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INSTRUCTIONS USE AND MAINTENANCE HANDBOOK

INSTRUCTIONS FOR THE INSTALLATION

LOGOS Junior

Medical Device for Dentistry

375 . 6E . G05

GENERAL INDEX

LOGOS Junior

PART I - INSTRUCTIONS USE AND MAINTENANCE HANDBOOK

IMPORTANT NOTICE

This unit is a medical device for dental treatment conforming to EEC Directive 93/42 - MEDICAL DEVICES - (see enclosed certification of compliance) and with CEI 62-5/CEI EN 60601-1 Standard (General standard for the safety of electromedical equipment).
It is intended to be used by dentists only, who may avail themselves of the assistance of authorized personnel.
We prescribe to read the instructions contained in the users' manual carefully before using the unit.
Furthermore, before using any of the devices connected to the dental unit, we prescribe to read the instructions attached to each single device carefully.

The instructions for installing the device and the instructions for technical service and repair are held by the "CASTELLINI AUTHORISED" TECHNICIAN IN POSSESSION OF A VALID LICENCE.

The Manufacturer will not be held responsible for the safety, reliability, or performance of the equipment in the event of civil or penal proceedings if:

a) the essential environmental requirements as stated in the "Table on Compliance of Installations, Premises and Supply" are not met;

b) assembly, additions, adjustments, re-settings, repairs are not performed by **"AUTHORISED CASTELLINI TECHNICIANS" IN POSSESSION OF A VALID CASTELLINI IDENTIFICATION CARD;**

c) any medical devices other than those authorised by Castellini itself or devices that fail to meet the compatibility parameters specified by Castellini S.p.A. are connected to Castellini equipment;

d) unauthorised modification, arbitrary tamperings, incorrect maintenance operations are carried out or if non-original spare parts and/or components are used;

e) the equipment is not used in compliance with the instructions for use (as set out in the use and maintenance manual) or if it is used for purposes other than those for which it is designed;

f) the power, water and compressed air supply, the water drainage system and the air extraction system (where applicable) do not comply with the conditions stated in the use and maintenance manual (see "preparing for installation" paragraph and equipment installation plan, scale 1:1 F220B386);

g) scheduled technical maintenance is not performed at the times indicated;

h) the user does not undertake all routine maintenance work and does not comply with the directions and rules in this use and maintenance manual.

Failure to comply with the above conditions automatically voids the guarantee terms, and can endanger the safety requirements defined under 93/42 CEE norm, transferring full responsibility for safety and CE mark compliance for the product on to those responsible for carrying out the operations described above.

DENTAL CARE SETTING: rules and recommendations

Besides complying with the requisites provided by local laws for health care facilities, the room should:
- be at least 2.50 m in length (optimal: 3.30 m) on its shorter side;
- have washable flooring capable of withstanding shocks and chemical agents, e.g. porcelain stoneware, with no gaps between the tiles and, if possible the surface where the walls and floor meet should be rounded to facilitate cleaning:
- have walls covered up to h. 2.00 m with washable materials resistant to chemical agents;
- have lighting provided by two ceiling fixtures with a double fluorescent tube, daytime light 5500°K, covered by alveolar grids, arranged longitudinally over the chair, so that the long sides are parallel;
- be free of non-sanitary curtains, upholstery, furniture and furnishing complements, ornamental plants.

Before installing the dental unit: the user must ensure that the plumbing meets the requisites for the water and compressed air supplies, drainage and centralized suction system (if applicable) and that the electrical work likewise conforms to requirements. If plumbing and electrical work is necessary, the user must follow the instructions shown on the installation layout (scale 1:1 Code F220B386), which is supplied on request prior to installation, as well as the directions provided in the "Table of Conformity of Equipment, Environment, Water Supply".

SETTING-UP PROCEDURES

Once the equipment is installed, the following operations must be performed before it may be used:
- Sterilization of instruments (see part "Operating Instruments").
- Sterilization or disinfection of all sterilizable parts supplied non-sterilized and disinfection of upholstery and any parts normally coming into contact with patients (see par. on cleaning, disinfection and sterilization).
- Carrying out of a waterline disinfection cycle (see par. on Autosteril and Time-Flushing).
- Application of disposable protections where required.
- Check that the burrs and tips are securely fitted into the instruments (see part "Operating Instruments").

USING SAFELY: rules and recommendations

To ensure that the equipment is used safely, the user must abide by the set standards of hygiene and professional diligence.
The following points should also be kept in mind:
- during use, dust and fragments of material from the patient's mouth or the device being used may be thrust into the surrounding environment (organic and inorganic particles, metal dust, liquids, potentially infected fluids and biological materials):

Personnel must duly protect their eyes, breathing passages, mouth and skin
by wearing safety glasses, face shields, masks and disposable gloves.
Operate the suction system at high speed in all operations likely to result in a discharge of materials, dust and aerosols to minimise their dissemination.
- During use, materials and microorganisms coming from a patient may penetrate into the waterlines and be expelled into the next patient and into the environment. The passive systems of protection installed in this equipment (No-retraction system, Barrier Effect, etc.) minimise the risk but cannot eliminate it completely:
  It is strongly recommended to carry out a waterline disinfection cycle system for decontaminating dental unit waterlines with a timed flow of liquid containing **(Autosteril)** at the start of each clinical day and after each patient**.**
- the equipment items normally have exposed sharp tips and edges (burrs and other tools for high-speed handpieces, scaler tips, etc.): take care to **avoid accidental cuts and puncture wounds;**
- after use:
  remove the aforesaid parts from the instruments;
  do not leave sharp and/or pointed parts mounted on the equipment when it is left unattended;
- after use on each patient:
  It is mandatory to sterilize the cord-attached instruments or their removable invasive parts, after washing and disinfecting the surfaces (see specific instructions). Sterilization must take place in a steam autoclave at 135°C, 2.1 bars (sterilization requisites also prescribed by Italian Law, Health Minister's Decree of 28.09.1990, art. 4);
  It is mandatory to regularly carry out the sanitization procedures described in this manual in the paragraph on "cleaning, disinfection, sterilization";
- it is not advisable to use drinking water to supply the dental unit since it may lead to the formation of a biofilm in the waterlines and thus facilitate germ proliferation inside the unit itself.
  It is recommended to supply the unit exclusively with dedicated liquids (Isotonic Saline Solution or It.Ph. Purified Water) using the Separate Supply system.

You are hereby informed that:
The Principal of the Dental Surgery is responsible for ensuring that the equipment, environment and water supply comply with the basic requisites shown in the table below:

TABLE OF CONFORMITY OF EQUIPMENT, Environment, Water Supply

ITEM	ESSENTIAL REQUIREMENTS
❑ Premises	a) protected from risk of explosion, non pressurized b) temperature between 10 °C and 40 °C c) Relative humidity between 30 % and 75 % d) Air pressure between 700 hPa and 1060 hPa (700 ÷ 1060 mbar)
❑ Electrical installation	a) compliance with regulations concerning electrical installations in premises used for medical purposes. All power and water supply installations must comply with the country legal provisions. b) Single-phase mains current, 220/240 V ± 10% - 50/60 Hz ± 10 % frequency
❑ Electrical power supply	Adequate for power requirements, as specified on the appliance's rating information plate Single-phase power 220/240 V - 50/60 Hz Maximum allowed variation on electrical power supply: ± 10 %. Max absorbed power 1,45 kVA The unit is fitted with a terminal board for connection to a permanent power supply system. Upstream from the unit have to be installed a differential, bipolar switch for at least 16 A - 250 V with differential operating time current IΔN = 0,03 A The electrical wiring of the room and the heart connection must comply with the current regulations. The addition of an air-compressor will require a power supply and safety fuse that must be independent from the unit.
❑ Water supply	Compliance with the country's legal provisions on drinking water
❑ Water treatment plant	Compliance with the country's legal provisions on drinking water
❑ Water supply	Drinking water for domestic use, duly filtered and decalcified, for mouth rinse cup and cuspidor a) hardness: 15 -20 °F (French degrees) b) pressure: 300 -500 kPa (3 -5 bars) c) flow: ≥ 3 l/min at 450 kPa (4.5 bars) Should the pressure be lower than 300 kPa (3 bars), install a device upstream from the dental unit to ensure the necessary pressure (autoclave). Should the pressure exceed 500 kPa (5 bars), install a suitable pressure-reducing device upstream from the dental unit. The water supply line must be fitted with an isolating valve. N.B.: To avoid the risk of contaminating the water supply as a result of the possible backflow of liquid from the dental unit, after irrigating tips have come into contact with the patient or chemical agents, instruments may be supplied using ONLY one of the following systems: 1 - Solely with liquid contained in the separate tank installed in the dental unit; the separate supply system option must always be selected (see section on "Separate supply system" in the user instructions). 2 - With mains water, after a dental water supply system conforming to standard CEI EN 1717 has been installed upstream from the dental unit to guarantee the physical separation of mains water and instrument sprays (e.g. "WEK" Metasys or equivalent). Before the mounting of the unit: WE PRESCRIBE TO clean thoroughly all pipes to prevent impurities from fouling the unit's water/air circuits, and to bleed extensively the water supply pipe so that no air bubbles remain in the system.
❑ Compressed air plant	The compressor must be installed in a well ventilated room and not in close proximity of heat sources or exhaust air from the vacuum system.
❑ Compressed air supply	a) Compressed air pressure between 550 kPa and 700 kPa (5,5 ÷ 7 bar) b) Capacity in excess of or equal to 50 1/min at 400 kPa (4 bar) c) Dew point: less or equal to 10 °C The compressor air supply line must be fitted with an isolating valve.
❑ Vacuum system	The pipework system must be installed if you intend connecting the unit to a centralized suction system. For a single dental unit it is sufficient to connect the aspirator to the unit through the appropriate tube supplied. The vacuum suction system must discharge the exhaust air outside to atmosphere. Air flow rate 300 l/min. Vacuum value 10 kPa (0,1 bar)
❑ Waste water line	We recommend a waste line slope of 1 cm for each metre of distance from the unit to the main waste. A "p" trap must be installed on the drain line outside the unit.

MAINTENANCE AND REVISIONS

The dental patient chair, dental unit (including all the tools and devices connected to it, with the exception of high speed drills), operating lamp, x-ray equipment, compressor and any other device manufactured by Castellini S.p.A. that forms an independent unit must undergo the scheduled annual maintenance operations (except where otherwise indicated in the part on "Scheduled Maintenance Operations" in this Manual) by technicians carrying a valid Castellini identification card, 365 days after installation, regardless of whether they have actually been used or not.
High speed drills manufactured by Castellini S.p.A. must undergo the scheduled annual maintenance operations performed by qualified technicians authorised by Castellini (except where otherwise stated in the part on "Scheduled Maintenance Operations" in this Manual).
The owner of the equipment is responsible for booking the services of the Castellini technician at all times.
The high speed drill must be returned to Castellini S.p.A. three years after installation to be reconditioned at the manufacturing plant.
Subsequently, high speed drills should be reconditioned every three years, in addition to undergoing the above described scheduled annual maintenance operations.

CIRCUIT DIAGRAM, LISTS OF COMPONENTS, CALIBRATION INSTRUCTIONS

Castellini S.p.A. undertakes to provide on request circuit diagrams, lists of components, calibration instructions or any other information that may be required by qualified technicians authorized by Castellini and in possession of a valid professional licence to repair those parts of the equipment that may be repaired.
Castellini S.p.A. reserves the right to modify the products at any moment without notice.

ATTENTION

- Before using the electrosurgery, consult the section on "INSTRUCTIONS FOR THE USE OF THE ELECTROSURGERY" contained in the dental unit's instruction manual.
DO NOT USE THE ELECTROSURGERY ON PATIENTS USING PACE-MAKERS.

- This unit complies with the EMC 89/336 EC Directive, according with the CEI EN 60601-1-2 Standard.
During the working, this unit will not cause radio interference to the electric network (*).

(*) See chapter : "INFORMATIONS ABOUT CONFORMITY BY "LOGOS Jr" DENTAL EQUIPMENT AT EEC CEI EN 60601-1-2 NORMS - 2001 EDITION".

SCRAPPING

If scrapped, the equipment must be disposed of in accordance with the provisions of applicable legislation.
The oil in the chair hydraulic circuit must be disposed of separately in accordance with the provisions of applicable legislation.
The materials used to construct the equipment do not constitute a hazard for humans or animals in the event of contact or exposure.
For disposal of the amalgam separator (if present), strictly follow the instructions and warnings given in the section "ACCESS TO AMALGAM SEPARATOR".

INFORMATIONS ABOUT CONFORMITY BY "LOGOS Jr" DENTAL EQUIPMENT AT CEI EN 60601-1-2 NORMS - 2001 EDITION

Annex A

The **dental unit** is suitable for use in the specified electromagnetic enviroment. The purchaser or user of the **dental unit** should assure that it is used in an electromagnetic enviroment as described below:		
Emission test	**Compliance**	**Electromagnetic Enviroment**
Radiated and conducted RF emission	Class B	This **dental unit** is suitable for use in domestic establishments directly connected to the low voltage power supply network which supplies buildings used for domestic purposes
CISPR 11	Group 1	This **dental unit** uses RF energy only for its internal function. Therefore, the RF emission is very low and not likely to cause any interference in nearby electronic equipment.
Harmonic emissions	Complies	The **dental unit** is suitable for use in establishments directly connected to a public low voltage power supply network.
Voltage fluctuations/ flicker emissions CEI EN 61000-3-3	Complies	The **dental unit** is suitable for use in establishments directly connected to a public low voltage power supply network.

Annex B

The **dental unit** is suitable for use in the specified electromagnetic enviroment. The purchaser or user of the **dental unit** should assure that it is used in an electromagnetic enviroment as described below:			
Immunity Test	**CEI EN 60601-1-2 Test level**	**Compliance level**	**Electromagnetic Enviroment**
Electrostatic discharge (ESD) CEI EN 61000-4-2	6 kV contact 8kV air	CEI EN 60601-2 Test level	Residential/Hospital
Radiated RF CEI EN 61000-4-3	Non-life-supporting Equipment 3 V/m 80 MHz to 2,5 GHz Life-supporting equipment 10 V/m 80 MHz to 2,5 GHz	CEI EN 60601-1-2 Test level CEI EN 60601-1-2 Test level	Residential/Hospital
Conducted Rf CEI EN 61000-4-6	Non-life-supporting equipment 3 V 150 kHz to 80 Mhz Life-supporting equipment 3 V (outside ISM band) 10 V (inside ISM band)	CEI EN 60601-1-2 Test level	
Electrical fast transient/burst CEI EN 61000-4-4	2 kV for power supply lines 1 kV for input/output lines > 3 m	CEI EN 60601-1-2 Test level	Residential/Hospital
Surge CEI EN 61000-4-5	1 kV differential mode 2 kV common mode	CEI EN 60601-1-2 Test level	Residential/Hospital

(see next →)

Voltage dips, short in terruptions and voltage variations on power supply input lines CEI EN 61000-4-11	0% U_n for 0,5 cycles 40% U_n for 5 cycles 70% U_n for 25 cycles 0% U_n for 5 s	CEI EN 60601-1-2 Test level	Residential/Hospital
Power frequency (50/60 Hz) magnetic field CEI EN 61000-4-8	3 A/m	CEI EN 60601-1-2 Test level	Residential/Hospital

Annex C

Recommended Separation Distance for non-LIFE SUPPORTING EQUIPMENT

RF Source	Typical Rated Power (W)	Distance (m)
microcellular phone CT1, CT2, CT3	0,01	0,3
DECT cellular phone, wireless information technology equipment (modems, LANs)	0,25	2
cellular phone, hand-held (USA)	0,6	2
cellular phone, hand-held (e.g. GSM and NMT, EUROPE; DECS 1800)	2 8	4 7
walkie-talkie (rescue, police, fire, maintenance)	5	3
cellular phone, bag	16	10
mobile radio (rescue, police, fire)	100	30

For transmitter using frequencies below 800 MHz, the DISTANCE can be estimated using Equation A:

$$d = 1.2\sqrt{P}$$

For transmitters using frequencies between 800 MHz and 2 GHz, the DISTANCE can be estimated using Equation B:

$$d = 2.3\sqrt{P}$$

where P is the rated power of the trasmitter in watt (W) according to the transmitter manufacturer.

