment, the instrument's tray assembly remains stable while the table performs the movements.

The instrument's tray (1) is made of stainless steel and can be autoclaved.

To adjust the tray position: use the plastic knob adjustment (2).

To adjust the height of the tray: loosen the plastic knob of the bracket (4), position the arm (3) at the desired height and tighten the plastic knob of the bracket (4).

The instrument's tray also has free rotation on its axis and can be adjusted.



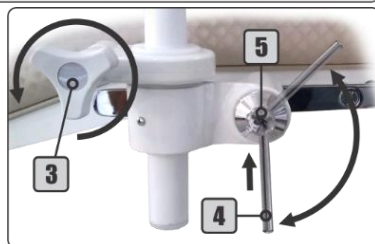
5.7 - Left and Right Bracket Locks (Optional)

Used to attach accessories to the side rails, the supports are attached according to the side of the chair to be installed. The support on the left side (1) receives the letter L and the right (2) receives the letter R.

To adjust the height (6) or turning (7) of the accessory: turn the plastic handle (3) counterclockwise. Adjust the accessory to the desired position and tighten the plastic handle (3) by turning it clockwise.

To adjust the position on the rails (8): pull the metal lever (4) counterclockwise by loosening the bracket on the side rail. Adjust the accessory to the desired position and turn the metal lever (4) clockwise.

Note: the metal lever (4) moves only in the area indicated in the figure to the side. To turn it the metal lever (4) clockwise, push it upwards causing the lever to pass through the metallic knob's axis (5), and then rotate it again.



5.7.1 - Accessories on Bracket Locks

Accessories which can be installed on the Performance Table by using bracket locks:

Through the left and right bracket locks, these accessories can be adjusted in height, depth and rotation on the axis.



Articulating Armboards/
Armrest for Blood Donation



Knee Crutches



Serum Support

5.7.2 - Interaction Between Accessories

The Performance Table allows the attendance of patients both lying down and sitting. In each of these conditions, the installation of the accessories to the side rails must be carefully observed to avoid damages to procedures, equipment and patient.

When moving the equipment, ensure that the accessories do not collide with one another or with other elements of the equipment, like figure be side.

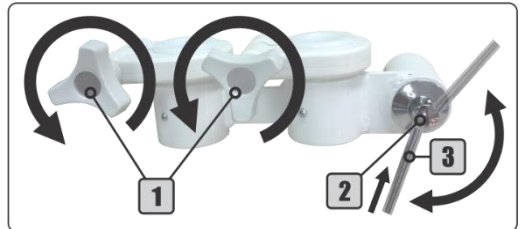
The positioning of the accessories on the side rails must be made according to the needs to perform each procedure, but the interaction between the accessories, during the equipment's movement it's operator's responsibility.



5.8 - Double Bracket Locks

The double bracket locks allow the coupling of 2 accessories, taking up less space on the side rails. The plastic handles (1) allow height and rotation on the shaft (distance the accessory to seat) adjustment, while the metal lever (3) allows the bracket lock adjustment on the side rails.

Simply turn the metal lever (3) counterclockwise to loosen and clockwise to lock.



To adjust the clamp position on the side rail:

pull the metal lever (3) counterclockwise. Adjust the attachment to the desired position and press the metal lever (3) clockwise.

Note: the metal lever (3) moves only in the area indicated in the figure above. To turn it the metal lever (3) clockwise, push it upwards causing the lever to pass through the metallic knob's axis (2), and then rotate it again.

5.9 - Articulating Armboards and Armrest for Blood Donation (Optional)

Are used to position the patient's arms to procedures on the hands or arms, and to facilitate the administration of intravenous drugs or blood donation, the articulating armboards (2) and the armrest for blood donation (1) are concave shaped and are made of ABS for better aseptis.

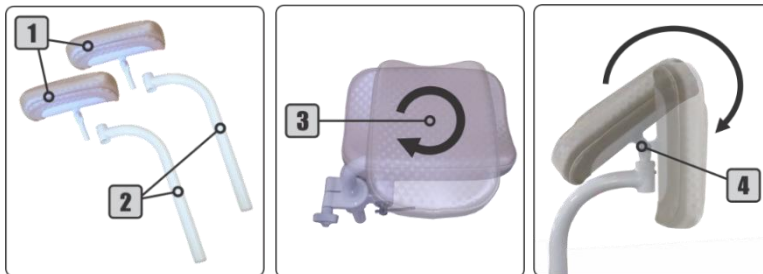
The articulating armboards (2) has a 15 cm support rod (5) and the armrest for blood donation (1) has a 36 cm rod (4).



5.10 - Knee Crutches (Optional)

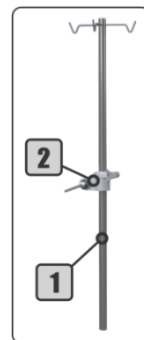
This support can be used for both leg support and armrest. The upholstery (1) can be easily removed from the holder (2) because it is engaged, which allows rotation on the shaft (3).

The fitting shaft has joint (4), which gives the piece the inclination adjustment. To adjust the inclination, just position the upholstery on the requested position.



5.11 - Serum Support (Optional)

With the same concept of space utilization and diversification of the functions of the equipment, it is possible to install the serum support (1) through the bracket locks (2) on the side rails, both with height adjustment.



5.12 - Rear Castor with Lock

The rear castors lock can be activated with the feet.

To lock the castor: press the lever (1) down.

To release the castor lock: push the lever (2) down.



The lock must remain active during the equipment use. Only disable the lock to move the equipment.

