

Instructions for use

**Patient Chair**

**ARCADIA P**

**SWAN**



DIRECTIVE 2007/47/EEC

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**ATTENTION**

Before using the device it's necessary to read carefully the O.M.S. fully use instructions and eventually all attached instructions coming from the accessories supplied.

This document is destined to dentists and operators of dental surgeries.

# 1. GENERAL INFORMATION

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The patient chair was conceived to guarantee the maximum security and comfort. Our special **Arcadia P / Swan** backrest is ultra-flat and totally free of projecting parts, thus providing a correct operation position for surgery personnel, with the patient laying down flat.

At the same time the backrest is anatomically shaped to distribute optimally and uniform loads of the patient's body, whatever its size, allowing optimal lumbar support.

O.M.S. **Arcadia P / Swan** patient chair have been designed and tested to withstand and lift up to 250 kg.

The reclining backrest is fitted with a shift compensation mechanism that prevents the undesired “clothes-stretching” effect during backrest up/down operations and does away the need to readjust the headrest every time.

Features included a fixed left-hand armrest, chair lift and decent mechanism, synchronization of backrest reclining movement with that of the general Trendelenburg position, double controls for chair resetting and mouth rinse positions, a foot-safe base, 9 program storage (8 to dental units with floor water group) settings and “last position” program.

The hinge of the headrest is lowered below the rim of the backrest for patients of modest size.

**Swan** model has a folding seat to allow an easy access for children and patients with motor disturbances. It's the ideal solution for orthodontics and frontal views.



**Arcadia P**



**Swan**

## **1.1. SYMBOLS**



### **ATTENTION**

Indicates a dangerous situation which may cause material or physical damage from mild to moderate.



### **DANGER**

Indicates a dangerous situation which may cause a direct connection to serious injury or death.



### **NOTE**

Warning, explanation or integration, important information for users and technicians.

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## **1.2. SERVICE**

**O.M.S. SPA Officine Meccaniche Specializzate**

**Via Dante 20/A 35030 Caselle di Selvazzano (PD) Italia**

**tel: +39 0498976455 - [www.omsstaff.com](http://www.omsstaff.com)**

**e-mail: [assistenza@omsstaff.com](mailto:assistenza@omsstaff.com)**

**Always communicate the serial number of the device.**

## **1.3. SAFETY**

### **1.3.1. General**

#### **DANGER**



To avoid risk of electric shock, this device should only be connected to power networks with protective ground in compliance with regulations in force in your country.

#### **DANGER**



Before powering the device after installation, repair or any other technical intervention, verify, and if necessary, ground cables to the screw marked with the ground symbol.

#### **DANGER**



The device should be installed in spaces with electrical systems in accordance with the regulations in force in your country.

#### **DANGER**



The installation of the device must be done from an authorized O.M.S. technician; the choice of pipelines by the designer and the laying of the same must be done by a qualified electrician in accordance with current legislation in your country

#### **DANGER**



The use of the device is prohibit to non-professional operators or who have not read the manual instructions.

Always check that the device is in good condition.

#### **ATTENTION**



Do not use the device if any part is defective or worn out. In this case, request the assistance of O.M.S. authorized technicians.

#### **ATTENTION**



Replace the faulty or worn parts only with original spare parts, guaranteed O.M.S.

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**DANGER**

Device not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.

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**ATTENTION**

Do not use the device in presence of liquids on the floor.

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**DANGER**

Do not modify this device without the manufacturer permission, the use of non-approved accessories and/or unauthorized modification can constitute imminent danger of injury to persons and damage to materials.

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**ATTENTION**

All maintenance operations must be performed after switching off the unit and in the absence of the patient.

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**DANGER**

In some parts, identified with symbol "ATTENTION PARTS UNDER VOLTAGE"



The voltage is present even after turning off the main switch, in case you need to intervene on the parts, you must disconnect the power to the system which powers off the device before operate.

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**DANGER**

The main switch achieves the isolation of the unit from the mains direct power supply, before making any operation inside the unit make sure that the switch is off.

### ATTENZIONE

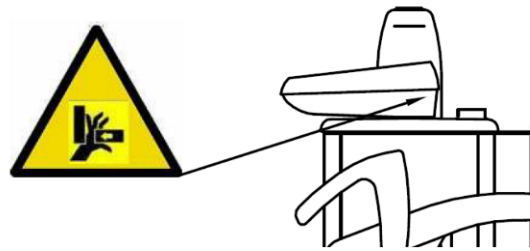


To connect a vacuum, it must be observed the instructions given in this manual and the wiring diagram; the vacuum must be marked CE in accordance with Directive 93/42/EEC and s.m.i. Medical devices and safety international standards CEI EN 60601-1 (medical electrical equipment-General requirements for safety), CEI EN 60601-1-2 (medical electrical equipment – collateral regulation: electromagnetic compatibility).

### DANGER



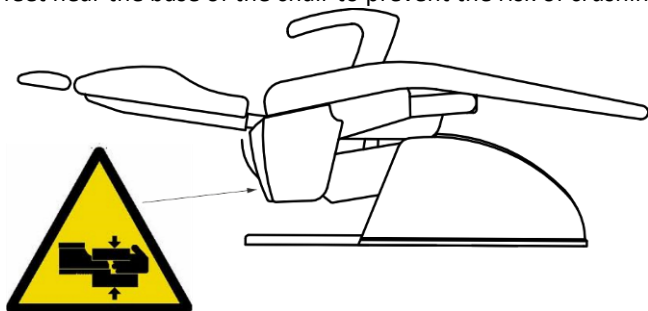
In the version with ground water box, during the ascent of the patient chair check the patient positioning on the arm side, to prevent the risk of crushing with the basin.



### DANGER



During the movements of the patient chair, both in manual and in particular in machine, do not put hands and feet near the base of the chair to prevent the risk of crushing, read



the chair instructions.

### ATTENTION



During the automatic movement of the chair the operator must remain near the dental complex.

### ATTENTION



Do not sit at the end of the head or feet of the chair.



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**ATTENTION**

In case of prolonged treatment in elder patients, pay attention to the formation of bedsores.

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**ATTENTION**

During the movement of the chair and in particular the headrest the patient's hair can get tangled.