TECHNICAL DATA EQUIPMENT

UNIT

MEDICAL DEVICE CLASS IIa By 93/42 EEC DIRECTIVE
Some of following operating instruments are part of unit's STANDARD configuration. When the unit is equipped with Electrobistury handpiece, it became by Class IIb, (as specified at clause 2.5, par 2 by enclosure IX of 93/42 ECC Directive).
ELECTRO MEDICAL EQUIPMENT CLASS I - TYPE B By CEI EN 60601-1 Standard
THE EQUIPMENT CANNOT BE USED WHEN FLAMMABLE ANESTHETIC MIXTURES CONTAINING AIR OR OXIGEN OR NITROUS OXIDE ARE PRESENT

DEGREE OF PROTECTION AGAINST WATER INFILTRATION:	**IPX0**
POWER SUPPLY	
MAXIMUM POWER INPUT (Unit+chair+suction system working together)	1450 VA
MAINS VOLTAGE	220/240 V~
SINGLE-PHASE A.C AT	50/60 Hz
INTERMITTENT OPERATION (Refer to the use specifications)	
WATER SUPPLY (See note in "TABLE OF EQUIPMENT CONFORMITY)	DRINKING WATER
PRESSURE	300 ÷ 500 kPa (3 ÷ 5 bar)
MAXIMUM CONSUMPTION	3 l/min at 450 kPa (4.5 bar)

Should the pressure be lower than 300 kPa (3 bars), install a device upstream from the dental unit to ensure the necessary pressure (autoclave).
Should the pressure exceed 500 kPa (5 bars), install a suitable pressure-reducing device upstream from the dental unit.
The water inlet MUST BE fitted with a cut-off valve.

AIR SUPPLY	
PRESSURE	550 ÷ 700 kPa (5,5 ÷ 7 bar)
CONSUMPTION	50 l/min at 400 kPa (4 bar)
VACUUM	
AIR FLOW RATE	≥300 l/min
VACUUM VALUE	≤ 10 kPa (0.1 bar)
UNIT WEIGHT	**90 kg**
UNIT + OPERATING LIGHT WEIGHT	**103 kg**
MAXIMUM WHOLE WEIGHT (Dental unit with chair, light, aspirator)	**258 kg**
ADDITIONAL WEIGHT ON THE INSTRUMENT TRAY OF THE DENTAL UNIT (with self-balancing of the arm):	**1 kg**
MAXIMUM ADDITIONAL WEIGHT ON THE INSTRUMENT TRAY OF THE DENTAL UNIT (w/o self-balancing of the arm):	**2 kg**

"THESI 2" / "THESI 2S" MOTOR CHAIR

MEDICAL DEVICE CLASS I - By 93/42 EEC DIRECTIVE
ELECTRO MEDICAL EQUIPMENT CLASS I TYPE B - By CEI EN 60601-1 Standard
THE EQUIPMENT CANNOT BE USED WHEN FLAMMABLE ANESTHETIC MIXTURES CONTAINING AIR OR OXIGEN OR NITROUS OXIDE ARE PRESENT

MAX. ABSORBED POWER	580 VA	
POWER SUPPLY VOLTAGE	220 V / 240 V~	
SINGLE-PHASE A.C. at	50/60 Hz	
POWER OF OPERATION COMMAND	24 V	
SINGLE-PHASE ELECTRIC MOTOR	220/240 V	
CONDENSER	20/16 µF	
INTERMITTENT OPERATION	1 min of work 14 min of rest	
WHOLE WEIGHT	135 kg	
HEIGHT FROM THE POINT OF SEAT	**"THESI 2"**	**"THESI 2/S"**
	min. 38 cm	min. 39 cm
	max. 78 cm	max. 79 cm
BACKREST HEIGHT FROM THE FLOOR	min. 43 cm	min. 41 cm
	max 83 cm	min. 81 cm
BACKREST SLIPPING STROKE	= 18 cm	
MAX LIFTING CAPABILITY	300 kg	
HYDRAULIC CIRCUIT MAX. WORKING PRESSURE	3500 kPa (35 bar)	
OIL FOR HYDRAULIC MOTION	**AGIP ARNICA 68** (950 g)	
WORKING POWER OF THE PNEUMATIC-VALVE	24 V	

PLEASE CHECK THE OIL LEVEL AT LEAST ONCE A YEAR AND REPLACE THE OIL AFTER EVERY 10 YEARS OF WORKING.

"MINITOM 2" ELECTROSURGERY

MEDICAL DEVICE CLASS IIb - By 93/42 ECC DIRECTIVE

ELECTRO MEDICAL EQUIPMENT CLASS I TYPE BF WITH HIGH FREQUENCY SECTION REFERED BY EARTH - By CEI EN 60601-1 Norms

THE EQUIPMENT CANNOT BE USED WHEN FLAMMABLE ANESTHETIC MIXTURES CONTAINING AIR OR OXIGEN OR NITROUS OXIDE ARE PRESENT

POWER SUPPLY (at the power feed)	32 V d.c
OUTPUT POWER	45 W ± 10%
LOAD IMPEDANCE	800 Ω (ohm)
WORKING FREQUENCY	500 kHz ± 10%
MAX PEAK NO-LOAD VOLTAGE	965 Vpp
PEAK VOLTAGE WITH LOAD OF 800 OHMS	530 Vpp
INTERMITTENT OPERATION	15 s of work 30 s of rest

"POLYLIGHT STERIL 2" - "POLYLIGHT STERIL 3" POLYMERIZING LAMP

MEDICAL DEVICE CLASS I - By 93/42 ECC DIRECTIVE

ELECTRO MEDICAL EQUIPMENT CLASS I TYPE B - By IEC CEI EN 60601-1 Norms

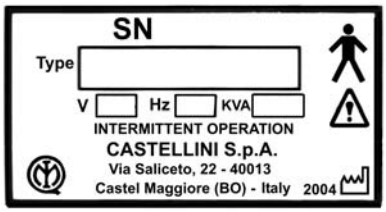
THE EQUIPMENT CANNOT BE USED WHEN FLAMMABLE ANESTHETIC MIXTURES CONTAINING AIR OR OXIGEN OR NITROUS OXIDE ARE PRESENT

	"POLYLIGHT STERIL 2"	**"POLYLIGHT STERIL 3"**
POWER SUPPLY VOLTAGE	8 V. d.c.	=
ABSORBED POWER	50 W	52 W
EMITTED BEAM WAVE LENGHT (range)	400 ÷ 515 nm	=
INTERMITTENT OPERATION	25 s of work	60 s of work
(each cycle)	60 s of rest	60 s of work
COOLING AIR PRESSURE	450 ± 10% kPa (4,5 ± 10% bar)	=

UNIT IDENTIFICATION LABEL

UNIT

Mark of Conformity to 93/42 ECC directive "MEDICAL DEVICE", equipped by correspondent number to the NOTIFIED ORGANIZATION (BSI - Notified Body number), authorized to issue the Conformity Certificate.



IDENTIFICATION LABEL

2004 **year of production (UNI EN 980)**
Through this number may be recognized the year and the month of production. The first two figures indicate the year other one letter indicated the month of production (for example 04A = January 04).

Mark released by the ISTITUTO ITALIANO MARCHIO DI QUALITA' to confirm that the unit complies with the CEI 601-1 Norms (General Norms for Safety in Electromedical Units).

SYMBOL CORRESPONDING TO PART APPLIED TYPE B As per CEI EN 60601-1:it indicates the degree of protection against direct and indirect contacts.

SN — **SERIAL NUMBER OF THE UNIT (UNI EN 980)**

TYPE — **COMMERCIAL DENOMINATION OF THE UNIT**

V — **CONNECTION VOLTAGE TO THE MAINS**

~ — **ALTERNATE CURRENT**

Hz — **MAINS FREQUENCY IN HERTZ**

kVA — **MAXIMUM POWER IN KILOVOLTAMPERE ABSORBED FROM THE UNIT**

Symbol to draw attention about further information written on use and maintenance handbook
In this case, there are specified work and rest times related at:
EQUIPMENT INTERMITTENT OPERATION

INTERM. OPERATION — **CONTINUOUS CONNECTION TO THE ELECTRICAL POWER SUPPLY WITH INTERMITTENT WORKING OF THE INDICATED PARTS** ***(according to the following user instructions):***

- TURBINE AND SCALER	20 min work 10 min rest	
	type "IMPLANTOR STERIL"	**type "IMPLANTOR 2LF"**
- MICROMOTORS	5 min work 20 min rest	5 min work 25 min rest
-- SYRINGE	10 s work 5 min rest	
	type "POLYLIGHT STERIL 2"	**type "POLYLIGHT STERIL 3"**
- POLYMERIZING LIGHTS	25 s work 60 s rest	60 s work 60 s rest
- ELECTROSURGERY	15 s work 30 s rest	
- ASPIRATOR (with working tips)	10 min work 20 min rest	
- "THESI 2" CHAIR	1 min work 14 min rest	

ELECTROSURGERY

CEI EN 60601-2-2

MARKING of the ITALIAN INSTITUTE FOR QUALITY MARKING. The marking certifies compliance with CEI EN 60601-2-2 standards (SPECIAL SAFETY STANDARDS FOR HIGH FREQUENCY ELECTROSURGERY EQUIPMENT).

CORRESPONDENT SYMBOL FOR EQUIPMENT TYPE BF.
(By CEI EN 60601-1 Norms)

POWER OUTPUT NOMINAL POWER (WATT)

LOAD LOAD RESISTANCE CORRISPONDENT TO THE INDICATED POWER

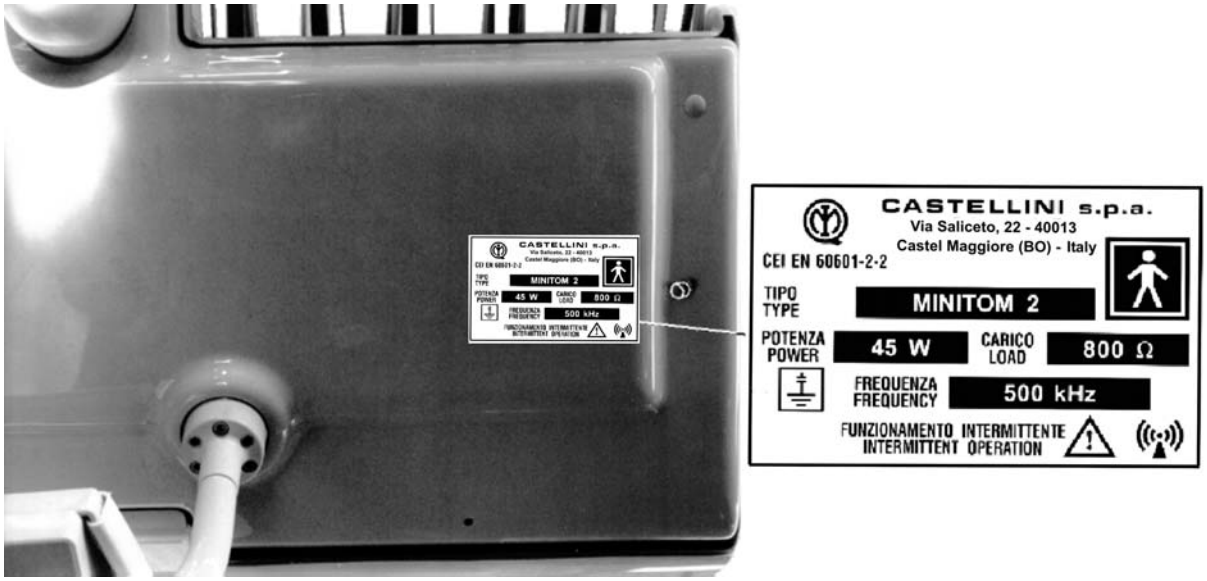
FREQUENCY NOMINAL FREQUENCY VALUE (MEGAHERTZ)

SYMBOL to indicate that the **HIGH FREQUENCY** part is refered by earth.

INTERM. OPERATION INTERMITTENT OPERATION (Refer to the use specifications)
15 s of work
30 s of rest

SYMBOL indicating the emission of non ionogenic radiation during operation of the equipment.

WARNING!: ELECTROSURGERY LABEL IS PLACED ON THE LOWER PART OF THE HOLDER INSTRUMENTS TABLE, NEAR THE PLUG FOR THE NEUTRAL ELECTRODE CONNECTION.



ATTENZIONE: NON STAZIONARE NELLA ZONA SOTTOSTANTE IL RIUNITO, durante l'uso della poltrona.

WARNING: DO NOT STAY IN THE AREA UNDER THE UNIT, during the use of the chair.

ATTENTION: NE PAS STATIONER DANS LA ZONE AU DESSOUS L'UNIT, pendant l'usage du fauteuil

ACHTUNG: KEINE GEGENSTÄNDE UNTER DIE ANLAGE STELLEN, während der Behandlungsstuhl arbeitet.

ATENCION: NO POSICIONAR NINGUN OBJETO BAJO EL EQUIPO, durante el uso del sillon.

ATTENZIONE: NON APPOGGIARE LE MANI, durante l'uso della poltrona.

WARNING: DO NOT LAY YOUR HANDS, while chair is in use.

ATTENTION: NE PAS APPUYER LES MAINS, pendant l'employ du fauteuil.

ACHTUNG: WÄHREND DES BETRIEBS DES STUHLS LEGEN SIE NICHT DIE HÄNDE.

ATENCION: NO APOYAR LAS MANOS, durante el uso del sillon.

ATTENZIONE: DISPOSITIVO DI SICUREZZA ANTI-SCHIACCIAMENTO

WARNING: ANTI-CRUSHING SAFETY DEVICE

ATTENTION: DISPOSITIF DE SECURITE ANTI-ECRASEMENT

ACHTUNG: SICHERHEITSABSCHALTUNG

ATENCION: DISPOSITIVO DE SEGURIDAD ANTIATRAPE

In case of crushing danger, operate this device thus immediately stopping the seat down movement by automatically operating the upstroke movement for a few centimetres.

MEDICAL DEVICES APPLIES TO THE UNIT

The dental units "LOGOS Junior" may be completed with the following devices:
- "THESI 2 / THESI2S" dental CHAIR and derived models with zero control or with working programme (only on request):
- "LUNA" operating light.
- SURGICAL SUCTION single-surgery UNIJET model or, alternatively, setup for centralized suction systems:
  - Centralised liquid ring suction system;
  - "METASYS MULTISYSTEM" and "METASYS ECO" centralised surgical suction system with amalgam separator
  - "DÜRR VSA" model centralised surgical suction system.
- Suction cannulas: bearing EC mark of conformity with Dir. 93/42 EEC, sterilizable or disposable
  rigid mist cannula with 15.7 - 16.2 mm-diameter connector
  rigid blood/saliva ejector cannula with 10.7 - 11 mm-diameter connector
  flexible blood/saliva ejector cannula with 6.0 - 6.5 mm-diameter connection
- "PANORAMIC" type X-Ray viewer for x-ray film
- "ASSISTANT'S TRAY" unit from 4-WAY, including one of the following supplementary instruments, plus 2 suction tubes:
  - SYRINGE, MULTISTERIL 2 TITANIUMmodel;
  - CURING LAMP, "POLYLIGHT STERIL 2 model".
  - CURING LAMP, "POLYLIGHT STERIL 3 model".
- DENTIST TABLE with the following instruments (max. 6):

- ELECTROSURGERY model:	MINITOM 2	
- ABLATOR handpiece model:	PIEZOSTERIL 5; PIEZOLIGHT 5	 (alternatively)
- SYRINGE model:	MULTISTERIL 2 TITANIUM;	
- ELECTRIC MICROMOTOR model:	IMPLANTOR STERIL; IMPLANTOR LF STERIL IMPLANTOR 2LF	 (alternatively) (alternatively)
- TURBINE model:	HI-POWER 2 CERAMIC, TITANIUM GOLD 2 TITANIUM GOLD 2 Miniature	 (alternatively) (alternatively)
CURING LAMP model	POLYLIGHT STERIL 2 POLYLIGHT STERIL 3	 (alternatively)

CASTELLINI firm doesn't authorize the application of other devices unnamed in this list.

UNIT OPERATION

MAIN SWITCH

The unit is provided with a combined main switch, positioned in the lower part of the chair (Pict. 4 - part. **6.1**), which activates or disactivates au together (position I or position 0 of the lever) the electric supply, the water supply and the compressed air supply, which are all necessary to operate the wait.

You are advised to turn off the about said main switch every day, before waging the office or before any break during the working hours.

You are advised to turn off the main switch before each technical repair or maintenance that requires the access to the inner parts of the units protected by covers.

The Castellini S.p.A. Company is not responsible for any damages to person or things, caused by the failure to performe the operation above described.