5.13 - Water Unit (Optional)

It offers the professional a point with water and drain, the water unit is swivel in 90° allowing approach or removal of the patient. It has junction box (7) for the hoses of water and sewage (9), and electrical connection, making available socket (8) protected with fuse of 10 A.

In the water unit can be provided cup filler (3) and instrument holder (6) such as Venturi saliva ejector, high power Vórtice saliva ejector, vacuum pump adapter and 3-syringe way.

To obtain water in the spittoon bowl (5): open the register (1).

To obtain water in the cup filler (3): press the button (2).

The water spouts (3 and 4) are detachable for ease of cleaning, the water spout of the tub (4) being adjustable to direct the flow of water in the spittoon bowl (5).



5.13.1 - 3-Way Syringe (Optional)

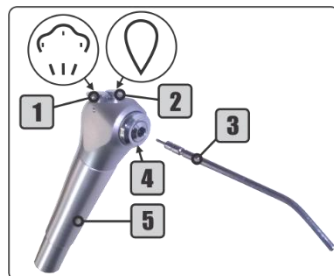
The 3-Way Syringe has three functions: water jet, air jet, and spray jet.

Before beginning the use of the 3-way syringe (5), connect the syringe tip (3) by pressing the locking ring (4) into the correct fit.

To emit air jet: press the air button (1).

To emit water jet: press the water button (2).

To emit spray jet: press simultaneously the air and water buttons (1 and 2).



5.13.2 - Venturi Saliva Ejector

Developed for saliva ejection, the Venturi ejector has cannula adapters (1 and 4) for fitting disposable cannulas or autoclavable metal cannulas. It also has a solid debris filter (5) that prevents them from being sent to the sewage system.

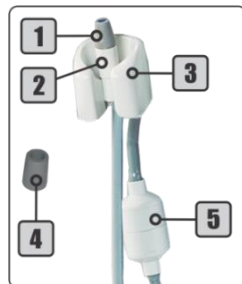
To activate the suction: remove the ejector (2) from the holder (3).

To deactivate the suction: place the ejector (2) in its holder (3).

The cannula adapters (1 and 4) is removable for cleaning.

The ejector has a cannula adapters for Ø6.5 mm (1) or Ø9.5 mm (4).

For proper functioning of this device it is necessary that the solid debris filter (5) is clean and the drain to the sewage system is properly installed and with proper inclination.



Note: the cannulas and the dental compressor do not come with the Venturi ejector.

5.13.3 - High Power Vórtice Saliva Ejector (Optional)

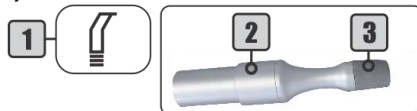
The Vórtice ejector is a device that uses the Venturi saliva ejector system, but its volume capacity is superior to that of the Venturi, reaching up to 385 mm/Hg.

It may be used for suctioning in minor surgical and prophylaxis procedures.

Before start the operation with the vortex ejector (2), insert the cannula into the adapter (3).

To enable/disable suction for Vórtice ejector (2): use the On/Off Vórtice saliva ejector button (1) on the pedal.

The cannula adapter (3) is removable for cleaning.



5.13.4 - Vacuum Pump Adaptor (Optional)

The kit can be installed in the water unit and features a cannula adapter for Ø6.3 mm (1) and flow control (4).

The pump connection hose is embedded in the corrugated hose of the water unit and the support (2) is provided with a device for automatically switching the vacuum pump on and off.

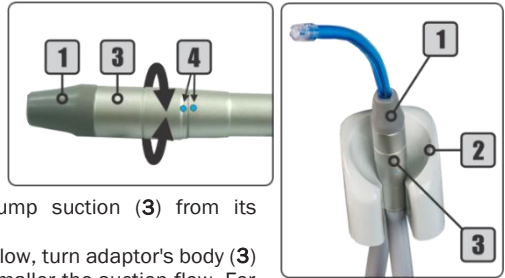
To activate suction: remove the vacuum pump suction (3) from its holder (2). The vacuum pump will work automatically.

To adjust suction flow: to decrease the suction flow, turn adaptor's body (3) away from the indicators (4). The more distant, the smaller the suction flow. For the maximum suction flow, align the indicators (4).

To deactivate the suction: place the vacuum pump in its holder (2).

The cannula adapter (1) is removable for cleaning.

The cannula adaptor (1) is removable, allowing the use of Ø11 mm.



Note: the vacuum pump (3) and the cannula are not part of this device and can be purchased separately.

5.14 - Emergency Battery (Optional)

The emergency battery was developed exclusively for emergency situations where it is necessary to complete a procedure with no electricity on the mains to supply the equipment.

The battery is automatically activated when there is a lack of power, or when the equipment is disconnected from the mains. In this case the equipment emits the "Battery Mode" warning (section 5.16.1).

The battery provides autonomy approximately 3 hours of operation, a period that may vary according to the amount of commands executed by equipment.

The LED (1) indicates the status of the battery according to the colors shown:

- GREEN: battery ready for use (full charge).
 - BLUE: battery in critical condition - Connect the equipment to the mains power supply as soon as possible.
- While charging the battery, the blue LED is blinking.

Note: when the BLUE LED On, all commands are blocked. Operation only with the equipment connected to the mains. Upon reaching the maximum battery charge, the LED turns GREEN and unlocks the commands for operation in battery mode again.