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## **1.4. DEFINITION OF THE DESTINATION**

Patient chair support (and of the unit).

## **1.5. ENVIRONMENT CONDITION ACCEPTED**

### **1.5.1. ENVIROMENTAL CONDITIONS PERMITTED FOR TRANSPORT AND STORARGE**

The unit packed can be exposed for a period not exceeding 15 weeks to the following environmental conditions:

Temperature from -40 to +70°C

Relative humidity from 10 to 100% non-condensing

Atmospheric pressure from 500 to 1060 hPa

### **1.5.2. PERMITTED ENVIRONMENTAL CONDITIONS FOR OPERATION AND OTHER SPECIFICATIONS**

Temperature from +10 to +40°C

Relative humidity from 30 to 75%

Atmospheric pressure from 800 to 1060 hPa

Altitudine nominale di funzionamento  $\leq 3000\text{m}$

Pollution degree 2

Overvoltage category II

## **1.6. WARRANTY**

The product is covered by a warranty period of 36 (thirty six) months from the date of installation from the purchaser. The warranty conditions are shown inside the warranty book supplied with the device.

The guarantee is applied to the purchaser also to the product specified in the installation, testing report and covers all mechanical and electrical interventions relating to the product concerned.

**The guarantee will be operative after the ordering party will compiled and send to O.M.S. spa the record of installation and testing. Essential condition to access the warranty is to return to O.M.S. spa of installation and testing record, in original by fax or by certified mail within ten days of installation, penalty the decadence of the guarantee.**


**O.M.S. SPA Officine Meccaniche Specializzate**

**Via Dante 20/A 35030 Caselle di Selvazzano (PD) Italia**

**fax: +39 0498975566 - e-mail: [garanzia@omsstaff.com](mailto:garanzia@omsstaff.com) - PEC: omsstaff@legalmail.it**

## 2. TECHNICAL CHARACTERISTICS

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<b>Model</b>	ARCADIA P
<b>Manufactured by</b>	O.M.S. S.p.A. Officine Meccaniche Specializzate Via Dante 20/A - 35030 Caselle di Selvazzano Padova Italia
<b>Class</b>	I 
<b>Application parts type</b>	B
<b>Protection level device</b>	IPX0
<b>Protection level foot control</b>	IPX1

### POWER SUPPLY

**Rated voltage** 230 Vac +/-10%

**Rated frequency** 50/60 Hz

Network connections that comply with the rules in force in the territory.

**Rated current** 2.5 A

**Nominal power** 600 W

### OPERATION TIME

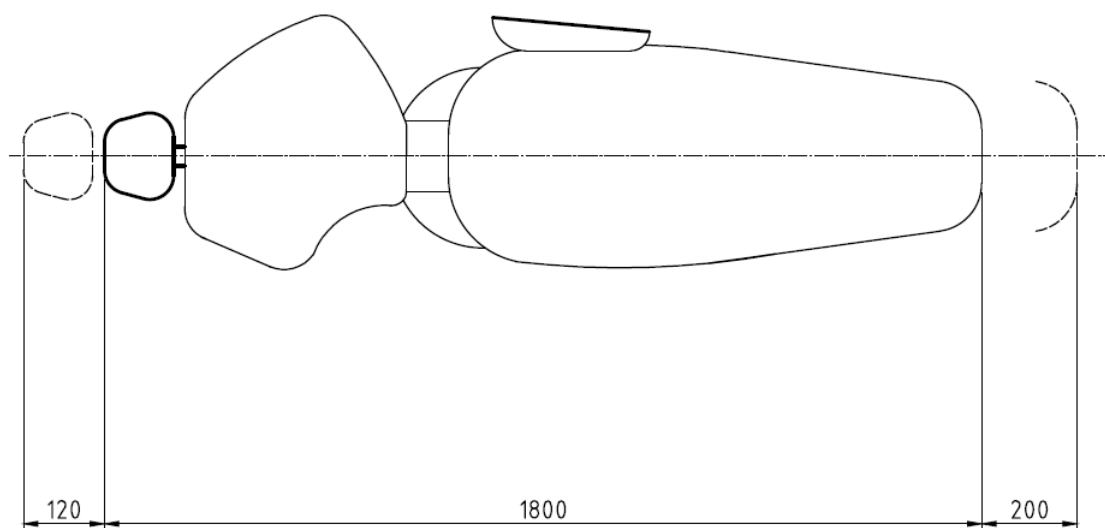
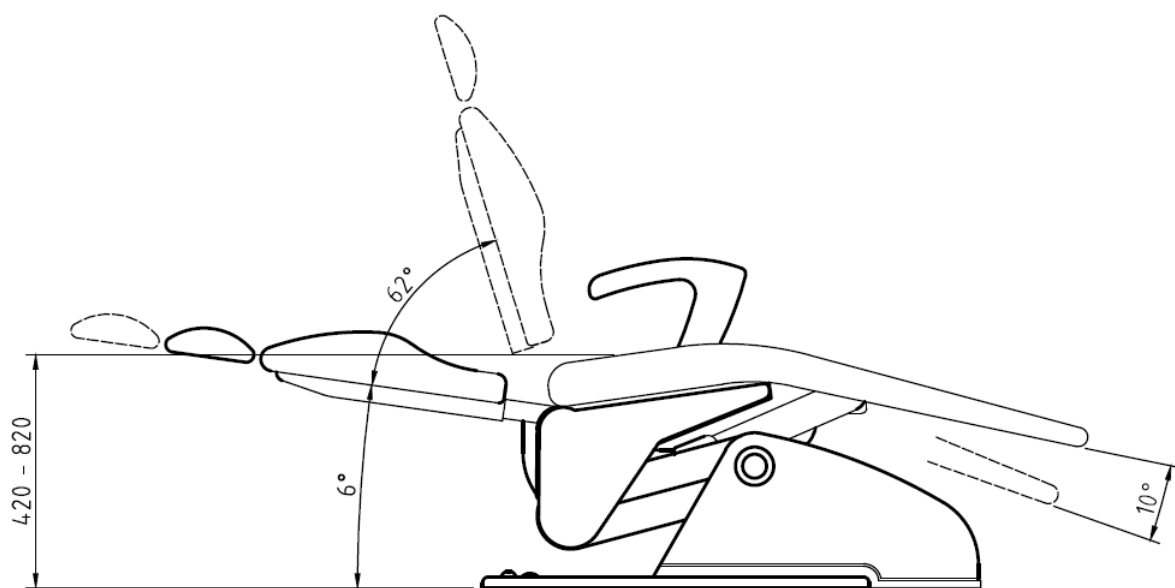
Anticipated equipment for continuous use with the followings intermittent loads:

chair	intermittent	1' on / 10' off
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### OTHERS