CONTROLS

The controls panel on the doctor's table has direct controls described in pictures 2B.
The controls panel on the assistant's table has direct controls described in pictures 3A.
The controls panel for AUTOSTERIL/TIME FLUSHING System has direct controls described in pictures 7.
The foot controls are described on the pages: "FOOT CONTROLS FUNCTIONS", other controls are indicated at the Cpt. "FOOT CONTROL FUNCTIONS"

OPERATIVE INSTRUMENTS

The operative instruments must be activated through the foot control (see "FOOT PEDAL FUNCTIONS").
All op. instrum. fonctionning parameters are visualized on LCD display on the doctor's control panel (see Cpt. "OP. INSTRUMENTS MENU"

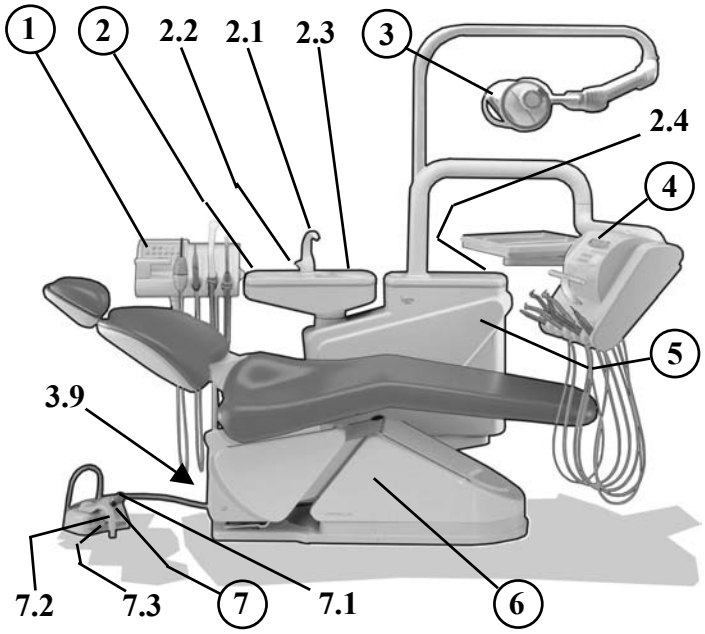
WARNING:

- **Before activate the op. instrum. by foot, it's necessary to verify that the Menu visualized on the display, is in conformity with the used handpiece**
- **The mouvements of the instruments table,of the assistant table, and of the light must bedone using the handles on the tables and on the light**

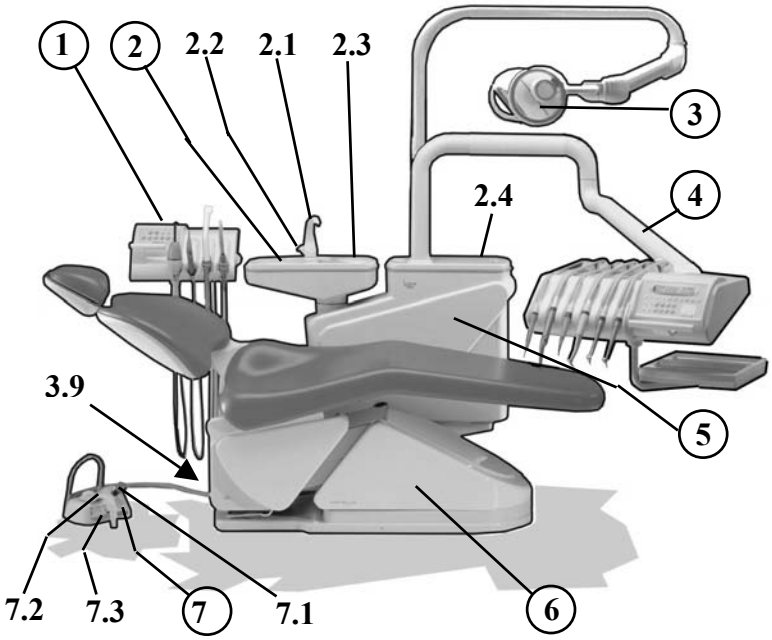
PICTURES AND DESCRIPTIONS

"LOGOS Junior" Unit (Dentist table with HANGING CORDS and S.P.R.I.D.O.) (Picts 1 and 1A)

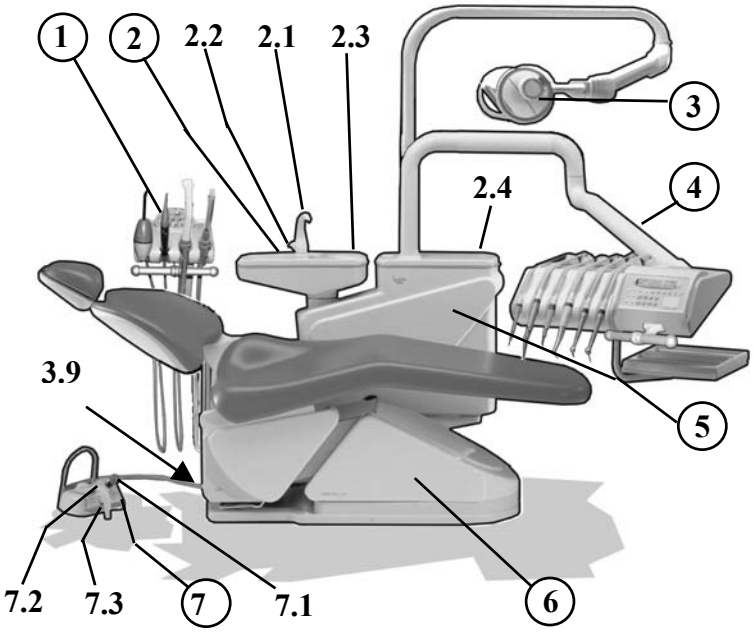
1 - ASSISTANT'S TRAY.
2 - WATER UNIT.
2.1 - Water jet to glass.
2.2 - Water fountain to bowl.
2.3 - Instrument receptacles for AUTOSTERIL cycles
2.4 - AUTOSYTERIL controls
3 - LUNA OPERATING LAMP.
3.9 - Suction stop control on chair base (only on request)
4 - DENTIST'S TRAY
5 - DENTAL UNIT BODY
6 - THESI 2 DENTAL PATIENT'S CHAIR
7 - FOOT CONTROL.
7.1 - Chair movement controls (up/down, backrest down/up).
7.2 - Control to start and adjust operating instruments
7.3 - Control to turn on operating instrument SPRAY and electrosurgery control



Pict. 1



Pict. 1A



DENTIST TABLE (Picts. 2 and 2A)

4.1 - Turbine.
4.2 - Electric micromotor.
4.3 - Electric micromotor.
4.4 - Syringe.
4.5 - Ablator handpiece.
4.6 - Electrosurgery.
4.7 - LCD Display.

CONTROL PANEL


____4.11 - Chair up control / Position 1 recall control.


____4.12 - Chair down control / Position 2 recall control.


____4.13 - Backrest up control / Position 3 recall control.


____4.14 - Backrest down control / Position 4 recall control.


____4.15 - Automatic reset direct control.


____4.16 - Rinse position recall direct control.


____4.17 - Stop all chair movements / Programmed position recall control.


____4.18 - Program memory


____4.19 - Control for water to glass/bowl.


____4.20 - X-Ray viewer lighting control.


____4.21 - Operating lamp control
Press once: to turn on at max intensity
Press again: to shift to medium intensity
Press again: to turn off


____4.22 - Cursor control for displaying parameters.


____4.23 - Control for adjusting displayed parameters to higher settings.


____4.24 - Control for adjusting displayed parameters to lower settings.


____4.25 - Control for enabling separate supply to instrument sprays.

____4.26 - Control for turning on the heater to supply warm water to the cup and syringe.

____4.27 - Control for heating the air syringe.


____4.28 - Control for enabling / disabling the spray air supply to turbines and handpieces.

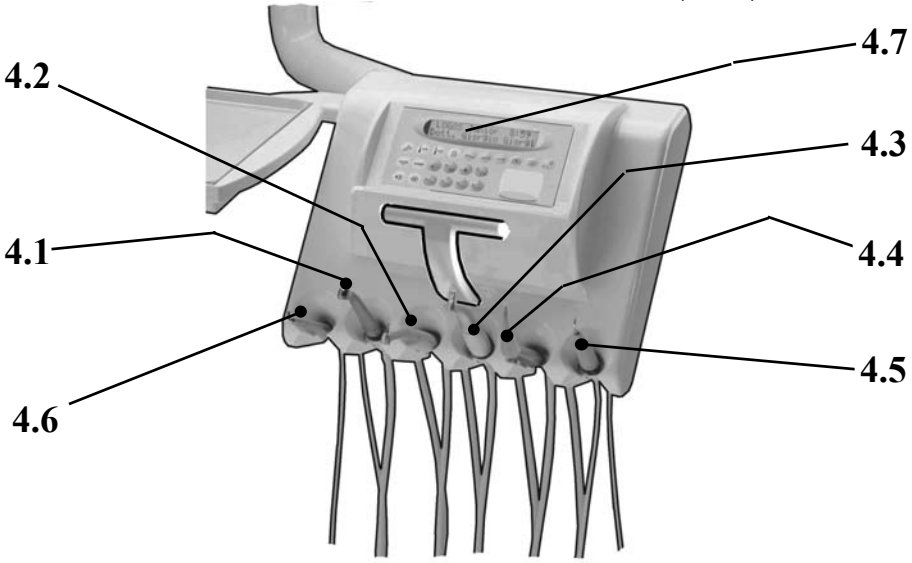

____4.29 - Control for releasing the tray handles.

____4.30 - ENDO control for scaler.

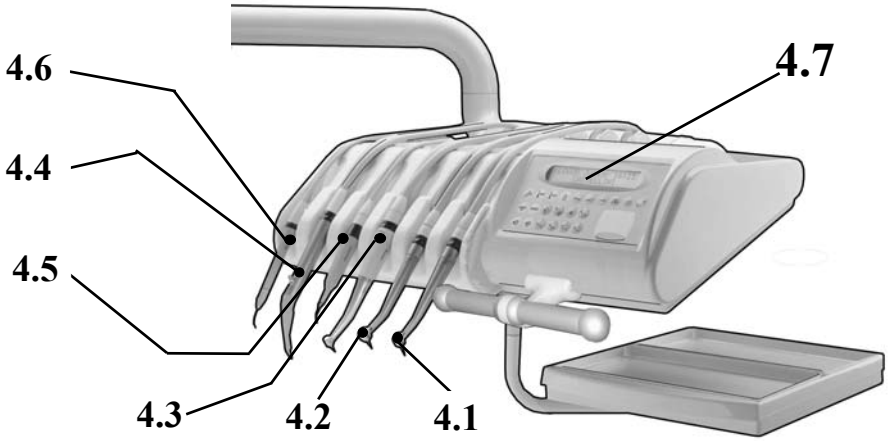

____4.31 - Buzzer control.

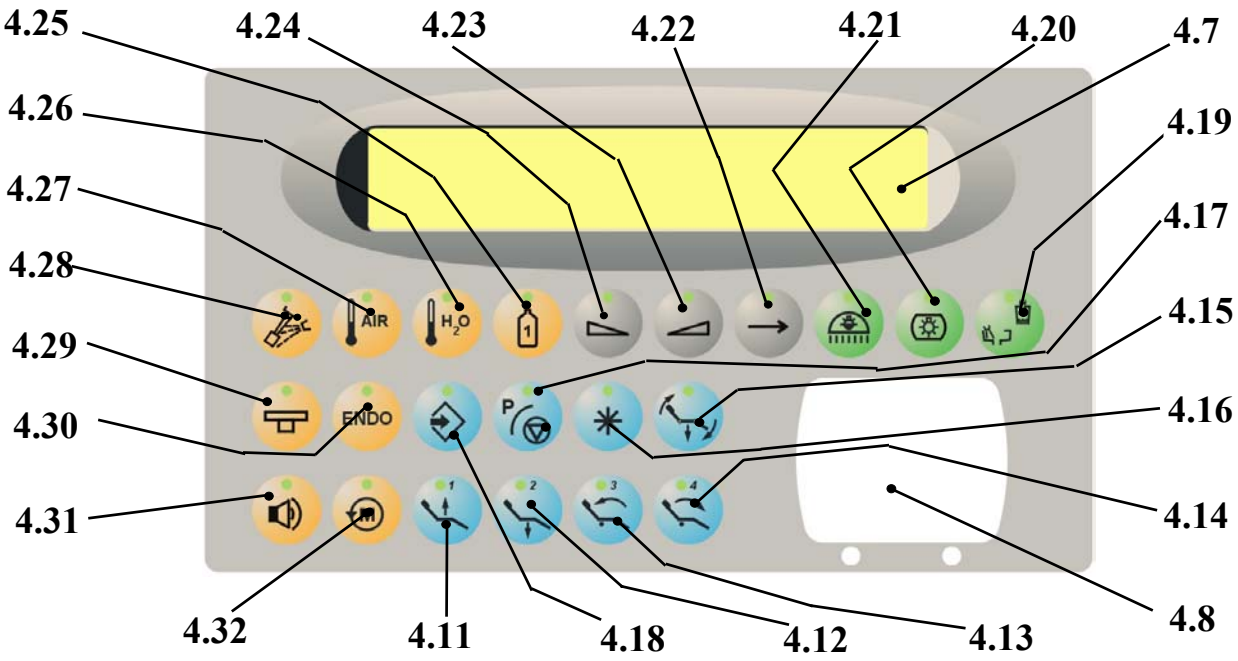

____4.32 - Electric micromotor reverse-speed control.

DENTIST TABLE with HANGING CORDS (Pict. 2)



DENTIST TABLE with HANGING CORDS (Pict. 2)





Pict. 2B

ASSISTANT'S TRAY (Pict. 3)

1.1 - Curing lamp.
1.2 - Supplementary syringe.
1.3 - Mist suction cannula.
1.4 - Saliva suction cannula.
1.5 - Suction filter.


____4.11 - Chair up control / Position 1 recall control.


____4.12 - Chair down control / Position 2 recall control.


____4.13 - Backrest up control / Position 3 recall control.


____4.14 - Backrest down control / Position 4 recall control.


____4.15 - Automatic reset direct control.


____4.16 - Rinse position recall direct control.


____4.17 - Stop all chair movements / Programmed position recall control.

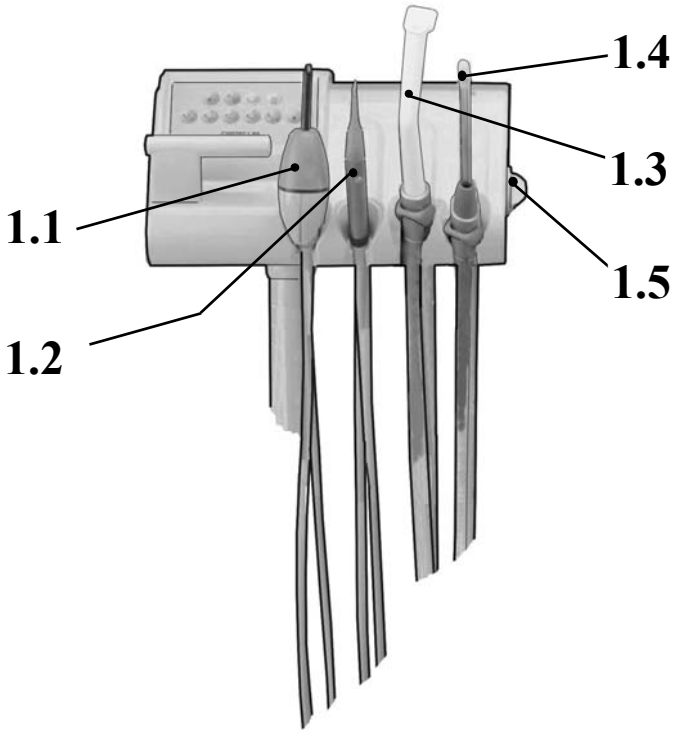

____4.18 - Program memory.


____4.33 - Control for water to glass.


____4.34 - Control for water to bowl.

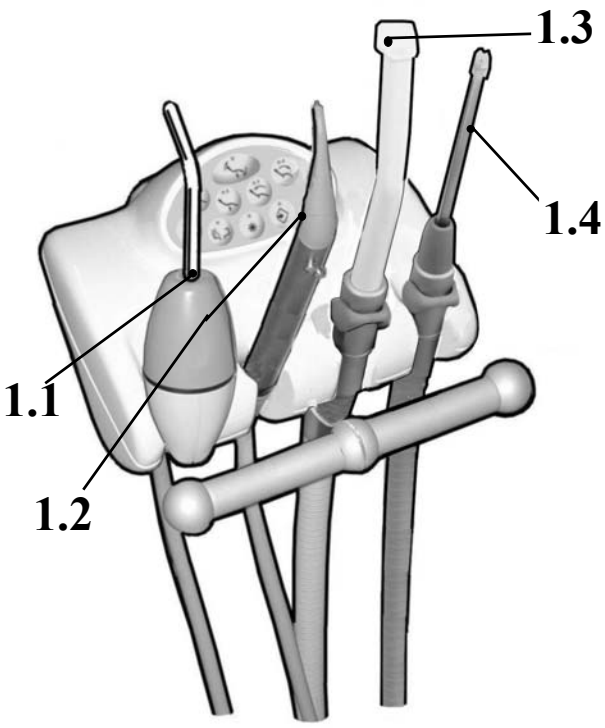
ATTENTION:
BEFORE PUTTING IN ACTIVITY THE MANUAL AR AUTOMATIC CONTROL OF THE CHAIR, BE SURE THAT THE ASSISTANT TABLE IS POSITIONED IN SUCH A WAY THAT IT IS NOT AN OBSTACLLE FOR THE NOUVEMENTS OF THE BACHREST.