5.14.1 - Battery Charge Warning Sounds

In addition to the LED battery charge indicator, the Performance Table uses warning sounds, as shown below:

- "Battery Mode": the equipment is disconnected from the mains or there is a lack of mains power.
- "Low Battery": the battery charge is less than 50% and must be recharged. While the equipment is not connected to the mains, the warning sound will be repeated every 5 minutes.
- "Discharged Battery": the battery charge is at a critical level. While the equipment is not connected to the mains, the warning sound will be repeated every 3 minutes. When this occurs, all the equipment commands are blocked.
- "Full Battery": the battery reaches the maximum charge level. The system emits this warning sound only once.

5.15 - Operating Lights

The Performance Table features lighting options through operating light with articulated arms that can be attached to your frame or fixed to the floor or ceiling.

5.15.1 - Premium LED (Optional)

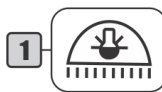
The Premium LED operating light features indirect illumination from 8,000 to 30,000 lux generated by LED directed to the multifaceted mirror with gradual and cyclic intensity control.

To turn On/Off the operating light: pass the hand in front of the sensor (5) approximately 5 cm away or press the control knob (4).

To change the light intensity: hold your hand in front of the sensor (5) or turn the control knob (4) until the operating light shows the desired intensity.

Only in case Performance Table has 3 motors, it will be necessary before turning on the operating light, as follows: press the On/Off operating light command (1) on the remote foot pedal to enable sensor (5) and control knob (4).

The handles (2) can be removed by removing the securing screws (3).



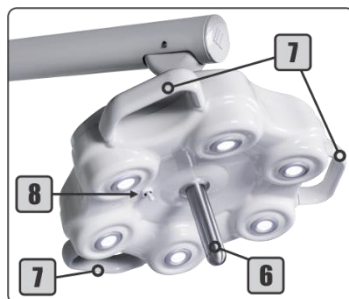
5.15.2 - Surgical Operating Light (Optional)

The surgical operating light is 30,000 lux intensity generated by 6 LED spotlights distributed to provide a wide area of illumination for outpatient procedures.

To turn on/off the surgical operating light: use the switch (8).

To move the surgical operating light, use the metal handle (6) or the side handles (7). The metal handle (6) can be removed for autoclaving by turning it counterclockwise.

It is recommended that the side handles (7) be packed with disposable material (per example plastic film) to prevent cross-contamination and damage to the equipment's fairings.



6 - General Features

- **Upholsteries:** are assembled on a very resistant frame, with soft foam and coated with flexible laminated PVC or leather, which besides being resistant, providing easy asepsis for the whole.
- **Mechanical structure:** manufactured in SAE 1020 rolled steel profiles and welded by MIG process, to guarantee the strength and durability.
- **Electrostatic painting:** it is applied to all structural metal parts of the equipment. The special polyurethane paint provides the equipment with high durability coating and has antibacterial properties according to JIS Z 2801: 2000, where in 24 hours, the bacterial reduction is greater than 99.9%.
- **Plastic covers:** made of high-strength ABS with acrylic cover, the plastic covers do not require painting and allowing polishing for recovery in case of wear or scratches.
- **Electrical system:** the equipment can work in frequencies of 50 or 60 Hz and can be configured to be connected to the voltages of 118/127/220/230 Volts by an authorized technician. The maximum supply voltage of electronic boards, motors, and other controls is 24 V. The electrical system has On/Off switch and protection fuses.
- **Spindle drive motor:** all motors used in the equipment are produced by *Robert Bosch of Brazil* and have advantages such as low noise, the absence of oil reservoir, uniformity in displacement, reduction of energy consumption and low cost for maintenance. The motors also have protection systems that act on the mechanical and electrical parts of the set.
- **Pressurized suspension:** the high pressure nitrogen cylinder relieves the load of the gear motor lifting system of the equipment in 100 kg. This means that a patient with this approximate weight is not acting on the electromechanical lifting components.

7 - Installation Requirements

7.1 - Pre-installation

The pre-installation must be guided by the Olsen authorized service to ensure that the environment is adequate the specified requirements for operation of the equipment (see chapter 8) and the positioning in which it is to be used. In this step the electrical connections and, if necessary, all the water and sewage pipes, according to the equipment's options, must be prepared.



This equipment is not designed to be installed or operated in surgical center.

7.2 - Electrical Installation

The power grid must be single-phase and have specific grounding and 10A/30mA DR circuit breaker. The circuit breaker must exclusively supply the Performance Table and must be easy and quick to disconnect from the mains. If the power grid presents voltage variation, the installation of a surge protection device is required. The power switch must be turned off at the end of the workday.

There is a table below for sizing the electrical installation.

Tension (V)	Wire Diameter (mm ²)	Distance (m)	Current (A)
118/127/220/230	2.5	Up to 20	5.0



This equipment should only be connected to a power source with protective grounding. There is risk of electric shock!

Equipment with a junction box may present the power supply plug next to the other equipment connections, allowing the power supply to be located inside the junction box.

7.3 - Water for the Water Unit

If your equipment has a water unit, it is essential that the water network has an easy access main valve to stop water flow, because the water main valve should be closed daily at the end of the workday. This valve can also be used to adjust the water pressure entering the equipment, preventing that the water arrives with too much pressure on the water unit.

The water pressure should be between 2.8 to 4.0 bar, with ideal pH (Hydrogenionic Potential) between 6.5 to 8. If the water pressure of your hydraulic network is not enough, we recommend that you consult a professional to review the hydraulic network.

It is recommended to use a filter before the external water supply of the equipment to prevent clogging in the internal water system.

7.4 - Sewage System

If your equipment has a water unit, the sewage system must have good hydraulic declivity (minimum of -2°) and should be preferably installed underground. The nominal diameter of the tubing must be of Ø40mm.