<b>Cable length rheostat</b>	2,5 m
<b>Power cable length (only wheel version)</b>	1,4 m
<b>Total weight</b>	about 126 Kg
<b>Maximum load permitted on the patient chair</b>	135 Kg
<b>Minimum space recommended for installation</b>	about 3.20x3.00x3.00 m (LxHxP)

## DIMENSIONS



## IMPORTANT

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**Note:**

The device is designed and manufactured in compliance with Directive 93/42/EEC medical devices (and s) and international safety regulations CEI EN 60601-1 (medical electrical equipment-General requirements for safety), CEI EN 60601-1-2 (medical electrical equipment – collateral regulation: electromagnetic compatibility), IEC 80601-2-60 (Medical electrical equipment: Particular requirements for basic safety and essential performance of dental equipment), ISO 6875 (patient chairs) , UNI CEI EN ISO 14971 (risk analysis), CEI EN 62304 (ing. Software), CEI EN 62366 (ing. Usability), CEI EN 60601-1-6 (Usability).

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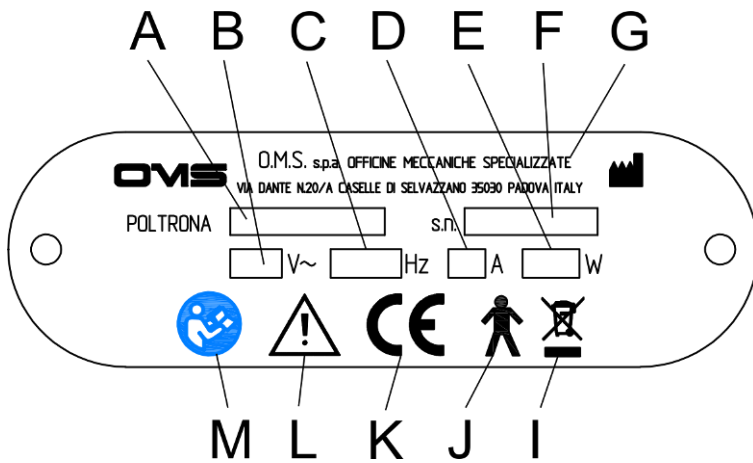
**Note:**


O.M.S. declines every responsibility to the effects of the safety and the reliability if the assemblage, the additions, the ritaratures, the changes or reparations are not effected from technical authorized O.M.S. with instructions and components exclusively furnished from O.M.S. and if the electric plant of the environment in matter is not conforming to the norms IEC and/or the instrument is not used in conformity to the use instructions.

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## 2.1. DATA PLATE

On the instrument a nameplate is applied that brings the general data of the instrument.



- A. Device model
- B. Rated voltage and nature of current (alternating )
- C. Rated frequency
- D. Rated current
- E. Rated power
- F. Device serial n°
- G. Manufacturer
- H. Cooling fluid temperature
- I. WEEE symbol
- J. Applied part Type B
- K. Certification markings: Medical device directive 93/42/EEC and subsequent amendments
- L. Mandatory, see enclosed documentation
- M. Follow operating instructions

## 3. COMMAND - CONTROL - WARNING

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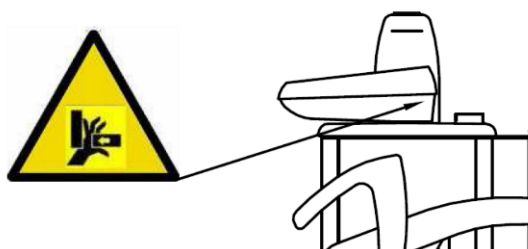
### 3.1. SAFETY SYSTEMS

The unit is equipped with safety devices that minimize the risk of collision during the movement of the chair, in particular there is a safety on the basin floor water group in version, which intervenes when the tray is rotated by the side of the chair, limiting the ascent of the chair at a defined height.

#### **DANGER**



In the version with a floor water group during the ascent of the chair check the positioning patient on the arm to prevent the risk of crushing with the basin.

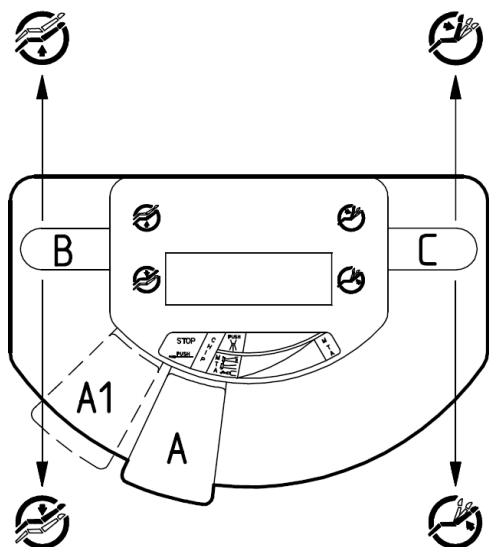


#### **Note:**

**During any automatic chair movement (reset, memory placement or rinse position) by pressing any patient chair command (from the dental unit or push off of the foot controller) the chair stops immediately.**

**The movement of the chair, either at power-up that in normal use, can be prevented if one or more safety systems are active**

### 3.2. CHAIR COMMAND FROM FOOTCONTROL



The footcontrol has two side levers (B and C) that allow the operator to position the chair using the controls on the foot:



Ascent command pantograph;



Descent command pantograph;



Ascent backrest command;



Descent backrest command.



#### Note:

All electric movements of the chair are equipped with electro-mechanical limit switches. Once you have reached the extremes of the pantograph or backrest, they automatically break the power of the engine in question thus avoiding the violent stresses that would produce using mechanical limit switches.