"S-TYPE" ASSISTANT TABLE (Pict. 3)

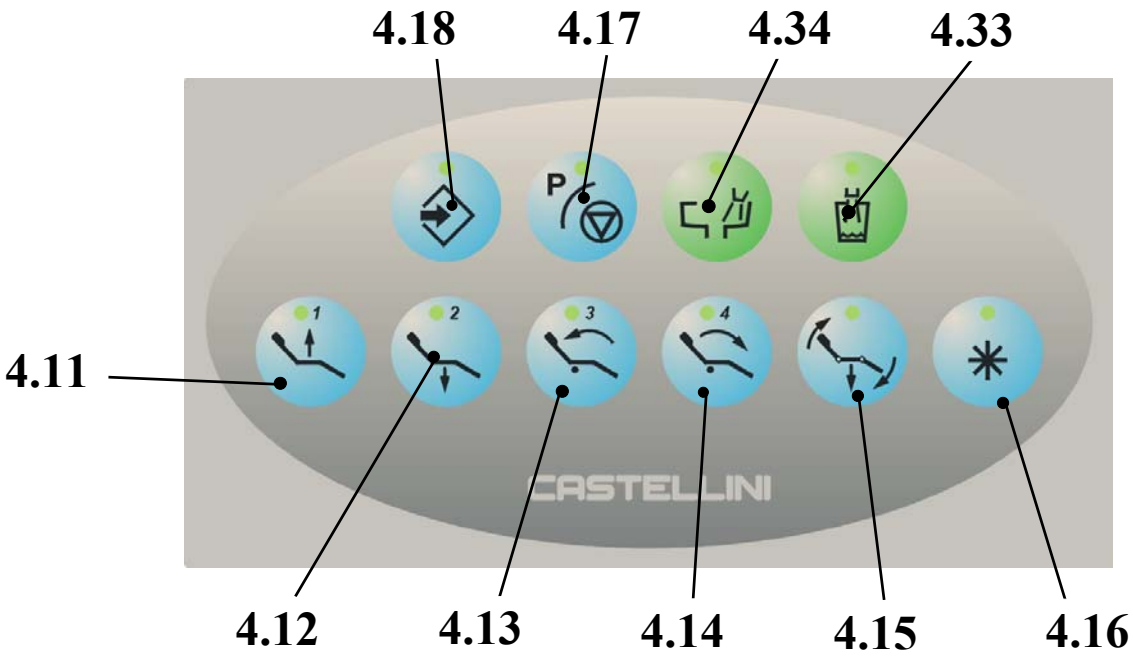


Pict 3

ASSISTANT TABLE (Pict. 3B)



Pict. 3A



Pict. 3A

DENTIST'S INSTRUMENT TRAY CONTROL PANEL

These controls allow the user to change the functional parameters shown on the DISPLAY either when the dental unit is on STAND-BY and the instruments are idle (see chap. FUNCTIONS ADJUSTABLE WITH THE DENTAL UNIT ON STAND-BY) or the instruments are extracted (see chap. on INSTRUMENTS MENU).

The "cursor" control shows the adjustable parameters on the DISPLAY. The cursor moves from bottom to top, proceeding in an anticlockwise direction.

These controls respectively decrease and increase the values of parameters.
If the above controls are left untouched for a few seconds, the system will reset itself and the last setting made will remain memorised.

FUNCTIONS ADJUSTABLE WITH THE DENTAL UNIT ON STAND-BY

- SETTING THE CLOCK (Pict. A)

- Press the control to shift the cursor onto the MINUTES and/or HOUR digits
- Press one of the controls to change the digits
- Press the cursor control again to exit the adjusted field or wait a few seconds until the new settings are automatically memorised

- SELECTING THE MENU LANGUAGE – (Pict. B)

- Press the cursor control until the currently set language appears on the DISPLAY
- Press one of the controls to select a new language setting

- ENTERING THE NAME OF THE EQUIPMENT OWNER (Pict. C)

To memorise the name of the equipment owner and display it in place of the name CASTELLINI, proceed as follows:

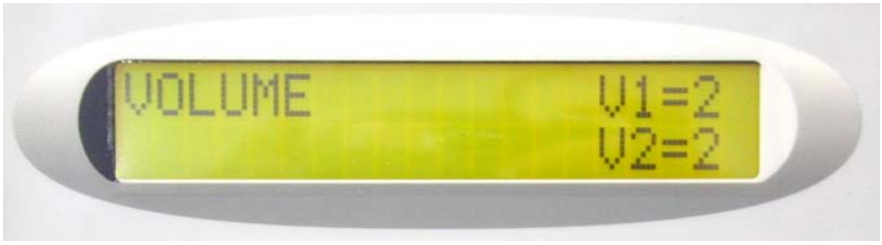
- Press the control to shift the cursor onto the DISPLAY field containing the name CASTELLINI and to move to each letter to be entered in succession.
- Press one of the two controls to enter the new string with the name to be memorised, using the characters listed in the table (C1)

Logos Junior Character Font															
	!	"	#	$	%	&	'	(	)	*	+	,	-	.	/
0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
P	Q	R	S	T	U	V	W	X	Y	Z	[	¥	]	^	_
'	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
p	q	r	s	t	u	v	w	x	y	z	{	|	}	→	←

 - Control for selecting the characters along the rows of the table from left to right.

 - Control for selecting the characters from right to left

ADJUSTING THE BUZZER VOLUME – (Pict. D)



 - Press the control to display the VOLUME menu

  - Press one of the two controls to adjust the volume of the controls/functions buzzer from 0 to 5 (V2)

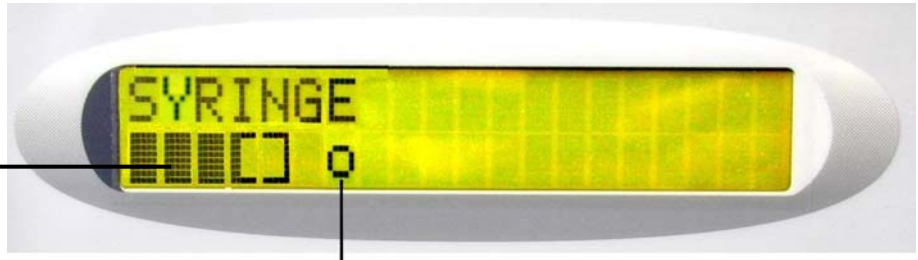
 - Press the control to shift the cursor onto V1

 - Press one of the two controls to adjust the volume of the electrosurgical instrument buzzer from 1 to 5

OPERATING INSTRUMENTS MENU

The adjustable parameters of each operating instrument installed in the DENTIST'S tray (excluding the instruments in the assistant's tray) are shown on the DISPLAY and can be changed only when the instrument is extracted.
If the controls providing access to the parameters and the parameter adjustment controls are left untouched for a few seconds, the activated control will reset itself and the last setting made will remain memorised.

- SYRINGE MENU (Pict. E)



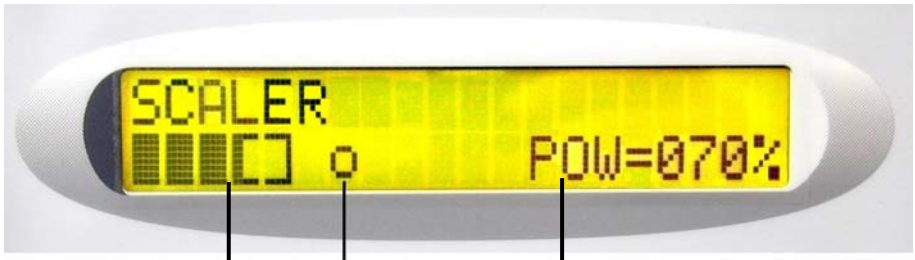
AIR HEATING TEMPERATURE SETTING

ENABLING FIBRE OPTIC LIGHTING

Enabling Fibre Optic lighting (active only for MULTISTERIL 2 TITANIUM L)

- Press one of the controls to enable the lighting (**Ö**), press again to disable (**O**)

- SCALER MENU (Pict. F)



LEVEL OF POWER ACTIVATED BY THE FOOT CONTROLS

ENABLING FIBRE OPTIC LIGHTING

DISPLAYING PRESET MAX POWER (%)

Presetting power from 0.01 to 100% (POW)

- Press the control to increase

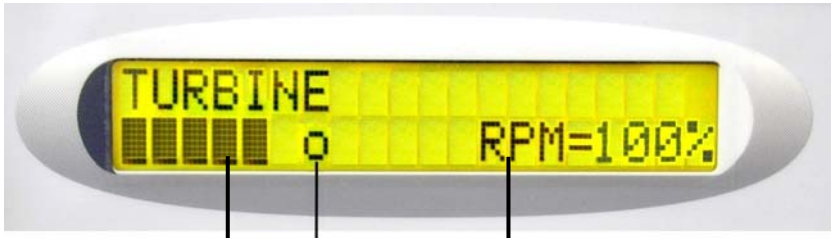
- Press the control to decrease

Enabling Fibre Optic lighting (active only for Piezolight Steril)

- Press the control to shift the cursor onto (**O**)

- Press one of the controls to enable the Fibre Optic lighting (**Ö**); press again to disable

- TURBINE MENU – (Pict. G)



SPEED REGULATED BY THE FOOT CONTROLS

DISPLAYING THE SPEED REGULATED BY THE FOOT

ENABLING FIBRE OPTIC LIGHTING

Enabling Fibre Optic lighting

- Press one of the controls to enable the Fibre Optic lighting (Ö); press again to disable

- ELECTRIC MICROMOTOR MENU – (Pict. H)

RPM REDUCTION RATIO

PRESET MAX TORQUE (%)

SPEED REGULATED BY THE FOOT CONTROLS

DISPLAYING PRESET MAX SPEED (IN RPM)

ENABLING FIBRE OPTIC LIGHTING

Presetting max speed from 200 to 40,000 RPM

- Press the control to increase the speed setting

- Press the control to decrease the speed setting

Presetting max torque from 20 to 100%

- Press the control to shift the cursor onto T

- Press the control to increase the % value

- Press the control to decrease the % value

Setting the handpiece rpm reduction ratios

- Press the control to shift cursor onto the currently set rpm reduction ratio

- Press the control to increase the setting, selecting from one of the following programmed values: 1:1 – 1:2 – 1:3 – 1:4 – 1:4.5 – 1:5 – 1:5.7 – 1000:1 – 260:1 – 120:1 – 60:1 – 40:1 – 30:1 – 20:1 – 16:1 – 10:1 – 8:1 – 7.4:1- 5.4:1 – 4:1 – 2.5:1 – 2:1.

- Press the control to decrease the setting

Enabling Fibre Optic Lighting (Active Only for Implantor L Steril and Implantor LF Steril)

- Press the control to shift the cursor onto (O)

- Press one of the controls to enable the Fibre Optic lighting (Ö), press again to disable

- "IMPLANTOR 2LF" ELECTRIC LOW-SPEED MOTOR MENU – (Figs. M – N – O)

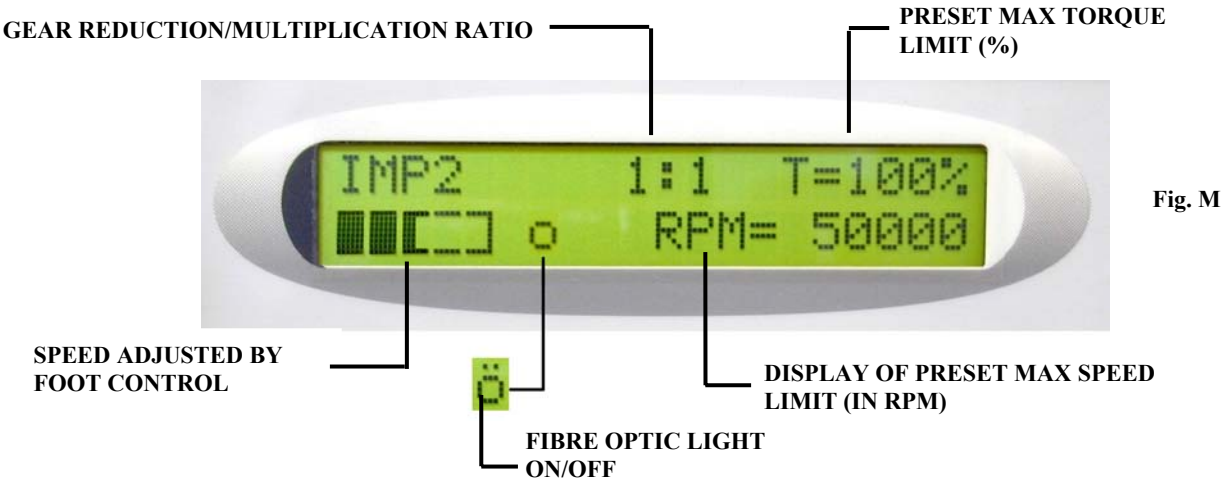


Fig. M

Micro motor operation in standard mode

When you take the handpiece, a menu will appear indicating IMP2 (see Pict. M).
Presetting the speed limit between 200 and 50,000 RPM

- Press the control to increase the speed setting
- Press the control to decrease the speed setting

The handpiece torque limit may be preset to a value between 1% and 100 %; to adjust the setting proceed as follows:

- Press the control to move the cursor to **T**
- Press the control to increase the **%** value
- Press the control to decrease the **%** value

Setting the handpiece gear reduction/multiplication ratio

- Press the control until the cursor moves to the set handpiece reduction ratio
- Press the control to increase the setting according to the values shown in the table
- Press the control to decrease the values

When you change the handpiece gear reduction/multiplication ratio the displayed speed (RPM) will change accordingly, in proportion to the reduction/multiplication ratio chosen.

When the selected reduction/multiplication ratios fall in the range between 1:5 and 75EKM the number of revolutions on the motor shaft will not change.

Selected gear ratio	LCD indication **(RPM)** MAX
1000:1	**25**
260:1	**96**
120:1	**208**
60:1	**416**
40:1	**625**
30:1	**833**
75EKM (20:1)	**2500**
20:1	**2500**
16:1	**3125**
10:1	**5000**
8:1	**6250**
7:1	**7142**
6:1	**8333**
5:1	**10000**
4:1	**12500**
2:1	**25000**
1:1	**50000**
1:2	**100000**
1:3	**150000**
1:4	**200000**
1:5	**250000**

N.B.: WHEN THE REDUCTION RATIO IS SET IN THE RANGE BETWEEN 30:1 AND 1000:1 THE NUMBER OF REVOLUTIONS ON THE MOTOR SHAFT WILL AUTOMATICALLY BE REDUCED BY 50% (RPM = 25000 MAX)

Low-speed motor operation with W&H handpiece model WS-75E/KM (torque reading in Ncm)

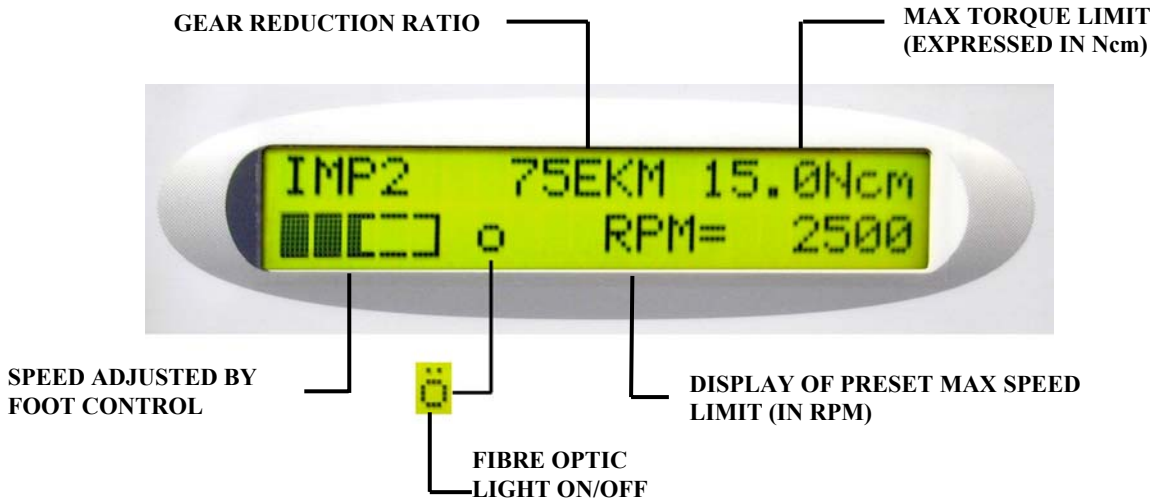


Fig. N

When you use the W&H handpiece model WS-75E/KM you can select the option **75EKM** and obtain a torque reading in Ncm rather than in % (see figure N).
The indication of the maximum torques actually deliverable by the low-speed motor can be changed by directly adjusting the value indicated on the display. Proceed as follows:

- Press the control to move the cursor to **Ncm**
- Press the control to increase the max torque (expressed in Ncm)
- Press the control to decrease the max torque

The max torque limits can also be changed by adjusting the max speed settings.