7.5 - Compressed Air

When necessary compressed air supply, it will be necessary an oil-free dental compressor, with dynamic pressure from 5.5 to 7.0 bar (80 to 100 PSI), and a minimum displacement of 150L/min and a 30L tank. The use of coalescing filter in the compressed air supply is recommended.

To ensure proper air pressure, observe the following specifications for hoses according to the distance:

- Up to 10 meters: use 1/4" hose;
- From 10 to 20 meters: use 5/16" hose;

The use of special air compressed mesh hose is recommended. Do not use hoses for connection between the compressor and the equipment with a distance greater than 20 meters. In these cases, it is recommended that you consult an expert for the correct sizing of the compressor and the type of pipe being used.

8 - Installation

The installation of the Performance Table must be done by Olsen certified technician, it consists in assembling the armrests, the auxiliary pillow positioning, as well as checking the mains voltage which will supply the equipment and, if necessary, make the tension adjustment. In case of optional items have been purchased, these should also be installed at this time.

The technician will also verify if the equipment complies with the purchasing order, if it maintains its integrity, and will provide operation, cleaning and maintenance guidance.

When the installation is complete, observe the following items:

- All remote foot pedal or hand control commands are working perfectly.
- The equipment memorizes the work positions and executes them correctly.
- The upholsteries and auxiliary pillow are intact.

In the case of optional items have been purchased; check the items below according to the acquired optional item:

- Integrity of upholstery and finishes.
- Joints without rigidity while moving.
- The attachment of the accessory is secure.
- If it has the water unit, it is correctly installed, has good water flow, adequate drainage of the spittoon bowl and no leaks.
- The accessories provided with the water unit are well fitted on the supports, have no leaks and have their perfect drive.
- The operating light turns On/Off normally and presents a smooth arm movement.

8.1 - Equipment Positioning

To position the equipment, put it on the stretcher position (backrest down and leg rest up) then take it to the place where it will be used. Perform the movements of raising and lowering the seat, making sure that there is enough room for all movements.

8.2 - Olsen Certified Technical Assistance Network

To access the Olsen certified technical assistance network for installation and maintenance contact us by e-mail export3@olsen.odo.br or if you prefer +55 48 2106 6000.



Installation should only be made by an authorized technician. Installation performed by an unauthorized person will result in loss of warranty.

9 - Cleaning and Disinfection



The whole sanitize process must be done with the use of gloves suitable for cleaning and protection, in addition to a mask and protective glasses, according to biosafety standards.

9.1 - Upholsteries and Plastic Covers

The plastic covers and upholsteries must be cleaned with a damp cloth containing neutral soap or detergent only. Olsen advises against using any chemical product to clean these parts, but in the case of disinfection products, it is important to check if it has suitable compatibility and specifications before use on these materials.

To clean the operating light Premium's multifaceted mirror, use only a soft cloth dampened with liquid glycerin.



Never use hypochlorite or alcohol-based products.

9.2 - Painted Parts

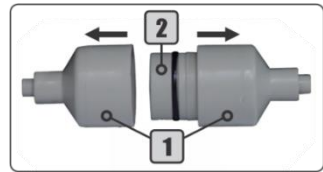
It must be cleaned with a slightly damp cloth containing only soap or mild detergent.



Never use hypochlorite or alcohol-based products.

9.3 - Ejectors

Daily disinfect the saliva ejector's hoses with an appropriate disinfection product for PVC hoses. It is essential to read the instructions of the aseptis product to avoid misuse or overdosage, which can cause damage to the medium and long term to the hoses. Using a proper concentration of the cleaning product, suck up with the suction needed for the effectiveness of the process. With the product still in the hose, place the suction on the hose holder. After the necessary action period of the product, suck 1 L of water.



The solids collector must also be cleaned daily. The saliva ejectors efficiency may be impaired if this filter is clogged. In the case of saliva ejector's performance reduction, clean its filters.

To clean the filters, follow the instructions below:

- 1° - Undo the solids collector cover (1);
- 2° - Remove the solids collector (2) for cleaning;
- 3° - After cleaning, re-assemble the solids collector.

9.4 - Water Unit and Strainer

To clean the spittoon bowl (1), remove the spittoon bowl's finishing, (5) the strainer (4), and the detachable water spouts (2 and 3), for then remove the spittoon bowl.

For removal of the strainer (4) use a tweezer or gloves to avoid direct contact with the waste.

The cleaning process of the strainer and the spittoon bowl can be made with running water and neutral soap or detergent. Use non-abrasive sponge.



All contaminated waste and materials should be disposed of in biological waste.

9.5 - Sterilization by Autoclave

The stainless steel tray and the metal handle of the surgical operating light can be sterilized by steam autoclaving at the following values (in accordance with ISO 17665):

- a) 130° C, 2 bar, 15 minutes; b) 120° C, 1 bar, 30 minutes c) 134° C, 2.2 bar, 4 minutes.

Note: these items withstand up to 1.000 autoclaving cycles.



All equipment items mentioned in this chapter must be sanitized and sterilized (when appropriate) prior to use.



Olsen is not responsible for defects, deformities, spots or abnormalities caused by improper use of chemical products, contact with tissues, leather, disposable gloves, inks, pigmented detergents and other organic or synthetic products.

10 - Technical Features

Power supply: 118/127/220/230 VC~.



A certified technician when installing the equipment must select the voltage.

Note: all equipment is adjusted at the factory to 220VC~.

Number of phases: single phase. **Frequency:** 50/60 Hz.

Power 118/127V: 330 VA. **Power 220/230V:** 350 VA.