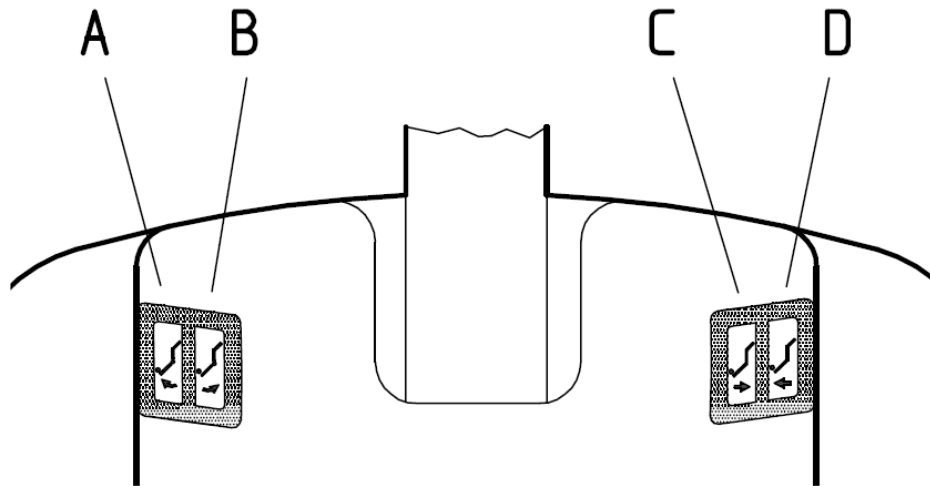


### **3.3. MANUAL COMMAND FROM CHAIR**

The activation of ascent and descent (pantograph-back) is achieved by using the commands on the upper end of the backrest of the Chair (see figures 3 and 4). These are the functions of each:

**A-B - Ascent and backrest command** (push the button towards the outside);

**C-D – Ascent and Descent pantographic command** (push the button towards the inside), synchronized with the Trendelenburg and legrest.



### 3.4. AUTOMATIC COMMANDS FROM THE CHAIR

The patient chair is endowed with commands that allow to make automatically assume default positions, they have different functions depending on the version of the patient chair.



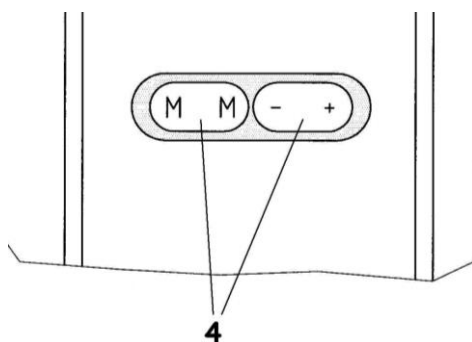
**Note:**

**When you turn on the chair you can run any resetting of movements. This is necessary to use the various automatic controls of the chair, rinsing and memories (if present).**

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#### 3.4.1. **ARCADIA P COMBINE TO THE DENTAL UNITS WITH SOSPEND WATER GROUP: LINEA ESSE – LINEA PATAVIUM – TEMPO 9 ELX**

##### 3.4.1.1. SEAT BACKREST PUSH-BUTTON PANEL



**4** – Push-buttons for re-calling and storing programs (numbered from 1 to 9) relating to positions of the chair (back – and legrest) and the pantograph height.

As far as the movements are concerned, we wish to point out the following:

All movements are equipped with electric limiting switches; this means that when the motor's worm screw is almost in reach of either end of its traverse, the limiting switches automatically cut off the power supply to the electric motor, thereby preventing the possibility of intense stress, which would come about if the mechanism reached its extremity.

##### 3.4.1.2. PROGRAMMING INSTRUCTION FOR WORKING

By pressing button **+** and **–** the number which appears on the display situated on the right-hand side of the pantograph can be increased or decreased.

- By pressing the button **+** the number range goes from 1 to 9.
- By pressing the button **–** the numbers on the display range from 9 to 1.

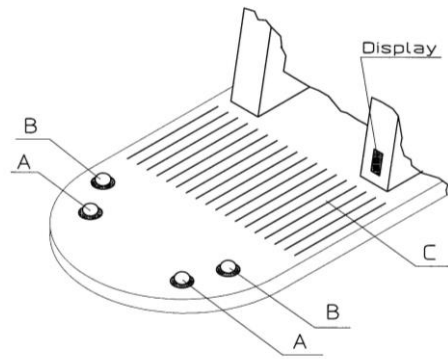
After having identified the first working position (by means of the push- buttons A-B and C-D), by pressing buttons **4** a number is then to be selected on the display (for example n°1).

To memorise this working position for future use, press button **M** and **M**. A beeping sound signals that the program has been stored.

A maximum of 9 positions can be memorized, corresponding to the 9 numbers viewed on the display.

#### 3.4.1.3.

##### BASE OF THE PATIENT CHAIR

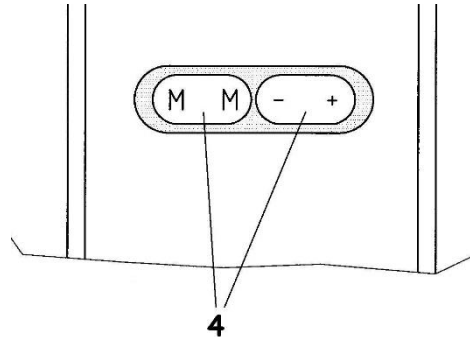


The base of the patient chair includes 5 push-buttons marked with the letters A, B and C:

- A. **BLUE PUSH-BUTTONS** (2 buttons for operator and assistant). By pressing one of these buttons the patient chair sets itself up to the position according to the program selected on the display
- B. **RED PUSH-BUTTONS** (2 buttons for operator and assistant). By pressing one of these buttons the patient chair resets itself automatically to position 0 (zero). It can also be used as a safety stop button to cancel an involuntary reset to zero
- C. **MEMBRANE SAFETY PUSH-BUTTON.** This is a safety push-button, which can be active by a simple pressure of the foot, situated inside a rubber protective covering on the footboard. In the event that an object or part of the operator's body remains trapped between the footboard and the patient chair and pantograph during its descent, a simple pressure of the foot on the safety push-button makes the chair rise immediately. Furthermore, pressing this button brings the chair to the mouth rinsing (spitting) position. Pressing button "A" when the chair is still makes it return automatically to the starting position.