Switching the fibre optic light on and off

- Press the control until the cursor moves to (**O**)
- Press one of the fibre optic ON/OFF controls (**Ö**), press again to switch off

Micro motor operation in the ENDO mode (Pict. O)

Operation in the **ENDO** mode must be enabled via the specific control provided on the main instrument tray panel since the function is not normally active. After picking up the handpiece, proceed as follows:

- Press the **ENDO** control to access the micro motor operating modes

A menu will appear indicating **ENDO** (see Pict. O).

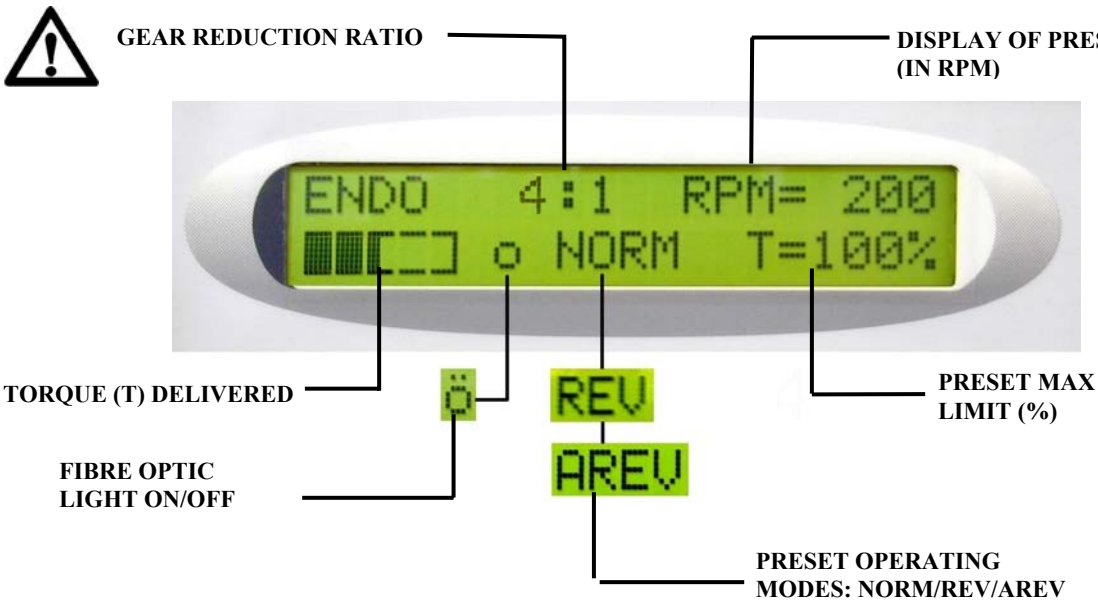


Fig. O

Activation of the instrument occurs when the lever is about halfway along its travel range. The max rotation speed of the burr is 600 RPM. The max torque on the activated instrument will automatically be limited to obtain about 5Ncm (T = 100%).
To change the set parameters proceed as follows:

Presetting the torque limit (T)

- Press the control to increase the **%** value
- Press the control to decrease the **%** value

N.B.: When the micro motor is working in the ENDO mode, a warning signal will be emitted every time the torque approaches the maximum limit set by the operator.

Presetting the max burr speed (150 - 600 rpm)

- Press the control to move the cursor to RPM
- Press the control to increase the speed setting
- Press the control to decrease the speed setting

Setting the handpiece reduction ratio

- Press the control until the cursor moves to the set handpiece reduction ratio
- Press the control to change the programmed values: (**4:1** and **16:1**).

When you change the handpiece reduction ratio (4:1 - 16:1) the set speed limit (RPM) will not change, whereas the micro motor speed will be changed automatically.

N.B.: Always check the compatibility between the handpiece used and the set gear reduction ratio.

Switching the fibre optic light on and off

- Press the control until the cursor moves to (**O**)
- Press one of the fibre optic ON/OFF controls (**Ö**), press again to switch off

3 different modes are available when the micro motor is operating in **ENDO**: **NORM/REV/AREV**. To select them, proceed as follows:

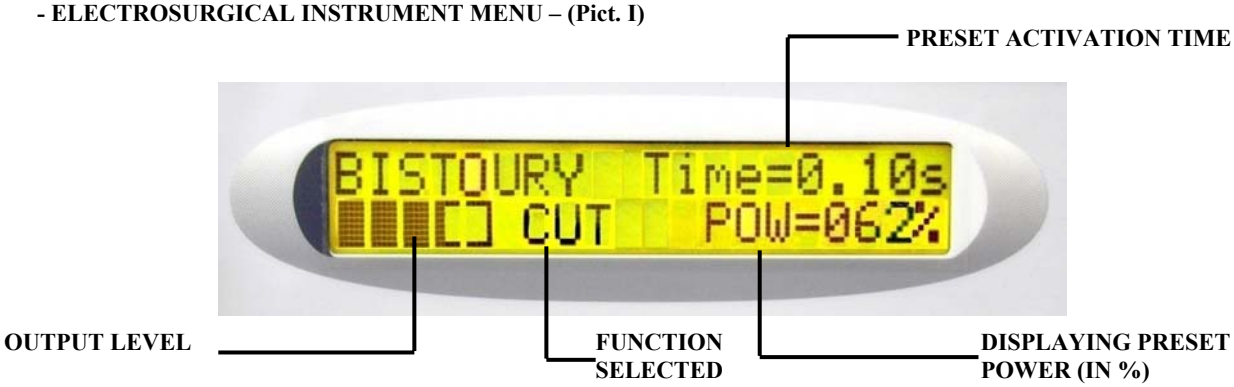
- Press the control until the cursor moves to the set operating mode
- Press the control to change the set operating mode, according to the sequence: **NORM**, **REV** and **AREV**

NORMAL mode: (NORM) **on reaching the set torque limit, the micro motor will stop if the max torque is maintained for over a second. To restart it, release the foot control lever and press it again.**

REVERSE mode: (REV) **on reaching the set torque limit, the micro motor will reverse the direction of rotation for about 1 second and then stop. To restart it, release the foot control and press it again.**

AUTOREVERSE mode: (AREV) **on reaching the set torque limit, the micro motor will reverse the direction of rotation for about 1 second and then again start turning in the original direction, repeating the same cycle until reaching the maximum torque. To stop the motor, release the foot control.**

- ELECTROSURGICAL INSTRUMENT MENU – (Pict. I)



Presetting max. output (POW) from 0.01 to 100%

- Press the control to increase the % value
- Press the control to decrease the % value

Setting the Timer (TIME)

- Press the control to shift the cursor onto TIME
- Press the control to increase the time setting (range from 0.01 to 9.99 s) and to enable timed operation (Time = 0.01s)
- Press the control to decrease the time setting and disable timed operation (Time = ----)

Selecting functions (CUT – BLEND – COAG)

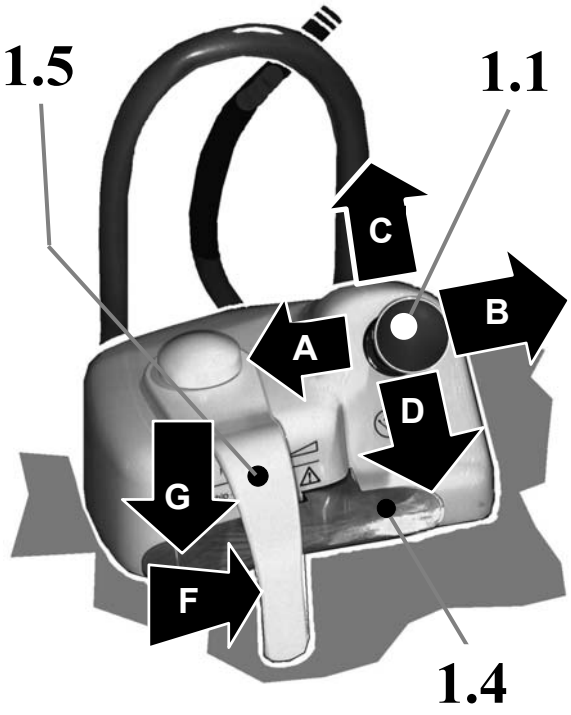
.- Press the control to shift the cursor onto the currently set function

- Press one of the controls to select one of the available functions (CUT – BLEND – COAG)

CURING LAMP MENU – (ONLY FOR POLYLIGHT STERIL 2) (Pict. L)

Setting the operating time (Time)

- Press the control to increase the operating time from 1 to 60 s
- Press the control to decrease the operating time



FUNCTIONS OF PEDAL BOARD

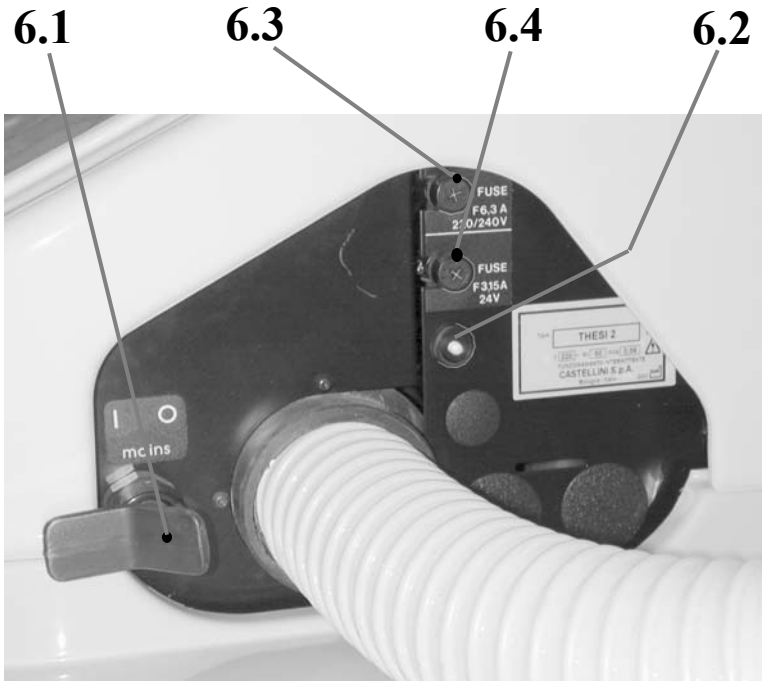
CHAIR CONTROLS

Move the lever control (**1.1**) in the direction marked with **C** in the figure to lift the chair seat and in the opposite direction to lower it.
Turn the control knob (**1.1**) in the direction marked with **A** to lower the back and in the opposite direction, marked with **B**, to return to its upright position.

INSTRUMENTATION CONTROLS

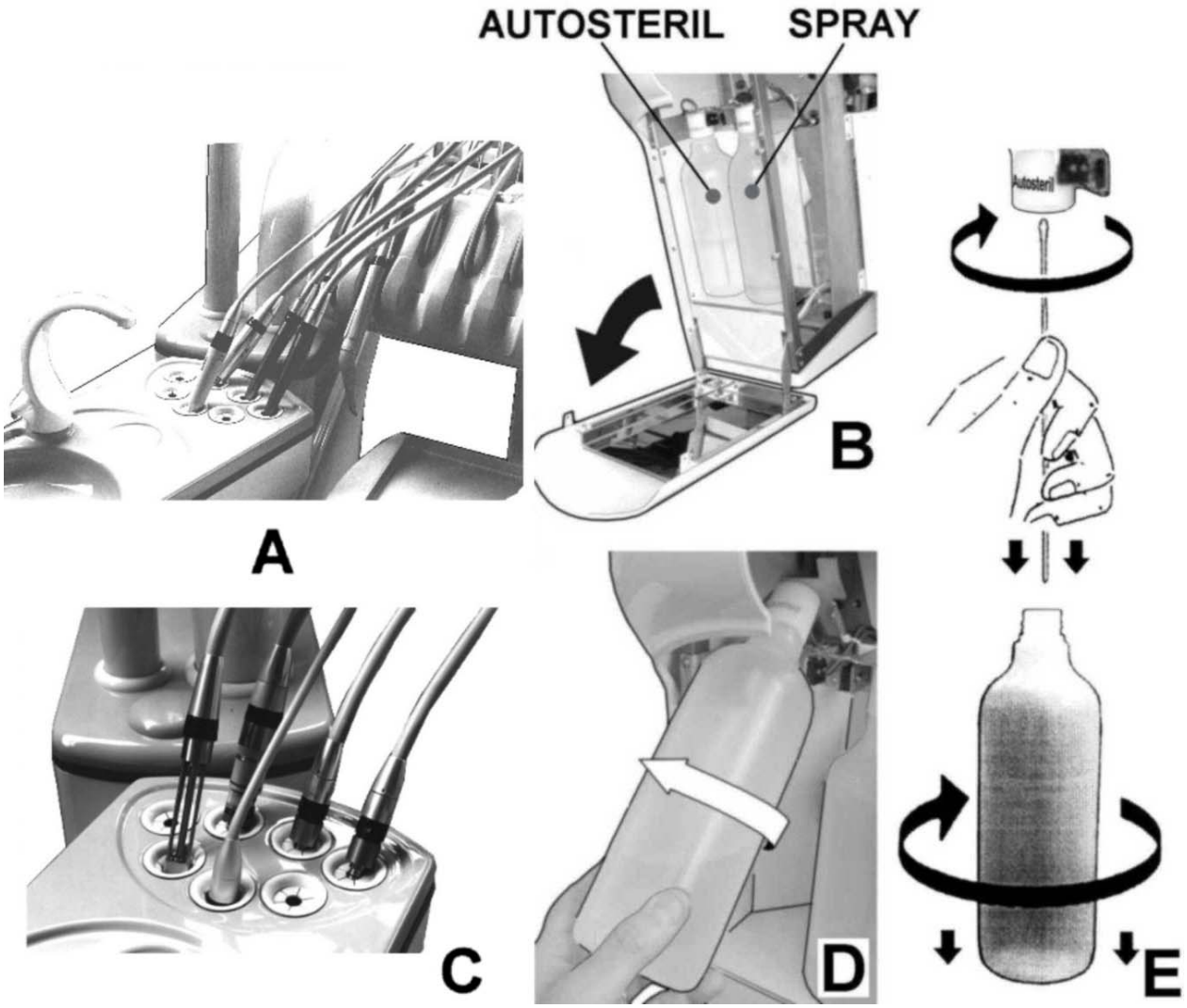
After extracting an instrument from the handpiece holder of the tray and turning the pedal (**1.5**) in the direction marked with **F**, it is possible to perform the functions described here below:
- control and adjust the turbine or (air-driven or electric) micromotor speed;
- control the scaler handpiece.

Press the lever switch (**1.4**) in the direction indicated by arrow **G** to direct the spray on the handpieces. This feature can be used only in combination with the pedal (**1.5**).
CASTELLINI recommends the use of the spray when the micromotors are operated at a rotating speed above 20,000 rpm.
Press the lever switch (**1.4**) in the direction marked with **G** without moving the pedal (**1.5**) to enable the **CHIP-AIR** feature (ejection of an air jet from the turbine or micromotor to clean the operating area).
After the electrosurgical handpiece is extracted, pressing the lever (**1.4**) on its own will activate the handpiece according to the currently set parameters, as shown on the DISPLAY.
Caution! If the external cover of the pedal board and/or of the control elements is visibly damaged, don't use the equipment and contact the authorised service centre.