Protection fuses:

- For 220/230VC~: 2.5 A H (5 x 20 mm).
- For 118/127VC~: 5 A H (5 x 20 mm).
- Emergency Battery: 10 A L (6.3 x 32 mm).
- Junction Box socket: 10 A L (6.3 x 32 mm).

Power cable specification (in compliance with requirements 6.1 and 6.2 of IEC 60601-1-2:2010):

- Flexible cable PP circular 500 V 3 x 1 mm 247-5 NM 53-C5.
- Tri-polar male plug 10 A - 250 V (NBR 14136).
- Tri-polar female plug 10 A - 250 V (IEC 60083/75).

Electrical shock protection type:

I Class Equipment, according to IEC 60601-1-1 and IEC 60601-1-2 standards.

Protection degree: B Type.

Operation Mode:

- Performance table: non-continuous operation.
Time On: 30 s. Time Off: 5 min.
- Premium LED operating light and surgical operating light: continuous.

Premium LED operating light intensity: 8.000 to 30.000 lux.

Surgical operating light intensity: 30.000 lux.

Color temperature: 4.500 K.

Operating Environment Conditions:

- Temperature: 15° C ~ 30° C.
- Pressure: 75 kPa ~ 106 kPa.
- Relative humidity: 30% ~ 70% non-condensing.

Harmful water penetration's protection:

- Equipment: IPX0.
- Pedal: IPX1.

Thermal protection of the transformer: aperture with 130° C ± 3%.

Lifting capacity (Maximum patient weight): up to 200 kg.

Equipment Weight:

- Net: 154,5 kg (with accessories: 170,5 kg).
- Gross: 186,5 kg (with accessories: 259,5 kg).

Weight of the Accessories:

- Multi-articulating headrest: 4.25 kg.
- Headrest with clipping: 3.80 kg.
- Knee crutches: 4,20 kg.
- Articulating armboards: 8.20 kg.
- Armrest for blood donation: 8.3 kg.
- Serum support: 2.70 kg.
- Instrument's tray: 5.90 kg.
- Premium LED operating light: 7.55 kg.
- Surgical operating light: 9.25 kg.
- Water Unit: 2.3 kg.
- Vacuum pump adaptor: 780g.
- Venturi saliva ejector: 1.10 kg.
- High power Vórtice saliva ejector: 1.2 kg.

10.1 - Electromagnetic Compatibility (EMC)



The Performance Table needs special attention regarding electromagnetic compatibility and must be installed and put into use in accordance with the electromagnetic compatibility information presented in this chapter.




Radio frequency (RF) communication equipment, portable and mobile, can affect the Performance Table.

Guidance and Manufacturer's Declaration - Electromagnetic Emissions		
The Performance Table is intended for use in the electromagnetic environment specified below. The customer or the user should assure that it is used in such an environment.		
Emission test	Compliance	Electromagnetic Environment - Guidance
RF emissions CISPR 11	Grupo 1	The Performance Table 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 use for domestic purposes.
RF emissions CISPR 11	Class B	
Harmonic emissions IEC 61000-3-2	Non-applicable	
Emissions due to voltage fluctuations/scintillation emissions IEC 61000-3-3	Non-applicable	

Guidance and Manufacturer's Declaration - Electromagnetic Emissions - I			
The Performance Table is intended for use in the electromagnetic environment specified below. The customer or the user should assure that it is used in such an environment.			
IMMUNITY Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment Guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact	± 6 kV contact	Floors should be wood, concrete or ceramic file. If floors are covered with synthetic material, the relative humidity should be at least 30%.
	± 8 kV air	± 8 kV air	
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines	± 2 kV for power supply lines	Mains power quality should be that a typical commercial or hospital environment.
	±1 kV for input/output lines	±1 kV for input/output lines	
Surge IEC 61000-4-5	± 1 kV differential mode	± 1 kV differential mode	Mains power quality should be that a typical commercial or hospital environment.
	± 2 kV common mode	± 2 kV common mode	
Voltage dips, short interruptions and voltage variations on the power supply input lines IEC 61000-4-11	<5% U _T (dip > 95% in U _T) for 0.5 cycle	<5% U _T (dip> 95% in U _T) for 0.5 cycle	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Performance Table requires continued operation during power mains interruptions, it is recommended that the Performance Table be powered from an uninterruptible power supply or a battery.
	40% U _T (60% dip in U _T) for 5 cycles	40% U _T (60% dip in U _T) for 5 cycles	
	70% U _T (30% dip in U _T) for 25 cycles	70% U _T (30% dip in U _T) for 25 cycles	
	<5% U _T (dip > 95% in U _T) for 5 s	<5% U _T (dip> 95% in U _T) for 5 s	
Power frequency (50/60 Hz) Magnetic field 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 Manufacturer's Declaration - Electromagnetic Immunity

The Performance Table is intended for use in the electromagnetic environment specified below. The customer or the user should assure that it is used in such an environment.

IMMUNITY Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment - Guidance
Conducted RF IEC 61000-4-6	3 V _{rms} 150 kHz to 80 MHz	3V _{rms}	<p>Portable and mobile RF communications equipment should not be used closer to any part of the Performance Table, including cables, than the recommended separation distance calculated by the equation applicable to the transmitter frequency.</p> <p>Recommended separation distance</p> $d = [1,2]^{\frac{1}{3}}\sqrt{P}$ <p>80 MHz to 800 MHz</p> $d = [1,2]^{\frac{1}{3}}\sqrt{P}$ <p>800 MHz to 2,5 GHz</p> $d = [2,3]^{\frac{1}{3}}\sqrt{P}$ <p>Where P is the transmitter maximum output power rating in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). 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 Interference may occur in the surroundings of equipment marked with the following symbol:</p> 
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	

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

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption 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 measure filed strength in the location in which the Performance Table is used exceeds the applicable RF COMPLIANCE LEVEL above, the Performance Table should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the Performance Table.