### 3.4.2.           ARCADIA EXT COMBINE TO DENTAL UNITS WITH FLOOR WATER GROUP: LINEA ESSE – LINEA PATAVIUM – TEMPO 9 ELX

#### 3.4.2.1.                       SEAT BACKREST PUSH-BUTTON PANEL



**4** – Push-buttons for re-calling and storing programs (numbered from 1 to 9) relating to positions of the chair (back – and legrest) and the pantograph height.

As far as the movements are concerned, we wish to point out the following:

All movements are equipped with electric limiting switches; this means that when the motor's worm screw is almost in reach of either end of its traverse, the limiting switches automatically cut off the power supply to the electric motor, thereby preventing the possibility of intense stress, which would come about if the mechanism reached its extremity.

#### 3.4.2.2.                       PROGRAMMING INSTRUCTION FOR WORKING

By pressing button **+** and **–** the number which appears on the display situated on the right-hand side of the pantograph can be increased or decreased.

- By pressing the button **+** the number range goes from 1 to 9.
- By pressing the button **–** the numbers on the display range from 9 to 1.

After having identified the first working position (by means of the push- buttons A-B and C-D), by pressing buttons 4 a number is then to be selected on the display (for example n°1).

To memorise this working position for future use, press button **M** and **M**. A beeping sound signals that the program has been stored.

A maximum of 8 work positions and 1 rinsing position can be memorized, corresponding to the 9 numbers viewed on the display.

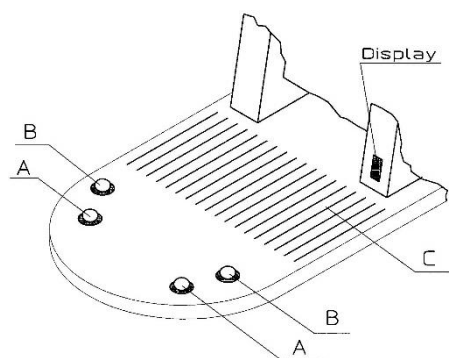


**Note:**

**Rinsing position corresponds to memory 9.**

### 3.4.2.3.

#### BASE OF THE PATIENT CHAIR

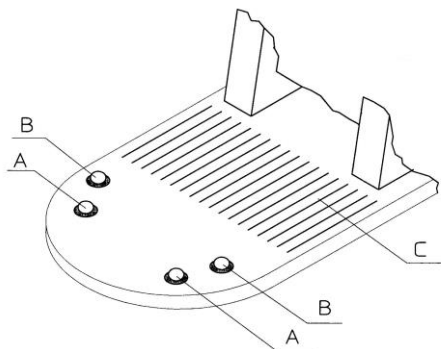


The base of the patient chair includes 5 push-buttons marked with the letters A, B and C:

- A. **BLUE PUSH-BUTTONS** (2 buttons for operator and assistant). By pressing one of these buttons the patient chair sets itself up to the position according to the program selected on the display
- B. **RED PUSH-BUTTONS** (2 buttons for operator and assistant). By pressing one of these buttons the patient chair resets itself automatically to position 0 (zero). It can also be used as a safety stop button to cancel an involuntary reset to zero
- C. **MEMBRANE SAFETY PUSH-BUTTON.** This is a safety push-button, which can be active by a simple pressure of the foot, situated inside a rubber protective covering on the footboard. In the event that an object or part of the operator's body remains trapped between the footboard and the patient chair and pantograph during its descent, a simple pressure of the foot on the safety push-button makes the chair rise immediately. Furthermore, pressing this button brings the chair to the mouth rinsing (spitting) position. Pressing button "A" when the chair is still makes it return automatically to the starting position.

### 3.4.3. ARCADIA P COMBINE TO THE DENTAL UNITS: VIRTUOSUS – CARVING PLUS – UNIVERSAL ML (DROP AND KART)

#### 3.4.3.1. BASE OF THE PATIENT CHAIR



The base of the patient chair includes 5 push-buttons marked with the letters A, B and C:

- A. **BLUE PUSH-BUTTONS** (2 buttons for operator and assistant). By pressing one of these buttons the patient chair sets itself up to the position according to the program selected in instrument table.
- B. **RED PUSH-BUTTONS** (2 buttons for operator and assistant). By pressing one of these buttons the patient chair resets itself automatically to position 0 (zero). It can also be used as a safety stop button to cancel an involuntary reset to zero
- C. **MEMBRANE SAFETY PUSH-BUTTON.** This is a safety push-button, which can be active by a simple pressure of the foot, situated inside a rubber protective covering on the footboard. In the event that an object or part of the operator's body remains trapped between the footboard and the patient chair and pantograph during its descent, a simple pressure of the foot on the safety push-button makes the chair rise immediately. Furthermore, pressing this button brings the chair to the mouth rinsing (spitting) position. Pressing button "A" when the chair is still makes it return automatically to the starting position.

## 4. CHAIR

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### 4.1. DOUBLE JOINT HEADREST

The articulated headrest is adjustable in height with an excursion of about 23 cm and has two articulations which can be controlled at the same time using the lever located in the back; It makes the headrest it easy to move on two rotation axes.

By carrying the headrest cushion to an inclination of about 90 ° with respect to the swivel mechanism, it can be rotated on itself by 180 °. It is also possible to lower the joint mechanism in a position that gives the headrest greater comfort for patients of modest stature.



**Note:**

**Once the headrest is positioned in the working position, reposition the release lever in place to lock the movement.**

---



## 4.2. DOUBLE JOINT HEADREST WITH CLICK

The double joint headrest with Click is adjustable in height with an excursion of about 23 cm and has two articulations simultaneously commandable using the lever placed in the rear; it makes it easy to move the headrest on two rotation axes.

By carrying the headboard cushion to an inclination of about 90 ° with respect to the swivel mechanism, it can be rotated on itself by 180 °. It is also possible to lower the joint mechanism in a position that gives the headrest greater comfort for patients of modest stature.