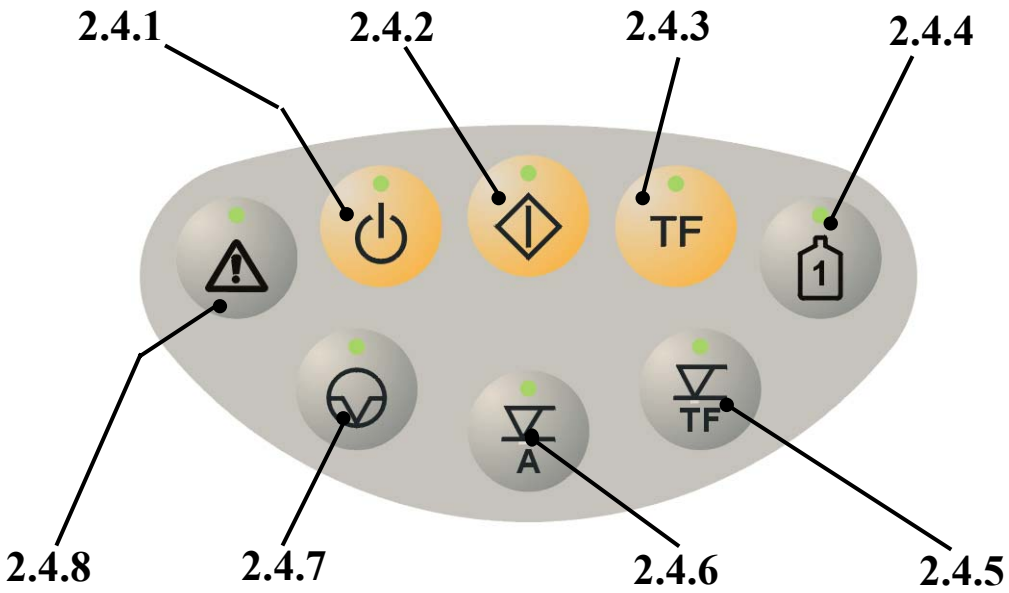


CONNECTION BOX (Pict.4)

6.1 - Main switch.
6.2 - ON lamp.
6.3 - F 6.3 A - 220 / 240 V power supply line fuse.
6.4 - F 3.15 A - 24 V chair power circuit fuse.



Pict. 6



AUTOSTERIL/TIME FLUSHING CONTROL PANEL (Pict. 7)

2.4.1 - Control for placing system on STAND-BY and green indicator LED / Break switch control of the pause-contact.

2.4.2 - Control for starting AUTOSTERIL system and green indicator LED.

2.4.3 - Control for starting TIME-FLUSHING system and green indicator LED (T.F.).

2.4.4 - Green LED indicating that the bottle is selected for TIME FLUSHING and for the Autosteril rinse with a specific rinsing agent or for instrument SPRAYS with a separate liquid as an alternative to mains water.
When the LED is off, it means that mains water has been selected for TIME-FLUSHING, AUTOSTERIL RINSE, instrument SPRAYS).

2.4.5 - LED warning that the level of liquid for TIME-FLUSHING, AUTOSTERIL RINSE and instrument SPRAYS is low.

2.4.6 - LED warning that the level of the AUTOSTERIL liquid is low.

2.4.7 - LED indicating that the AUTOSTERIL system is on pause.

2.4.8 - LED warning of faults in the water circuit.

IMPORTANT:
If the dental unit is shut down while an AUTOSTERIL/TIME FLUSHING cycle is in progress, when the unit is switched back on, the system will completely repeat the phase of the cycle it was carrying out.

AUTOSTERIL and TIME FLUSHING

* **AUTOSTERIL: system for decontaminating** dental unit waterlines with a timed flow of liquid containing a chemical agent that kills spores, viruses, fungi and bacteria, programmed contact time and rinse with mains water or dedicated liquid supplied from an independent reservoir.
  The result varies according to the length of exposure and the product used and is achieved at the end of the contact time. The final rinse removes product residues and leaves the last rinse liquid in the waterlines.
* **TIME-FLUSHING: sanitization** of dental unit waterlines with a system that flushes out the waterlines with the liquid selected for the instrument sprays (mains water or dedicated liquid supplied separately)

AUTOSTERIL and TIME FLUSHING are not designed to deliver liquids during treatment on patients. The cycles must be run while the equipment is not in use.
The section entitled "Products to be used with Castellini Dental Units" indicates the specific disinfectant product to be used for Autosteril cycles and the dedicated liquids for the Separate Supply system.

CAUTION:
Always check what kind of liquid is contained in the tank,
both before carrying out decontamination cycles and resuming normal use

PREPARATION
Before carrying out Autosteril or Time-Flushing cycles:
- **Prepare the disinfectant solution** in tank n. 2 (AUTOSTERIL) (Pict. 6-B), following the manufacturer's directions. Then connect the tank to the fitting provided (Pict. 6-E)
- **select the liquid** for the Autosteril rinse or Time Flushing cycle with command **4.25** fig 2B (see. – "Separate Supply")
- disconnect the Turbine, Micromotor, Scaler handpieces and open the flow regulators in the tubing terminals all the way
- insert the tubing terminals in their receptacles in the water delivery unit (Pict. 6-A)

Note: the cycles may also be performed with the handpieces connected to the tubings, as long as care is taken to remove burrs, rotary instruments and Scaler tips before inserting to instruments in their receptacles.

1 - AUTOSTERIL (decontamination cycles with sporicidal virucidal disinfectant)

1a) Complete Treatment (automatic 13-minute cycle)
- first press the Autosteril button (**2.4.1** Pict. 7) and then the start button (**2.4.2** Pict. 7): make sure that liquid is discharged from the instruments.

The system automatically performs the phases in sequence: flow of disinfectant, period of contact (signalled throughout by an intermittent beep) and rinse with the liquid selected.
The beeper sounds when the cycle is over. Lubricate the high-speed handpieces and run them for a few instants.

1b) Rapid Treatment (7-minute semiautomatic cycle)
- follow the same steps as for a complete treatment
- after at least 5 minutes of contact (the period of contact is signalled by the lighting up of LED **2.4.2** and **2.4.7** and an intermittent beep) AGAIN PRESS the start the button (**2.4.2** Pict. 7): the system will proceed directly to the final rinse.

The beeper sounds when the cycle is over. Lubricate the high-speed handpieces and run them for a few instants.

2 - TIME-FLUSHING (rapid sanitization cycle with liquid used for instrument sprays)
Carry out the preparatory steps described above
- first press the Time-Flushing button (**2.4.1** Pict. 7) and then the start button (**2.4.3** Pict. 7). Make sure that liquid is discharged from the instruments.

The beeper sounds when the cycle is over.

3 - SIGNALS (Pict. 7)

- Systems on:		LED 2.4.1 lit
- Autosteril:	a) disinfectant being dispensed:	LED 2.4.2 flashes
	b) contact period:	LED 2.4.2 + 2.4.7 lit + intermittent beep throughout the contact period
	c) final rinse	LED 2.4.2 lit
- Time-Flushing in progress:		LED 2.4.3 flashes
- END OF CYCLES:		LED 2.4.1, 2.4.2, 2.4.3, 2.4.7 off + end of cycle signal (3 beeps)
- Level of Disinfectant in tank low:		LED 2.4.6 lit + sound warning
(the level sensor will prevent a new cycle from being carried out but will allow a cycle already in progress to be completed)		
- Selection of Separate Supply		LED 2.4.4 lit
- Level of dedicated Liquid in tank low		LED 2.4.5 lit + sound warning
(the level sensor will prevent a new cycle from being carried out but will allow a cycle already in progress to be completed)		
- Fault in water circuit		LED 2.4.1 and 2.4.2 lit, LED 2.4.8 flashes + intermittent sound warning.

SEPARATE SUPPLY SYSTEM

The dental unit may supply the dental instrument sprays from two different sources:
- normal supply with mains WATER, provided that it is supplied by a system guaranteeing the physical separation between the water supply and instrument supply lines, in conformity with standard CEI EN 1717
- Separate Supply from an independent tank, either sterilizable or disposable (Spray-tank Pict. 6);

the tank and intake tube (Pict. 6) may be removed and sterilized in an autoclave at 135 °C, 210 kPa (2.1 bars) for 20 minutes.
The tank is also used for Autosteril/Time Flushing cycles
For the separate supply, you may use a liquid poured into the tank provided or else Rinsing Agents in disposable containers which may be connected to the dental unit instead of the tank: Purified Water. or Isotonic Saline Solution.
Note: The Rinsing Agents allowed for use with the Separate Supply System are listed in the paragraph on "Products to be Used with the Castellini Dental Unit".

SELECTING THE SUPPLY SOURCE

The control for selecting the liquid supply source is located on the control panel on the Instrument Tray (Pict. 2B)
- Button **4.25** deactivated and LED off = mains water supply
- Button **4.25** activated and LED on = separate supply from independent tank

FILLING / REPLACING THE LIQUID IN THE TANK

Separate sterilizable, reusable tank
- button **4.25** deactivated
- disconnect the sterilizable tank from its screw coupling by turning it anti clockwise
- remove the intake tube by turning it anti clockwise;
- sterilize the tank and tube in an autoclave for 20 min at 135 °C - 210 kPa (2.1 bars)
- pour the liquid chosen into the sterilized tank
- wearing sterile gloves and avoiding all contact with surrounding surfaces, screw the sterilized tube back into place
- reconnect the tank, lifting it up around the intake tube, and screw it firmly into place.
- press button **4.25** (LED on) to select the dedicated liquid.
- Replace the bottle at least once in a year

AUTOCLAVEABLE BOTTLE
CODE N5000096

Disposable container of Rinsing Agent
- button **4.25** deactivated and LED off, to depressurise the circuit.
- disconnect the tank or empty disposable container by turning it anti clockwise
- remove the intake tube by turning it anti clockwise and sterilize it in an autoclave for 20 min at 135 °C - 210 kPa (2.1 bars)
- wearing sterile gloves and avoiding all contact with surrounding surfaces, screw the sterilized tube back into place
- open a new container of Rinsing Agent by removing the cap
- directly connect the container, lifting it up around the intake tube, and screw it firmly into place.
- press button **4.25** (LED on) to select the dedicated liquid.

PURIFIED WATER
1 Litre BOTTLE
CODE N500P064

SALINE SOLUTION
Litre BOTTLE 1
COD. N500P066

WARNING:
before using the spray on the patient, check the type of liquid contained in the tank

After using Physiological Solution or Isotonic Saline Solution, immediately rinse out the circuits with a simple flushing cycle (see Time-Flushing) or by running the sprays with tap water for a few seconds

Do not blend different products. Before pouring a new product into a tank:
- remove and rinse out the tank to eliminate residues of the previous product
- pour tap water into the tank and connect it back in place
- carry out a Autosteril/Time-Flushing cycle with the separate supply system (see paragraph on "Autosteril"/"Time Flushing") to rinse out the circuit
- remove and empty the tank, then fill it with the liquid chosen according to the directions provided.

Alternatively, use disposable containers of a Rinsing Agent.

SYSTEM STATUS SIGNALS (Pict. 7)

- System selection (from instrument tray): LED **2.4.4** steadily lit.
- Signal of tank (SPRAY) level low: LED **2.4.4** + LED **2.4.5** steadily lit + brief intermittent beeping (The "level low" signals will cease once the SPRAY tank has been refilled or replaced)


AUTOSTERIL 8:45
Stand-by

7.1


AUTOSTERIL
Ster4Spray

7.2


AUTOSTERIL 8:45
Pause

7.3


AUTOSTERIL 8:45
Timeflushing

7.4

SUCTION SYSTEMS (optional)

Type "S" Single-Surgery suction system
This type of suction system consists of a single-surgery suction motor set inside a box and a kit comprising the elements listed below, fitted onto a support to be positioned on the floor next to the chair base:
- Mini air/liquid separator complete with a drainage pump for continuous draining of the aspirated liquids.
- Control unit.
- Circuit for activating the suction motor.
- Casing to match the covering of the chair base.

Setup for type "C" centralised air suction system
This setup consists of a kit for connecting the dental unit to a centralised suction system; the kit comprises the elements listed below, fitted onto a support to be positioned on the floor next to the chair base:
- Mini air/liquid separator complete with a drainage pump for continuous draining of the aspirated liquids
- Control unit
- Electro-pneumatic valve for selecting the suction function

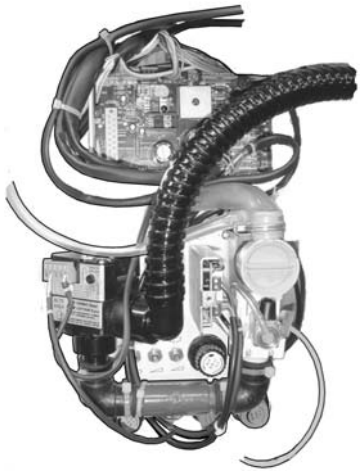
Suction system with amalgam separator
Using "METASYS" separators in single-surgery and centralized air and liquid-ring suction systems allows not only air/liquid separation but also the separation and collection of amalgam residues contained in the liquids.
The "METASYS ECO" system is a partial separator of solid amalgam residues contained only in the liquids aspirated through the suction tubes.
The "METASYS MULTI-SYSTEM" is a high-efficiency centrifugal amalgam separator, which separately treats the two types of waste discharged from the dental unit:
1) waste from the surgical suction system, consisting in little water (50 - 70 ml/min) with a high concentration of amalgam residues;
2) waste from the cuspidor, consisting in a higher flow of water (4 - 5 l/min) with a low concentration of amalgam residues.
The "METASYS MULTI-SYSTEM" ensures separation of up to 98% of the amalgam, in conformity with current international laws; there is no risk of the internal separators becoming clogged and the system requires minimal maintenance.
Both systems are supplied only on request, already installed inside the dental unit.

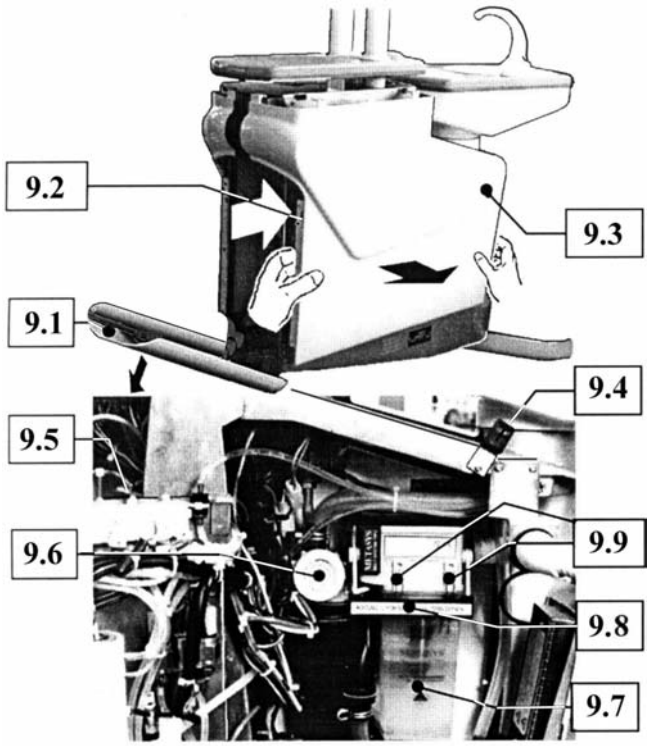
METASYS MULTISYSTEM

METASYS ECO

Setup for centralised suction system "DÜRR VSA"

This setup provides for the installation, within the dental unit itself, of a kit of components for connection to a single-surgery or centralised suction system; the kit comprises:
- Electro-pneumatic valve for selecting suction in the tubes.
- Collector for waste liquid from the cuspidor and cup; it has a solenoid valve for activating the suction system to evacuate the liquids themselves and a filter, accessible from the outside, for treating solid residues.





Pict. 9

ACCESS TO SUCTION SYSTEM SEPARATOR (Pict. 9)

1) Shut the dental unit off with the main switch (position **O**).
2) Open the hinged guard (**9.1**) by turning it downward as shown in the figure.
3) Unscrew the knob (**9.2**) and remove the cover (**9.3**), by grabbing it with both hands and pulling first with your left hand and then with your right, as shown in the figure.
4) Move the locking lever up (**9.4**) and then open the metal door (**9.5**).

ACCESS TO AMALGAM SEPARATOR
Carry out the steps described above.

CLEANING THE FILTER
Once a week:
- Wear gloves, a mask and an eye shield.
- unscrew the cap covering the filter (**9.6**)
- remove the filter tray and disinfect it by soaking it in Surgical Alcohol (see Products to Be Used with the Dental Unit)
- clean the filter using a brush with hard bristles
- fit the filter back in place and screw on the cap

Warning:
- do not dispose of waste in the public sewage system
- using the system without the filter may cause irreparable damage to the centrifuge

AMALGAM COLLECTOR
The amalgam collector (**9.7**) is disposable and must be replaced when full.
When the collector is full, the user will be warned by:
1st Sound signal (may be reset)**:** 90 % full
2nd Sound signal (permanent) 100 % full and **automatic disabling of surgical suction system**

REPLACING THE COLLECTOR:
- If the suction system is on (1st signal), clean the circuit with Ster 3 plus, following the directions on the package

Wear gloves, a mask and an eye shield
- prepare the new collector, the sealing lid and the container of disinfectant provided
- turn the handle (**9.8**) up
- slide the block outward until it may be completely removed
- release the fasteners (**9.6**) and remove the collector
- seal the collector with the lid provided
- connect the new collector to the block, with the writing on the front
- secure the collector with the fasteners (**9.6**)
- fit the collector block back in place
- turn the handgrip (**9.8**) down until the block is securely fastened.