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

Recommended Separation Distances Between Portable and Mobile RF Communications Equipment and the Performance Table

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

Rated Maximum Output the Power of the Transmitter (W)	Separation Distance According to Frequency of Transmitter (m)		
	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2,5 GHz
	$d = [1,2]^{\frac{1}{3}}\sqrt{P}$	$d = [1,2]^{\frac{1}{3}}\sqrt{P}$	$d = [2,3]^{\frac{1}{3}}\sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,37	0,37	0,74
1	1,2	1,2	2,3
10	3,7	3,7	7,4
100	12	12	23

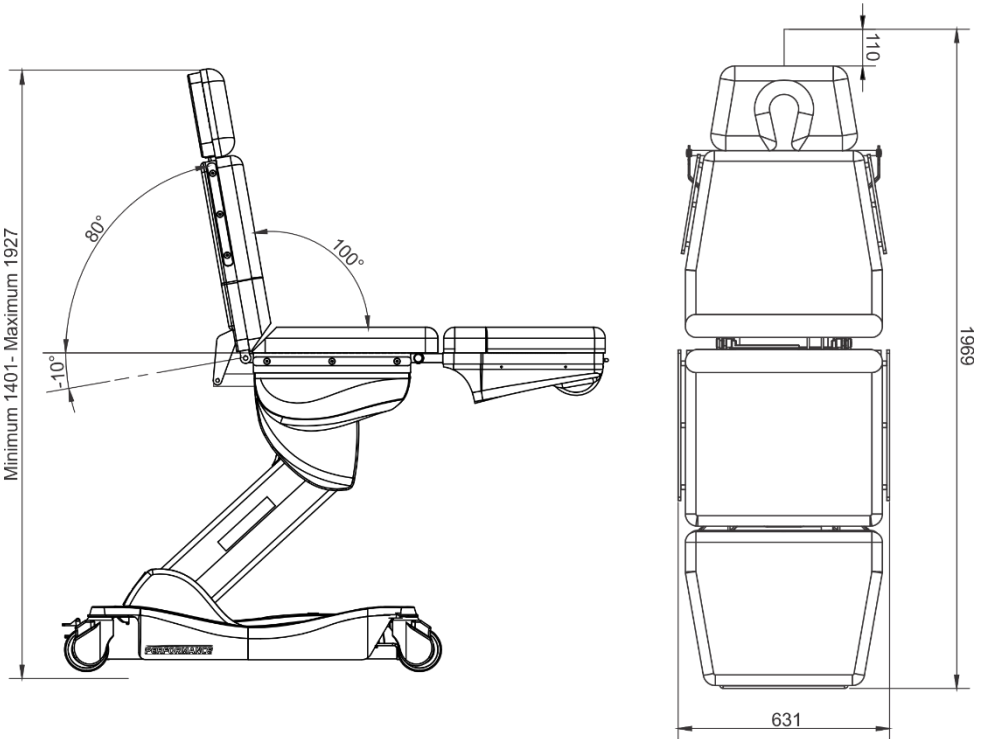
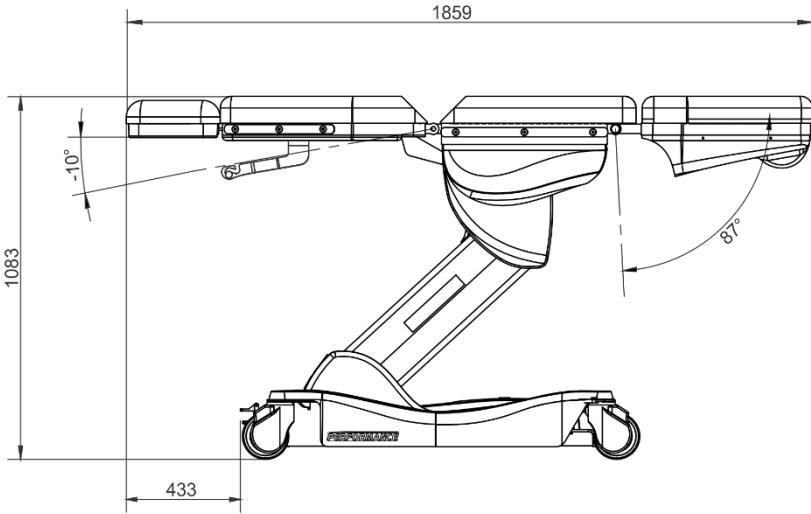
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter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

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

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







11 - Dimensional

Measured in Millimeters



12 - Simbology

According to IEC 60601-1 and IEC 60878 standards.

	Seat Up		Seat Down		Zero Position
	Backrest Up		Backrest Back		Work Position
	Recline Seat		Incline Seat		Leg Rest Down
	Leg Rest Up		Bowl Flush		Cup Filler
	Saliva Ejector		Suction Handpiece		Hand Control Valve
	Dental Operating Light		Non-Sterile		"OFF" (Power)
	"ON" (Power)		Stop		Battery Check
	Write Data into Store (Selection)		Caution		General Warning Sign
	Warning, Electricity		Operating Instructions		Refer to the Instruction Manual
	General Mandatory Action Sign		General Prohibition Sign		Stepping Prohibited
	Manufacturer		Serial Number		Type B Applied Part
	Earth (Ground)		Protective Earth (Ground)		Alternating Current
	Sterilizable Up to the Temperature Specified		Humidity Limitation		Temperature Limitation
	Fragile, Handle with Care		Keep Away from Heat		Keep Dry
	This Side Up		Heaping Up		
	Authorized Representative in the European Community				

13 - Important Notes

The reproduction and distribution of these instructions can only be made with prior permission from Olsen Indústria e Comércio S.A.