**Note:**

**Once the headrest is positioned in the working position, reposition the release lever in place to lock the movement.**

---





### **4.3. HEADREST WITH 3D MOVIMENT**

The 3D headrest movement is adjustable in height with an excursion of about 23 cm and has a articulation on the rear joint that also allows the lateral movement, using the lever placed in the rear; It makes it easy to move the headboard on three rotation axes.



**Note:**

**Once the headrest is positioned in the working position, reposition the release lever in place to lock the movement.**

---



#### **4.4. ARMREST**

The patient chair is supplied as standard with the left armrest only. Optionally it can be requested with both armrests; the right armrest is provided with a button (at the base of the same) whose pressure allows to break the armrest forward or backward to facilitate the passage of the patient.

Once the armrest is pulled back, it is also possible to remove it simply by pulling it in the direction of the axis of rotation, helping with small rotatory movements; Proceed exactly in reverse order to reinsert it, taking care that the insertion is fully thoroughly before turning the armrest.

The extraction and insertion manoeuvres of the armrest must be accomplished gently avoiding, in case of difficulty, to force any movement.

## 5. MAINTENANCE AND KEEPUP

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The operations described, which we strongly recommend to carry out with the procedures and periodicity indicated, is to ensure maximum durability and efficiency over time to your equipment.

The following paragraphs listed the for the various maintenance activities, with the relative frequency, the indication of the executing officer and any reference details.

The activities are classified in:

- Cleaning/disinfecting,
- adjustments,
- scheduled maintenance,
- extraordinary maintenance.

View all the configurations using the various accessories available in the list and therefore must be applied according to the options you have chosen when ordering.

### **5.1. CLEANING AND DISINFECTING**

For hygiene (and to avoid prolonged exposure of surfaces to stains of corrosive substances) clean the device frequently.

For hygiene and cleaning, it's raccomandanded, without incurring any risk of damage, O.M.S. recommends the use of products that contain:

- Quaternary Ammonium
- Phenolic compounds
- Iodophors

That do not contain:

- Alcool
  - Hypochlorite
  - Soda
- Organic Solvents

O.M.S. recommends these products already tested, always refer to the manufacturer's instructions and safety data sheets

- ZETA 4.

Disinfectant

- OROCID MULTISEPT.

### **Upholstery Patient chair**

For the thorough cleaning of the upholstery of the patient chair you can use a product suitable for the treatment of skay such as

- EMULSIO.

For daily cleaning and disinfection use a little aggressive product such as:

- GREEN & CLEAN SK.

O.M.S. provides, on request, the tested and proven products in the company.



**Note:**

**O.M.S. declines all responsibility for problems arising from the use of substances other than those recommended.**

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DISINFECTION AND CLEANING			
Activities	Frequency	Who makes it?	Notes/reference
Patient chair: Upholstery, headrest and armrests	After each patient	Trained operator	Use only the products indicated by OMS.
Rheostat cleaning	daily	Trained operator	Use only the products indicated by OMS.
Painted casing	daily	Trained operator	It is recommended not to use denatured alcohol detergents based on soda or organic solvents, because they could ruin the paint and upholstery

### 5.1.1. ARMCHAIR



**Note:**

Daily cleaning and disinfection must be done with the use of unaggressive products for the upholstery in the Skay of the patient chair.

The periodical thorough cleaning of the upholstery, armrests and headrest must be done with products suitable for the treatment of the Skay and adopting the following procedure:

1. Shake well before use.
2. Pour the product onto a dry cloth, do not pour directly onto the surface to be treated.
3. Start to treat a small surface by verifying that there are no alterations on the Skay, then extend to the rest of the upholstery and go up to the complete evaporation.
4. Pass a damp cloth to take away residues from the treated surface.

Do not abuse in use and wait at least 60 days before repeating the treatment.

## 5.2. SCHEDULED MAINTENANCE

Scheduled Maintenance			
Activities	Frequency	Who makes it?	Note/reference
General functional checks	Annual or after 8000 hours of use	Authorized Technician	
Periodic checks of general safety/performance - IEC 62353	Two years	Authorized Technician	Mandatory by law

## 5.3. FUNCTIONAL AND SAFETY CHECKS

In order to guarantee the operational and functional safety of the chair, it is necessary to do an annual maintenance procedure, that must be done with authorized OMS technicians.

Medical devices are built to ensure safety even in the event of first failure for the patient, the operator or third parties, must follow the periodically checks, the level of effective safety.



### ATTENTION

It is necessary to perform periodic safety tests and checks at least every two years in order to identify any electrical failures (e.g. damaged insulation), which may reduce the initial safety level.

Such checks must be done by a OMS authorized technician, with appropriate tools and equipment and according to well-defined standards; The IEC 62353 standard is the benchmark for the control of electro-medical devices manufactured in accordance with IEC 60601-1.

Periodic tests and checks shall include visual checks, measurements of ground connections and dispersed currents; The results and measured values are necessarily recorded on specific forms and must be stored in order to demonstrate the maintenance of the appliance (complete with its accessories) in time, and to monitor the safety level of the device.

- Following the first commissioning (installation),
- After repair or maintenance work,
- During periodic checks.



### DANGER

The use of the dental patient chair is permitted only if all safety checks have been successful past.

## **5.4. EXTRAORDINARY MAINTENANCE**

Some extraordinary maintenance operations are described below; Except for paint retouching, we recommend that all must be done by authorized technicians O.M. S.

O.M.S. will provide on request all wiring diagrams, list of components, descriptions, calibration instructions, or other information that assist the authorized technicians O.M.S. in the repair of the device.

<b>EXTRAORDINARY MANTAINENCE</b>			
<b>Activities</b>	<b>Frequency</b>	<b>Who makes it?</b>	<b>Notes/ References</b>
Paint retouching	When necessary	Trained operator	
Fuse Replacement	When necessary	Trained operator	Refer to the technical documentation
Interventions for any malfunction, malfunction or downtime	When necessary	Trained operator	Refer to the technical documentation

### **5.4.1. RETOUCHING**

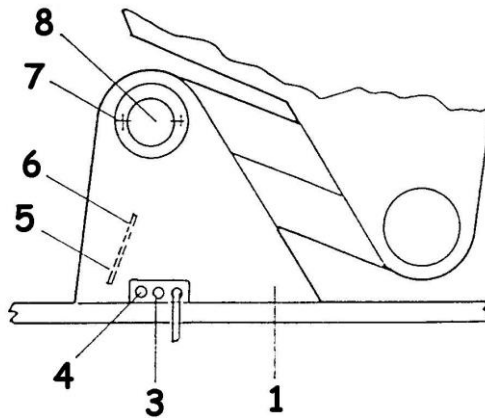
In case of small enamel scratches, it is possible to perform the retoug with the color bottle specially supplied in the accessory box. It is recommended to shake the bottle before use and to mix the color well, raising and lowering the brush several times inside the bottle containing the enamel. The retouching must be performed "dots" the ruined area, with small drops of color.