Note: the handgrip may be turned all the way down only if the collector has been properly fitted onto the block.

DISPOSAL
The contents of the collector are DANGEROUS WASTE.
It must be disposed of through the Waste Collection Centres indicated in the instructions provided with the separator. Use the package and labels provided.

CHAIR MOVEMENTS

DIRECTLY CONTROLLED MOVEMENTS

CHAIR UP / DOWN – BACKREST RECLINE / RETURN

The movement controls (Pict. 2C on page 14) control the up and down movements of the chair and the reclining and return of the backrest. The movement continues as long as the push button is held down (push button LED on) and stops when it is released (LED off).

RESET

The Reset push button causes the chair to move back into the Reset position established by the manufacturer.
The movement starts when the button is released (Push button LED on) and stops when the chair reaches its position (LED off)

- The STOP / Program control stops every automatic movement under way.

CAUTION: BEFORE OPERATING THE DIRECT OR AUTOMATIC CONTROLS, make sure that the Assistant's Tray will not interfere with the movement of the backrest.

PROGRAMMED MOVEMENTS

The Chair with programming may memorize and recall positions set by the user: Rinsing, Reset and 1 working position (with simplified programming) or 4 working positions (with complete programming).

RINSING POSITION (with all kinds of programming)

Programming

1 - Use the movement controls to set the backrest in the desired position for rinsing

2 - Press the "Programming" push button (Push button LED on)

3 - Press the "Rinse" push button to memorize the position (Push button LED on).
The LED of the two push buttons will go off when the positions are memorized.
Repeat the above steps to change the rinsing position.

Recall / Last Position Memory

- **Recall**: press the Rinse button (Push button LED on): when the button is released, the backrest will move until it reaches the position memorized (LED on)
- **Last Position Memory**: when the button is pressed again, the backrest will return into the previous position (LED off)

- The STOP / Program control stops every automatic movement under way, cancels the execution of the Last Position Memory and enables the other chair movements

RESET POSITION (with all types of programming)

Programming

1 - Use the movement controls to set the chair and backrest in the desired reset positions

2 - Press the "Programming" button (Push button LED on)

3 - Press the "Reset" push button to memorize the position (Push button LED on).
The LEDs of the two push buttons will go off when memorization is completed.
Repeat the above steps to change the reset position

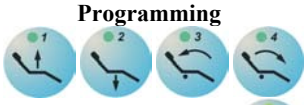
Recall

- Press the Reset button (Push button LED on).
The movement will start when the button is released (LED on) and stop when the memorized position is reached (LED off)

- The STOP / Program control stops every automatic movement under way.

WORKING POSITION WITH SIMPLIFIED PROGRAMMING (1 position memorizable)

Programming



1 - Use the movement controls to set the chair and backrest in the desired working positions

2 - Press the "Programming" push button (Push button LED on)

3 - Press the STOP / Program button (Push button LED on).
The LED of the two push buttons will go off when the positions are memorized.
Repeat the above steps to change the working position.

Recall

- Press the STOP / Program button (Push button LED on).
When the button is released, the chair will move until it reaches the memorized position (Push button LED off)

- The STOP / Program control stops every automatic movement under way.

WORKING POSITIONS WITH COMPLETE PROGRAMMING (4 positions memorizable)

Programming

1 - Use the movement controls to set the chair and backrest in the desired working positions

2 - Press the "Programming" push button (Push button LED on)

3 - Press one of the four numbered push buttons to memorize the position (Push button LED on).
The LED of the two push buttons will go off when the position is memorized.
Each numbered button records a working position.
Repeat the above steps to change the programming.

Recall

1 - Press the STOP / Program button (Push button LED on)

2 - Press the push button with the number of the position desired (Push button LED on).
When the button is released the chair will move into the position memorized
(LED of the two push buttons off)

- The STOP / Program control stops every automatic movement under way.

CAUTION: BEFORE OPERATING THE DIRECT OR AUTOMATIC CONTROLS, make sure that the Assistant's Tray will not interfere with the movement of the backrest.

DO NOT MEMORIZE extreme limit positions for the seat and backrest: leave a small amount of leeway.

SAFETY SYSTEMS: SELF-DIAGNOSIS AND AUTOMATIC SHUTDOWN

The chair features a system for diagnosing particular faults, with automatic shutdown and indication of the fault:

- The LED of the STOP / Program control flashes to warn of a fault in the crush-prevention safety systems: **all direct and automatic chair controls are disabled.**

- The flashing LED of the Programming control warns of a fault in the Position Control potentiometers and/or corresponding cables: **the automatic Chair movements are disabled while the direct movement controls (manual controls) remain enabled**

DISINFECTION AND STERILIZATION

Procedures and program for sanitizing the equipment

PROCEDURE Put on protective gloves before carrying out the cleaning and disinfection operations below

CHAIR AND PEDALS

Cleaning the **Upholstery**:	Headrest, backrest and seat should be protected with disposable covers (see "Products to be Used with the Dental Unit). With neutral liquid detergent (e.g. a neutral Shampoo) and warm water: apply with a soaked sponge, then wipe off residues and rinse with a sponge soaked in water. For more thorough cleaning use "***ST-Surface Treatment"*** sanitizing protective detergent for Dental Chair and Stool upholstery: apply directly on the surface to be treated and spread with a soft cloth. Then wipe clean with a dry cloth.
cleaning **Surfaces**	Clean and decontaminate with ***STER 1 PLUS*** Castellini according to the instructions provided.
disinfection	Disinfect with Surgical Alcohol (see par. on Products to be Used with the Dental Unit) apply with a soaked cloth, allow the alcohol to act and then wipe off.

DENTAL UNIT

- cleaning **Surfaces**	Clean and decontaminate with ***STER 1 PLUS*** Castellini according to the instructions provided.
disinfection:	Disinfect with Surgical Alcohol (see par. on Products to be Used with the Dental Unit)
- Waterlines supplying sprays	
cleaning:	Flushing - Time Flushing with mains water (see Chap. on Autosteril / Time Flushing)
decontamination:	Autosteril cycle with chemical sterilant added to water supplied from independent reservoir (see Chap. on Autosteril / Time Flushing).
- Flexible shields	Cuspidor, Instrument Tray, tray inside, handpiece holder, Time Flushing receptacles To remove the cuspidor cover, take out the filter inserted in the central drain hole.
cleaning and disinfection:	Clean and decontaminate with ***STER 1 PLUS*** Castellini according to the instructions provided **WARNING**: contact with silicone materials for interocclusal records may cause irreparable damage to flexible shields and instrument cords
sterilization:	in an autoclave with steam for 20 min at 135 °C - 210 kPa (2.1 bars)
maintenance	to bleach flexible shields prepare a solution with 0.1÷ 0.5 % Active Chlorine, such as ***AMUCHINA*** Chlorine Oxidant diluted 10% in water or commercial Bleach diluted 10 % in water (see par. on Products to be Used with the Dental Unit); - soak the part to be bleached for about 2 hours; remove and rinse thoroughly. **Note**: immediately after treatment the part may become temporarily darkened but after a few hours of exposure to the air it will spontaneously regain its natural surface color. This treatment also serves to disinfect. **WARNING: In contact with acids, the liquid releases a toxic gas (Chlorine). Irritant.** **Rinse the treated materials thoroughly before reusing them**
- Tray handles	
Tank and hose for separate supply	
Cover of time-flushing tub	
Cleaning and disinfection:	clean and decontaminate with Ster 1 plus Castellini according to the instructions provided
sterilization:	in an autoclave with steam for 20 min. at 135 °C - 210 kPa (2.1 bars)
- Compressed air filter ampules (General air filter and HPA filter)	
cleaning:	clean with a neutral liquid detergent (e.g. Johnson's Baby Shampoo or another neutral Shampoo) and warm water: **WARNING: THE MATERIAL OF THE AMPOULES IS NOT ALCOHOL RESISTANT!**
- HPA filtering cartridge for compressed air	
sterilization:	in an autoclave with steam for 20 min. at 135 °C - 210 kPa (2.1 bars)

SURGICAL SUCTION SYSTEM

- Suction tubes	
Cleaning and sanitizing	aspirate the diluted solution of ***STER 3 PLUS***, according to the instructions provided; then replace the disposable cannulas or rinse out and sterilize the reusable cannulas.
- Reusable cannulas and cannulas connectors	
	CASTELLINI does not supply the suction cannulas and PRESCRIBES the use of only those cannulas that comply with EC Directive 93/42 and bear the EC mark.
cleaning and disinfection:	Clean and sanitize the CONDUITS (see "**Suction tubes**") with the cannulas plugged into the connectors; then replace the disposable cannulas or rinse out and sterilize the reusable cannulas
sterilization:	in an autoclave with steam for 20 min. at 135 °C - 210 kPa (2.1 bars) (cannulas connectors disconnected from the cords)
- Suction system filter	
cleaning	Clean and sanitize the CONDUITS (see **"Suction tubes"**), activate the suction system by raising a cannula;while the suction is on, remove the pressure plug (**1.5a**) and take out the filter; dispose of the residues and wash the filter under running water.
OPERATING LIGHT:	See the instructions in Part "LUNA" operating light – in this manual,
INSTRUMENTS:	See the instructions for each instrument in Part – Operating Instruments – in this manual.

EQUIPMENT SANITIZATION SCHEDULE

START OF THE WORKING DAY

- ***TIME-FLUSHING*** cycle, simple flushing with tap water
- Application of sterilized Flexible Protections
- Application of disposable covers for the Chair and Dental Unit
- Insertion of ***VF CONTROL PLUS*** tablet in the filter of the suction system

VF CONTROL PLUS
PACKAGE CONTAINING 120 TABLETS CODE N500PP80
PACKAGE CONTAINING 240 TABLETS CODE N500PP79

AFTER EACH PATIENT

- ***AUTOSTERIL*** waterline decontamination cycle
- Sterilization of sterilizable instruments
- (lubrication of Turbines and Micro-motor handpiece before and after treatment with ***DAILY OIL***)
- Sterilization of Flexible Shields
- Cleaning and disinfecting of contaminated surfaces with ***STER 1 PLUS and ETHYL ALCOHOL 70%***
- Change of disposable covers

DAILY OIL
SPRAY W/ QUICK COUPLING CODE L0000945
SPRAY W/ QUICK COUPLING CODE L0000946
SPRAY WITH SCREW CONNECTION CODE L0000950
SPRAY WITH SCREW CONNECTION CODE L0000951

STER 1 PLUS
1 Lt CODE N500P089
Package with six 1Lt Bottles CODE L0000813

END OF THE WORKING DAY

- ***AUTOSTERIL*** waterline decontamination cycle
- Sterilization of sterilizable instruments
- (lubrication of Turbines and Micro-motor handpiece before and after treatment with ***DAILY OIL***)
- Sterilization of Flexible Shields
- Sterilization of Separate Supply Tank
- Elimination of disposable covers
- Sanitizing of Dental Unit and Chair surfaces with ***STER 1 PLUS***
- Sanitizing protective detergent of Dental Chair surfaces and Stool Upholstery use ***ST-Surface Treatment***
- Clean and disinfect contaminated surfaces with ***STER 1 PLUS and*** *ETHYL ALCOHOL* ***70%***
- If necessary, further cleaning of upholstery with neutral Shampoo or creamy detergents on a sponge with lukewarm water and subsequent rinsing
- Cleaning of surgical suction CONDUITS with ***STER 3 PLUS***
- (3 measuring caps in 1 liter of hot water)

STER 3 PLUS
1 Lt CODE N500P071
Package with six 1Lt Bottles CODE L0001293

ST-Surface Treatment
Bottle 400 ml
CODE N500P150

MONTHLY

- Sterilization of ***HPA*** cartridge (if present)
- Washing of suction system MINI-SEPARATOR (if present) (see instructions)
- Cleaning of AMALGAM SEPARATOR filter (if present)
- Note: see instructions for replacing the amalgam collector
- Cleaning of GLASS FRONT and REFLECTING MIRROR of the Operating Light

CARTRIDGE HPA
CODE H4200025

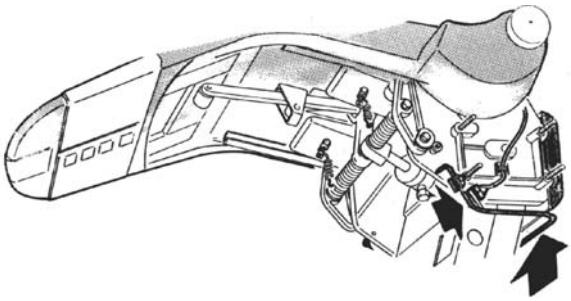
ROUTINE MAINTENANCE

procedures and maintenance to be performed by Dental Surgery Personnel

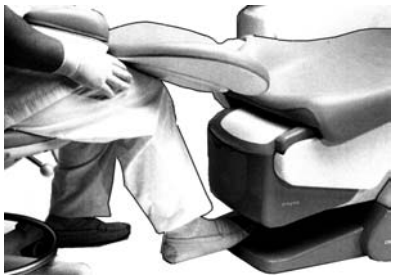
Routine checks and maintenance ensure that the equipment preserves its functional and safety features and are the user's responsibility.
In addition to routine maintenance, periodic scheduled maintenance must be performed by a Castellini Service Center, which must be called by the user at the intervals indicated in the Chapter on Schedule Technical Maintenance.

PROCEDURES

CHECK ON CRUSH-PREVENTION SYSTEMS



Pict. 10



Pict. 10A

1 - **Pict. 10** - Check on Chair descent crush-prevention system
- Actuate the control for lowering the chair and simultaneously move the safety lever upward; the chair must stop immediately and rise by a few centimeters

2 - **Pict. 10A**- Check on backrest recline crush-prevention system
- Actuate the control for reclining the backrest and simultaneously block its descent; the movement must stop immediately

Contact the Castellini Service Center should any malfunctioning occur.

GENERAL AIR FILTER

The general air filter has the function of trapping dust and separating out the condensation of the pneumatic supply. The level of condensed liquid must not reach the filtering element (**10.1**).
To empty out condensed liquid:
- raise the chair to maximum height
- shut off the main switch of the dental unit
- place a container beneath the filter
- unscrew the drain valve (**10.2**) and drain the condensed liquid

WARNING: the transparent ampoule is not ALCOHOL RESISTANT!

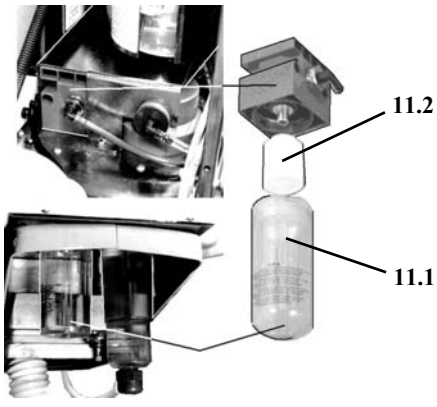
REPLACE the filtering element once a year (contact the Service Center)

HPA FILTER (Optional)

The HPA filter has the function of trapping air-borne bacteria. The internal cartridge is autoclaveable:
- raise the chair to max. height
- shut off the main switch of the dental unit
- operate the syringe to release the air pressure
- unscrew the transparent ampoule with your hands (**11.1**)
- pull out the cartridge (**11.2**) and sterilize it in an autoclave at 135 °C - 210 kPa (2.1 bars) for 20 min.

DO NOT USE DRY STERILIZERS.
- re-insert the sterilized cartridge by applying pressure and screw the ampoule back in place, tightening it all the way.

WARNING: the ampoule is NOT ALCOHOL RESISTANT!
REPLACE the cartridge once a year.



Pict. 12

SUCTION SYSTEM FILTER

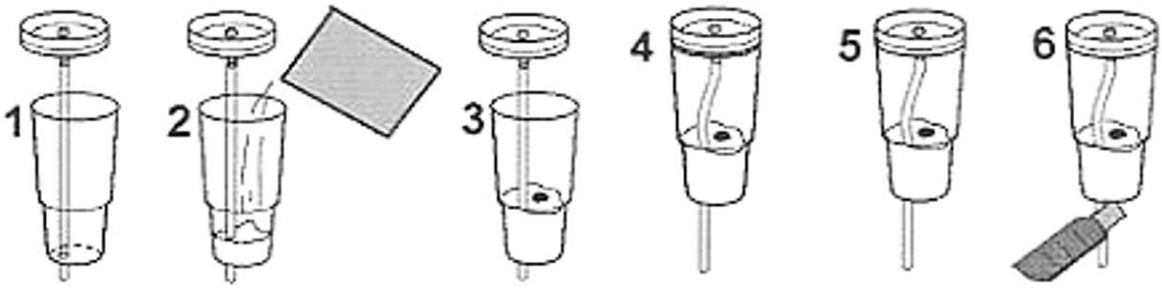
Keep the suction filter clean and free of residues according to the cleaning directions provided in the chap. on Cleaning, Disinfection and Sterilization.
After cleaning, place one or two VF Control plus - sanitizing antifoaming tablets inside the filter.