The technical features of the products described in this manual correspond to its publication period. Future technical improvements do not result in any right to update existing products.

The pictures presented in this manual are illustrative.

This equipment is designed to be free from magnetic fields interference, external electrical influences, electrostatic discharges, pressure or pressure variation if the equipment is transported, installed, operated and sanitized in accordance with the operating instructions contained in this manual.

13.1 - General Cares - Compulsory Read



Follow the instructions in *chapter 7* of this manual (*Installation Requirements*) to suit the electrical and hydraulic network where the equipment will be installed.



Follow instructions for proper use of the equipment and its accessories as described in *chapter 5* (*Equipment Description and Operating*). Improper use could be harmful to the equipment, which would not be covered by warranty.



Follow the instructions in *chapter 9* (*Cleaning and Disinfection*) of this manual for daily cleaning of your equipment.



If you have a compressor, check your condition before starting the activities in the office.



Protect your equipment from direct exposure to sunlight. The equipment direct exposure to sunlight may cause premature aging of the plastic covers and the upholstery.



Turn off the circuit breaker or unplug the equipment and shut the main water valve (when equipped with water unit) at the end of the working day.



It is recommended to replace the battery every 4 years to ensure maximum performance of the equipment. This procedure must only be performed by an Olsen accredited technician.



In case of remote foot pedal damage, hand control or anti-crush sensor, discontinue use of the equipment, turn it off, and contact Olsen accredited assistance.



Use only the mains cable supplied with the equipment for mains connection. Use of cables other than those specified (*chapter 10 - Technical Features*) may result in increased emissions or reduced immunity of the Performance Table.



Only the authorized technician can replace the equipment's mains cable and internal fuses.



This equipment is not suitable for use in the presence of a flammable anesthetic mixture with air, O₂ or Nitrous Oxide.



This equipment should only be operated by physicians, nurses and dental surgeons for clinical, outpatient and maxillofacial procedures.






The battery system has a charger integrated into the electrical system of the equipment, which guarantees the good operation and durability of the batteries, avoiding short circuits, oxidations and leaks. However, should any of these defects be found, discontinue use of the equipment, unplug it from the mains and contact the Olsen accredited technician.



Do not remove the plastic covers from the equipment. There's a risk of electric shock. Only the accredited technician is authorized to perform this procedure.





In the case of damage to the electrical panel, adjacent plastic covers and motors' plastic covers disconnect the equipment from the mains and contact the Olsen accredited service. Interrupt the equipment use until maintenance is complete. The equipment use in these conditions offers a risk of electric shock.

-  Do not perform maintenance or cleaning on the Performance Table while it is in use or turned On.
-  Do not install or use any electrical equipment over or near the Performance table. If necessary, check the Performance table to see if it is functioning normally in the configuration in which it will be used.
-  Do not perform the following procedures if it is possible to touch the patient, even if unintentionally, during the procedure:
 - Fuse replacement;
 - Do not perform the patient load or other procedures on the Performance table if the castors are not properly locked.

13.2 - Discard

 Debris, residues and infectious materials resulting from the procedures performed on this equipment must be deposited in biological waste duly identified and in accordance with current legislation.

 For proper disposal of this equipment and its components and accessories, we recommend that it be sent to specialized recycling companies to ensure the best destination of each component without harm to the environment.

 This equipment may have 2 lead-acid batteries and they can not be disposed of with common waste because they present a risk of leakage and consequent contamination of soil and water. Therefore, when they are removed, they must have their contacts isolated and be referred to companies specializing in the recycling of this type of product or to any Olsen representative, either technician or reseller.

13.3 - Transportation and Storage

 It is recommended that the equipment's transportation and storage to be made in its original package.

 Transport carefully protecting the equipment from falls and impacts.

 Protect from moisture, rain exposure and direct contact with liquids.

 Keep it sheltered from the sun.


 Do not heap more than 4 volumes.

 Do not move or store the equipment on uneven surfaces.

 Temperature range for transportation and storage: -10° to + 45°C.

 Moisture limits for transport and storage: 20% to 70%.

13.4 - Contraindication

 This equipment is contraindicated for any use other than that for which it is intended, or to be operated by unauthorized personnel.

14 - Troubleshooting

For solving possible problems in a simple and practical way, just follow the instructions in the following table:

Item	Problem	Causes	Solutions
1	The equipment doesn't perform any command	1° - The equipment is not connected to the mains electricity	1° - Connect the equipment to the main electricity
		2° - Electrical circuit breaker is switched Off	2° - Switch On the electrical circuit breaker
		3° - There is no power on the main electricity	3° - Call the power supply company
		4° - The protection fuse is blown	4° - Contact Olsen certified assistance
2	The chair doesn't memorize work positions	1° - The equipment is not connected to the mains electricity	1° - Check Troubleshooting, <i>item 1</i>
		2° - Is the record position command incorrect?	2° - Repeat the recording, see the user manual (<i>section 5.4</i>)
		3° - Is there an electronic problem?	3° - Contact Olsen certified assistance
3	Operating light is not lighting	1° - The equipment is not connected to the mains electricity	1° - Check Troubleshooting, <i>item 1</i>
		2° - The LED is burned	2° - Contact Olsen certified assistance
4	The saliva ejector is weak or loses suction during the procedure	1° - The saliva ejector's filter is clogged	1° - Clean the saliva ejector's filter
		2° - There's insufficient air pressure for the equipment	2° - Open the main air valve
		3° - The equipment's drain hose is obstructed	3° - Release bent/wrinkled hose
		4° - The sewer is clogged	4° - Provide sewage clearance
		5° - The hydro-pneumatic system is locked	5° - Contact Olsen certified assistance

If you are in doubt or find a problem with the equipment that is not mentioned in this chapter, stop using the equipment immediately and contact your authorized service center or contact us by e-mail export3@olsen.odo.br or by calling +55 48 2106 6000.