### 5.4.2. REPLACEMENT OF FUSES

#### DANGER



In order to replace a fuse, you must first identify the causes that have caused the rupture and only after removing them proceed with the replacement. The new protection fuse must have the same characteristics as the one replaced, indicated on the electrical diagram of the device



On the base of the armchair, the protection fuses (3) and (4) can easily be identified, that can be replaced externally by means of a screwdriver. Another one is situated on the printed circuit board (6) on the inner side which can be replaced after having remove the cover (1), fastened with its screw (7), situated underneath the cover caps (8).

A series of spare fuses provided by O.M.S. Is located inside the accessory box

You can see here below the values of the main fuses, for the sole reference only:

- 3. Electric Motor Fuse 4.0 AT, 230 Vac
- 4. Transformer fuse 0.5 AT, 230 Vac
- 5. low voltage circuit fuse 0.5 AT, 230 Vac

#### DANGER



The main switch realizes the insulation of the device from the direct power supply, before making any operation inside the device make sure that switch is off.

#### DANGER



The replacement of the fuses must done by an authorized technician O.M. S.



## 6. TECHNICAL INSTRUCTIONS FOR INSTALLATION

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### 6.1. PACKING

The unit shipped enclosed in a box (weight approx. 165 kg), contains:

Patient chair, fixing screws patient chair, right armrest \*, suction \*, operating instructions, wiring diagrams, guarantee coupon

(\*)Present only in the case of a specific request to the order.

Outside each case there is a mark showing the order number, the order confirmation number, the device model.

N.B.: The packing of a possible seat O.M.S. is separate

#### MOUNTING

1. first operation to do, the Chair must be unpacked and placed in the vicinity of the predispositions previously made using the installation plan in possession of the local organisation.
2. Attach the seat to the chair, insert the headrest and right armrest.
3. Record any "games" by screwing or unscrewing the adjustment feet (supplied).
4. Attach the chair to the floor using the two expansion screws (supplied).
5. Make the electrical connection and proceed with the installation of the cover.
6. Connect the ground wires to the screw marked with the earth symbol.
7. Insert the headrest and right armrest.

### 6.2. TESTING AND IMPLEMENTATION

1. . Check the correct operation of the manual descent and ascent pantograph and backrest controls, the automatic reset control, the rinse position and the "last-position" working position. Memorize and verify the good positioning of the 3 programs (see Manual controls and 4.3 automatic controls).
2. Check the correct operation of the limit switches and safety systems (see Safety Systems Section).



#### IMPORTANT WARNING:

During the testing, it is necessary to ensure the mechanical stability of the device, after having placed all the movable elements and accessories (tablet, lamp, water group, etc.) in the most unfavourable position. If it is not possible to fix the chair to the floor, stabilizer elements are available.

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#### DANGER

The main switch realizes the insulation of the appliance from the direct power supply, before making any operation inside the appliance make sure that the switch is off.

## 7. INFORMATION RELATING TO ELECTROMAGNETIC COMPATIBILITY IN ACCORDANCE WITH IEC 600601-1-2

The device is designed and manufactured in compliance with the standard CEI en 60601-1-2 (Electro-medical apparatus, collateral standard: electromagnetic compatibility) and therefore has a degree of immunity and emissions such as not to create dangerous interference with devices complying with the same norm. Warning: Interference with electrical equipment that has a level of emission or immunity that does not conform to CEI en 60601-1-2 may occur. In such cases, these equipment should not be used at the same time with O.M.S. equipment; If the device is in a stalemate due to such interference, it is sufficient to turn it off and on again.


In the presence of particular holes in the supply voltage, it is possible that the micromotor has a momentary drop in speed that does not affect the safety and performance of the same, the duration of the event is limited to the duration of the voltage drop.

Manufacturer's Guide and declaration – Electromagnetic emissions		
The device is intended to work in the electromagnetic environment below specified. The customer or user of the device must ensure that it is used in this environment.		
Emission test	Compliance	Electromagnetic Environment-Guide
Emission RF CISPR 11	Group 1	The device uses RF energy only for its internal operation. As a result, its RF emissions are very low and probably does not cause any interference in the electronic devices located nearby.
Emission RF CISPR 11	Class B	The device is suitable for use in all environments, including domestic ones and those connected directly to a low-voltage public network power supply that feeds buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Fluctuations voltage emissions /flicker IEC 61000-3-3	In compliance	

Manufacturer's Guide and declaration – Electromagnetic immunity			
The device is intended to work in the electromagnetic environment below specified. The customer or user of the device must ensure that it is used in this environment.			
Immunity test	Test level IEC 60601	Level of Compliance	Electromagnetic Environment-Guide
Electrostatic discharge (ESD) IEC 61000-4-2	contact $\pm 6$ kV air $\pm 8$ kV	$\pm 6$ kV $\pm 8$ kV	The floors must be in wood, concrete or ceramic tiles. If the floors are covered with synthetic material, the relative humidity should be at least 30%.
Transients/rapid electrical pulse sequence ( <i>Burst</i> ) IEC 61000-4-4	$\pm 2$ kV For power lines $\pm 1$ kV For input/output lines	$\pm 2$ kV $\pm 1$ kV	The quality of the main voltage should be that of a typical commercial or hospital environment.
Surge ( <i>Surge</i> ) IEC 61000-4-5	$\pm 1$ kV between the phases $\pm 2$ kV between phases and ground	$\pm 1$ kV $\pm 2$ kV	The quality of the mains voltage should be that of a typical commercial or hospital environment
Voltage gaps, short interruptions and voltage variations on the input lines dell'alimentazione	$<5\% U_T$ ( $>95\%$ hole in $U_T$ per 0.5 cycle)	$<5\% U_T$ 0.5 cycle (10ms)	The quality of the mains voltage should be that of a typical commercial or hospital environment. If the user of the device requires continuous operation during the interruption of the mains voltage, it is recommended to power the device with a UPS or with batteries.