15 - Preventive Review

In order to extend your equipment's lifespan, Olsen has prepared a list of the main equipment items for which it recommends performing semi-annual preventive maintenance.

Performing a preventive maintenance by an accredited technician does not interfere with the equipment's warranty period.

STANDARD ITEMS
Checking the remote foot pedal/hand control commands
Checking the anti-crush sensor
Spindle drive motors and joint lubrication

OPTIONAL ITEMS
Left and right bracket loks checking
Checking the voltage and integrity of the batteries
Paper roll holder's axle lubrication
Checking the ejection and drainage of the water unit and Venturi saliva ejector
Checking the operating light joints
Checking the conditions of the LED from the Premium LED/Surgical operating light

To access the Olsen certified technical assistance network for installation and maintenance contact us by e-mail export3@olsen.odo.br or if you prefer +55 48 2106 6000.



Allow only qualified Olsen technicians to perform installation and maintenance on your equipment and accessories.



Use only Olsen original parts and accessories. The use of non-original components can compromise the performance of the equipment, increasing its emissions or reducing its electromagnetic immunity.



Do not make adaptations, modifications or changes to the equipment or its components or accessories.

16 - Warranty Terms

The warranty period for this product is 12 months, counted from the equipment installation date, considering the 90 days legal warranty term, provided that the installation is performed within the period of 90 days from the product's Purchase Invoice issue and the fulfilled of other requirements of this certificate.

- 1** - The maximum term of storage is 3 months from the date of purchase of the product. If the storage period is exceeded, the guarantee is still in progress, even if the product is still stored.
- 2** - Upholstered parts are guaranteed for 6 months.
- 3** - LED's, mirrors, fuses, cables and transformers are not covered under warranty.
- 4** - The warranty is limited to repair or replacement of defective parts and does not cover defects originated by:
 - a) Non-compliance with the instructions for use and maintenance;
 - b) Falls, crashes and inadequate storage;
 - c) Action of nature agents;
 - d) Damage to upholstery, improper use of chemicals, exposure to unsuitable weather conditions, contact with tissues, leather, disposable gloves, paints, pigmented detergents, razors or any sharp instruments;
 - e) Damage to painted parts and plastic covers caused by improper use of chemicals or by contact with disposable gloves and sharp or piercing objects;
 - f) Connection to wrong voltage power supply.
- 5** - This warranty will cease when:
 - a) In the normal course of its period of warranty;
 - b) Make changes in the product not authorized by Olsen;
 - c) Adulterations in the purchase, installation or services document;
 - d) Installation or technical assistance made by a person not authorized by Olsen;
 - e) Failure to install the equipment for more than 90 days, counted from the purchasing date contained in the invoice;
 - f) By using non-genuine spare parts.
- 6** - The parts repairing or replacement during the warranty period will not extend the original expiry date.
- 7** - The expenses originated from the unit installation, scheduled preventive maintenance, travel, and hotel of the service staff involved in the calls for service for installation or units repair will run under the unit's owner responsibility and in accordance with the distributor's norms.
- 8** - The purchaser, after verifying the services performed in the installation and revision of the equipment, must date and sign the service order provided by the technician and keep along with his invoice of purchase of the equipment, failing which the warranty extension product when necessary.
- 9** - All service requests for warranty equipment must be made with the serial number of the equipment to be serviced and a copy of the purchase or installation document. If this information is not communicated, the service request will be made as not covered by the warranty.

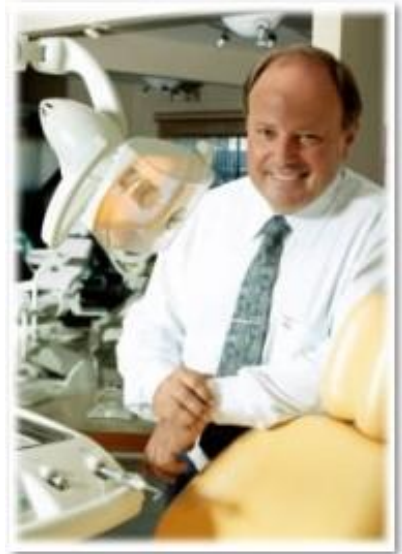
17 - Message from the President

Olsen and its clients:
A successful relationship.

I have linked my name to the factory and to the Dental and Medical equipment, which are currently produced, and trade in more than 100 countries, having minded the responsibilities and long-term response to this initiative.

Our products are modern, innovative, durable and of low maintenance cost. These characteristics have been achieved thanks to our competent and dedicated team, which make me very proud for many reasons, as they are always giving the best of their creative capacity to our clients.

Our company will always be open to all those who prefer Olsen products, for any necessary information and technical assistance, but especially for comments regarding the relationship with customers. We expect this connection to always, bring you satisfaction, resulting in more and more benefits to all of us.



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Olsen

Equipment made to last

Registration at Ministry of Health of Brazilian 10281300011

Technician In Charge - Engº Cleber da Costa - CREA SC: S1 116283-5

Cod. 5400399 - Rev. 11 - 28/09/2021

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