IEC 61000-4-11	40 % $U_T$ (60 % hole in $U_T$ per 5 cicli)  70 % $U_T$ (30 % hole in $U_T$ per 20 cicli)  <5 % $U_T$ (>95 % hole in $U_T$ per 5S)	40 % $U_T$ 5 cycle (100mS)  70 % $U_T$ 20 cycle (500mS)  <5 % $U_T$ 5S	
magnetic field at Network frequency (50/60 Hz)  IEC 61000-4-8	3 A/m	3 A/m	The magnetic fields at network frequency should have characteristic levels of a typical locality in a environment such as commercial or hospital.
NOTE: $U_T$ is the network tention in c.a. before the application of test level.			

Manufacturer's Guide and declaration – Electromagnetic immunity			
The device is intended to work in the electromagnetic environment below specified. The customer or the user of the device must ensure that it is used in this environment.			
Immunity test	Level test IEC 60601	Level of Compliance	Electromagnetic Environment-Guide
RF conduct  IEC 61000-4-6  RF irradiata  IEC 61000-4-3	3 Veff  from 150 kHz to 80 MHz  3 V/m  from 80 MHz to 2,5 GHz	3 V    3 V/m	Portable and mobile RF communication equipment should not be used near any part of the device including cables, the recommended separation distance calculated with the equation applicable to the frequency of the transmitter. Recommended Distance Separation:  $d = 1,17 \sqrt{P}$  $d = 1,17 \sqrt{P}$ from 80 MHz to 800 MHz  $d = 2,34 \sqrt{P}$ from 800 MHz to 2,5 GHz  where P is the maximum rated output power of the transmitter in Watts (W) according to the manufacturer of the transmitter and D is the recommended separation distance, in meters (m).  The field intensities of fixed RF transmitters, as determined by an electromagnetic investigation on site A should be below the level of compliance for each frequency range B.  Interference may occur near devices marked with the following symbol:

			
<p>Note 1: At 80 MHz and 800 MHz, the separation distance for the highest frequency range applies.</p> <p>Note 2: These guidelines are not applicable in all situations. Electromagnetic propagation is influenced by the absorption and reflection of structures, objects and people.</p>			
<p>a The intensities fields for stationary transmitters, such as the base stations for radio telephones (cellular and cordless) and terrestrial radiomobiles, radioamateur devices, transmitters in AM/FM and TV transmitters can not be foreseen theoretically with precision. An electromagnetic survey of the site should be considered to evaluate an electromagnetic environment caused by fixed RF transmitters. If the field strength measured in the place do to the device is used exceeds the applicable level of compliance above, the operation of the device should be observed. If you notice abnormal performance, additional measures may be required as a different orientation or position of the device</p> <p>b The field strength in the frequency range from 150 khz to 80 MHz should be less than 3 V/M</p>			

Recommended distances separation between portable and mobile radiocommunication devices.			
<p>The device is intended to operate in a environment electromagnetic space where RF radiated disturbances are under control. The customer or the user of the device can help prevent electromagnetic interference by ensuring a minimum distance between mobile and portable RF communication devices (transmitters) and the device as recommended, in relation to the maximum output power of the radio equipment.</p>			
Maximum output power of the specified transmitter  W	Separation distance for transmitter frequency  m		
	From 150 kHz a to MHz  $d = 1,17 \sqrt{P}$	from 80 MHz to 800 MHz  $d = 1,17 \sqrt{P}$	from 800 MHz to 2,5 GHz  $d = 2,34 \sqrt{P}$
0,01	0,12	0,12	0,24
0,1	0,37	0,37	0,74
1	1,17	1,17	2,34
10	3,70	3,70	7,40
100	11,70	11,70	23,40
<p>For the transmitters specified for maximum output power not shown above, the recommended separation distance d in meters (m) can be calculated using the equation applicable to the frequency of the transmitter, where p is the maximum rated output power of the transmitter in Watts (W) according to the manufacturer of the transmitter</p> <p>NOTE 1: to 80 MHz and 800 MHz, applies the separation distance for the highest frequency range.</p> <p>NOTE 2: These guidelines may not be applied in all situations. Electromagnetic propagation is influenced by the absorption and reflection of structures, objects and people.</p>			

## 8. DISPOSING OF THE DEVICE AT THE END OF LIFE

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European Directives 2002/96/EC and 2003/108/EC electrical and electronic on waste equipment (RAEE).



The symbol of the crossed bin shown on the equipment or its packaging indicates that the product at the end of its useful life must be collected separately from the other waste. The user must, therefore, confer the equipment reached at the end of the life of the appropriate waste collection centres of electronic and electrotechnical, or return it to the retailer at the time of purchase of a new equipment of equivalent type, in reason of one by one.

The appropriate separate collection for the subsequent start of the equipment disposed of recycling, treatment and environmentally compatible disposal helps to avoid possible negative effects on the environment and health and promotes the reuse and/or recycling of the materials of which the equipment is composed.

## 9. REPORTING ACCIDENTS TO PEOPLE

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Dir. 93/42/CEE All. II (D.G. 2/1 Rev. 0)

CUSTOMER NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
SERIAL NUMBER OF DEVICE \_\_\_\_\_  
ACCIDENT \_\_\_\_\_  
\_\_\_\_\_

DAMAGE TO THE PATIENTS OR USER HEALTH \_\_\_\_\_  
\_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_

Space reserved for the company (Quality assurance)

Possible cause of the accident:

- ☐ Malfunction  
☐ deterioration of characteristics and/or performance  
    Shortage of operating instructions

Other \_\_\_\_\_

Damage \_\_\_\_\_  
\_\_\_\_\_

Proposed operational decisions \_\_\_\_\_  
\_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_

Space reserved for the Company (Directorate General)

Operational decisions \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Corrective actions \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_

In case of an accident send the form to O.M.S.. with the maximum priority.