CAUTION: wear protective gloves
Always operate with the suction system on (tube raised).

MWB SYSTEM – BIOLOGICAL CONTROL OF WATER SUPPLY (Optional) - (*under responsibility of dental surgery personnel*)

The MWB system automatically dispenses a disinfecting agent in the incoming water supply, at a concentration that ensures "hygienic protection" of the water supply and prevents contamination within the circuit.
The system utilizes a disposable cartridge which must be filled with disinfectant.
The products that may be used with the MWB system are listed in the Chap. on "Products to be Used with the Dental Unit"
The cartridge must be replaced once a year.

Cartridge preparation and assembly



1 - Insert the tube inside the hole at the bottom of the cartridge and place the opposite end in the lower receptacle of the cover
2 - Pour 50 grams of disinfectant in the cartridge
3 - Place the level indicator (red ball) inside the cartridge
4 - Close the cartridge by fitting the cover, allowing any excess tubing to come out of the bottom
5 - Fit the cover in all way by applying light, steady pressure with a flat object until it clicks into place.
6 – Cut off the excess tubing at the bottom of the cartridge.

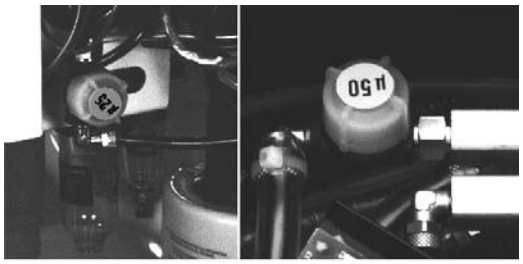
Installation / replacement of MWB cartridge

Pict. 12A

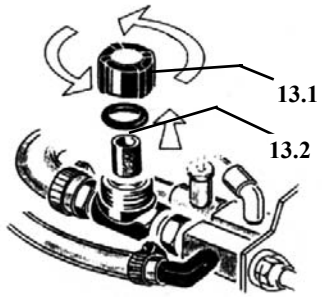
8 - Shut off the main switch of the dental unit and operate the air/water syringe to release residual pressure
9 - Unscrew the lower casing from the head of the MWB unit
10 - Insert the complete closed cartridge in the lower casing.
11 - Fit the lower casing back onto the head, without forcing it.
12 - Turn on the dental unit and check the tightness of the MWB unit.

MWB CARTRIDGE
CODE H4200027

WATER FILTERS **(*under responsibility of dental surgery personnel*)**



Each dental unit has two water filters: a general filter in the base of the chair (50 µm, with a **yellow** label), and a filter for the instruments in the Water Supply Unit (25 µm, with a **red** label).
In the event of a decrease in pressure or in water flow and in any case at least once a year, clean or replace the filtering elements:
- shut off the water supply to the dental unit
- shut off the main switch of the dental unit
- use the syringe to release residual pressure
- unscrew the cap (**13.1**) and take out the filtering element (**13.2**)
- replace the filtering element or clean it with either compressed air or water



LUBRICATION OF SEALS

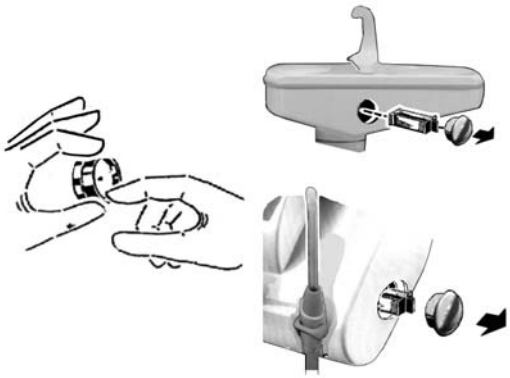
Use protective paste: **"S1 Castellini – Protettivo per O-ring".**
Directions: wear protective gloves, apply small quantities of paste on your fingertips and spread a fine layer of paste over the part to be lubricated directly with your fingers.

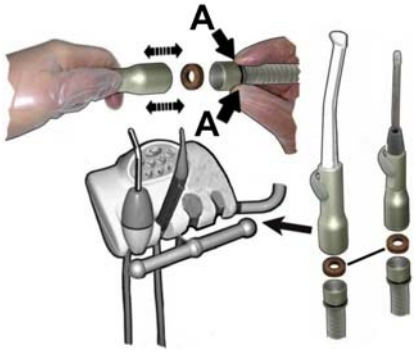
SUCTION FILTER CAP

Clean and sanitize the conduits with *STER 3 PLUS* according to the directions provided

- raise a tube to keep the suction system on
- take off the filter cap (Pict. 12)
- lubricate the inner surface of the cap as shown in the figure
- fit the cap back onto the filter

CAUTION: wear protective gloves
Always operate with the suction system on (tube raised).

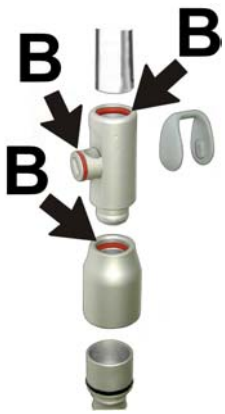




SUCTION CANNULA HOSE CONNECTION

- raise a cannula to maintain suction
- remove the cannula body from its hose connection
- lubricate the O-Ring shown by arrow A
- lubricate the (red) (B) gasket by vaseline
- insert a VF Control plus tablet inside the hose connection before fitting each cannula back in place

Warning: wear protective gloves. always perform this operation with the suction on (cannula raised).



DENTAL INSTRUMENTS see specific instructions in Part - Dental Instruments- of this manual

OPERATING LIGHT see the specific instructions in Part – Operating Light- of this manual

ROUTINE MAINTENANCE PROGRAM

The manufacturer notes that all routine maintenance and sanitation of the dental unit must be performed EXCLUSIVELY with the products (lubricants included) specified by Castellini. It is forbidden to use any products other than those explicitly named in this manual and in the *"Protocol for Hygiene and Maintenance of the Dental Unit"*.

The Manufacturer warns that any failure to comply with the above prescription will be considered improper use in contradiction with the manufacturer's directions and as a result will compromise the essential safety requisites prescribed by Directive 93/42/EEC, thereby invalidating the EC mark placed on the equipment.

DAILY

- Lubricate TURBINE with ***DAILY OIL***
- Lubricate MICRO-MOTOR HANDPIECE according to the handpiece manufacturer's directions
- Lubricate AIR MICRO-MOTOR with ***DAILY OIL***
- Lubricate FILTER CAP of the Suction System with protective paste ***S1 – Protettivo per O-Ring***
- Empty out condensation from GENERAL AIR FILTER
  Note: the Turbine, Micro-motor handpiece and Air Micro-motor must also be lubricated before and after autoclave sterilization cycles

DAILY OIL
SPRAY W/ QUICK COUPLING CODE L0000945
SPRAY W/QUICK COUPLING CODE L0000946
SPRAY WITH SCREW CONNECTION CODE L0000950
SPRAY WITH SCREW CONNECTION CODE L0000951

WEEKLY

With ***S1 – Protective for O-Ring, lubricate***

- O-Ring of quick coupling of TURBINE (if present)
- O-Ring of coupling of MICRO-MOTOR HANDPIECE
- Connectors of internal section of SYRINGE

PROTECTIVE PASTE S1
50 g CODE N500LP89

MONTHLY

- Check CRUSH-PREVENTION SAFETY systems of the Chair

YEARLY

- Replace filtering element of GENERAL AIR FILTER
- Replace cartridge of ***HPA*** FILTER (if present)
- Replace ***MWB*** cartridge (if present)
- Replace the (separate supply system) bottle at least once in a year
- **CONTACT SERVICE CENTER for Scheduled Technical Maintenance**

PRODUCTS TO BE USED WITH THE CASTELLINI DENTAL UNIT

RINSING AGENTS FOR SEPARATE SUPPLY SYSTEM

* **ISOTONIC SALINE SOLUTION** - OGNA S.p.A. 1000 ml disposable bottle to be connected to dental unit.
* **PURIFIED SOLUTION P.S.** - OGNA S.p.A. 1000 ml disposable bottle to be connected to dental unit.
* **PHYSIOLOGICAL SOLUTION** – Pharmaceutical product that may be used in the separate supply tank following sterilization of the latter in an autoclave.

PRODUCTS FOR AUTOSTERIL CYCLES (WATERLINE TREATMENT)

* **Ster4Spay** - Chemical Powder Sterilizer.
  USE: in solution, according to the directions on the label (16 grams per liter, in warm water 35-40 °C). The solution must be used after 15 minutes and within 24 hours, with the separate supply tank for Time Flushing sterilization cycles.
  5 minutes for rapid disinfection, 10 min for a complete treatment
  WARNING: do not use in the supply to the sprays.
  Always rinse out the circuits with tap water or another rinsing agent before reusing the instruments.

Ster4Spray
200 g CODE N500P140

PRODUCTS FOR MWB

* **PRODUCT TESTED TOR MWB SYSTEM: STERIDROLO** – MOLTENI – Chloramine T cristalline, box of 50 g- Pharmaceutical Product – Preparation of cartridge by the user: see "Routine Maintenance"
* **THER PRODUCTS FOR MWB SYSTEM**
  Commercial products with the same base: Aktiven – Chloraseptine – Chlorazene – Chlorazone – Clorina – Euclorina – Gansil – Gyneclorina – Halamid – Mianine – Tochlorine – Tolamine.
  Attention: Check that the product used complies with the following requirements:
  substance: pure Chloramine T, crystalline.
  Synonyms of the same substance: N.Chloro-4-methylbenzenesulfon-amide sodium salt, (N-chloro-p-toluenesulfon-amide) sodium, sodium p-toluenesulfon chloramide
  DANGER! AVOID substances with similar, but not identical names, e.g.:
  Dichloramine T, N, N dichloro-4-methylbenzenesulfonyl-amide sodium salt, sodium p-toluenesulfonyl dichloramide:
  IF USED IN THE MWB **SYSTEM IT REPRESENTS A HAZARD FOR PERSONS AND FOR THE EQUIPMENT**
  Avoid powder products (non-crystalline) because they may come out of the MWB cartridge still undissolved

PRODUCTS FOR SANITIZING THE MEDICAL DEVICE

* **SURGICAL ALCOHOL** - Solution 70 % (70 parts Ethyl Alcohol + 30 parts Distilled Water)
  To be prepared on the spot by the user.
  Note: in the "Guidelines of Conduct for Health Personnel for Controlling HIV infections", Ministry of Health 6 April 1989, this substance is listed among the high-grade disinfectants effective against the HIV virus: "Ethyl Alcohol and Isopropyl Alcohol (...) deactivate HIV in a few minutes. They are not effective on bacterial spores. Alcohol is most effective at a concentration of 70%: higher or lower concentrations are less effective ".
* **STER 1 PLUS Castellini** – Decontaminant for surfaces of Castellini Medical Devices for dentistry. 1000 ml bottle
* **STER 3 PLUS Castellini** – Concentrated sanitizing liquid for cleaning the Surgical Suction System - 1000 ml bottle
* **ST-Surface Treatment Castellini –** Sanitizing protective detergent for Dental Chair and Stool Upholstery – 400 ml bottle
* **VF CONTROL PLUS Castellini** – Sanitizing anti-foaming tablet for surgical suction circuits
  Formats SMALL (240 1.7 g tablets) and MAGNUM (120 2.4 g tablets) - Use: in the suction system filter and in each suction cannula.
* **AUTOCLAVEABLE TANK** for separate supply system
* **PROTECTIVE SHIELDS:**
  Disposable covers for Chair headrest, backrest and seat
  Disposable adhesive cover for Control Panel
  Flexible autoclaveable shields for Cuspidor, Instrument Tray, tray, Handpiece Holder, Time Flushing receptacles
  Autoclaveable cover for Time Flushing Tub

PRODUCTS FOR MAINTENANCE

* **DAILY OIL Castellini** – Lubricating spray for daily turbine maintenance - Format: 200 ml cylinder
* **S1 Castellini - Protettivo per O-Ring** – Protective silicone paste - Format: 20 g. tube
* commercial **VASELINE**
* **SODIUM HYPOCHLORITE 5 ÷6% of Active Chlorine (commercial bleach) – DILUTED BEFORE USE**
  USE: to bleach flexible shields, 10% solution to be prepared by user on the spot (1 part bleach + 9 parts water)
* **AMUCHINA Electrolytic Chlorine Oxidizer – DILUTED BEFORE USE**
  USE: to bleach flexible shields, 10% solution to be prepared by user on the spot (1 part bleach + 9 parts water)

LOGOS Junior

PART II – OPERATING LAMP "LUNA"

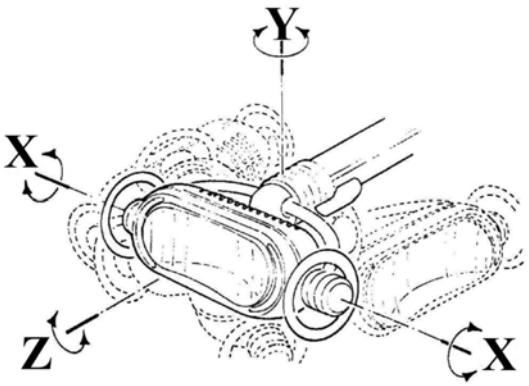
TECHNICAL DATA

MEDICAL DEVICE CLASS I - by 93/42 EEC directive

ELECTRO-MEDICAL EQUIPMENT CLASS I TYPE B - By CEI EN 60601-1

THE EQUIPMENT CANNOT BE USED WHEN FLAMMABLE ANESTHETIC MIXTURES CONTAINING AIR OR OXIGEN OR NITROUS OXIDE ARE PRESENT

POWER SUPPLY	
MAXIMUM POWER INPUT	75 W
VOLTAGE TO THE BULB	12 V ~
HALOGEN BULB WITH AXIAL FILAMENT (OSRAM HALO STAR 64450S)	12 V - 75 W
CONTINUOUS OPERATION	continuous
LIGHTING PARAMETER	
LIGHTING AT 70 cm (I position)	20000 lux
COLOR POINT PROJECTION at 20000 lux	4000 K
LIGHT PROJECTION at 70 cm	20 X 10 cm
OPERATING LIGHT RANGE	
VERTICAL TRANSLATION (to the "Y" axis)	87 cm
"X" AXIS ROTATION	280°
"Z" AXIS ROTATION	60°
"Y" AXIS ROTATION	120°
ARTICULATED ARM ROTATION AS TO SUPPORT POLE	350°
SUPPORT POLE ROTATION AS TO THE UNIT	140°
MAXIMUM WHOLE WEIGHT	
UNIT VERSION	13 kg

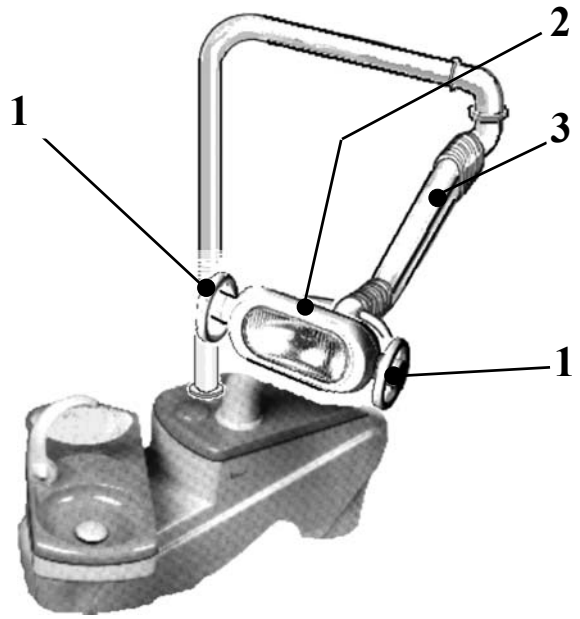


PICTURES AND DESCRIPTIONS

(Pict. 1)

1 - Operating handle
2 - Operating light head
3 - Self-balanced pantograph arm

Warning!
- Do not use the lamp if the front glass or the external head casing are visibly damaged or if unusual noises and/or vibrations are produced. Contact an authorised technical service centre.
- For the mouvement of the light use the ahandles only



Pict. 1

REPLACEMENT OF THE BULB
(*12 V - 75 W HALOGEN* **type HALO STAR 64450S OSRAM) - (Pict. 2)**

Before executing this operation, it's necessary to take away the electric current from the unit:

- Bring the head (**2**) in an accessible position for the operator, and orientate it up, as shown in the picture.

- Wait some minutes for the frontal glass cooling and hold it by hand, unscrewing the fixing screws (**2.1**) as to whole loosening: these screws go down without fall.

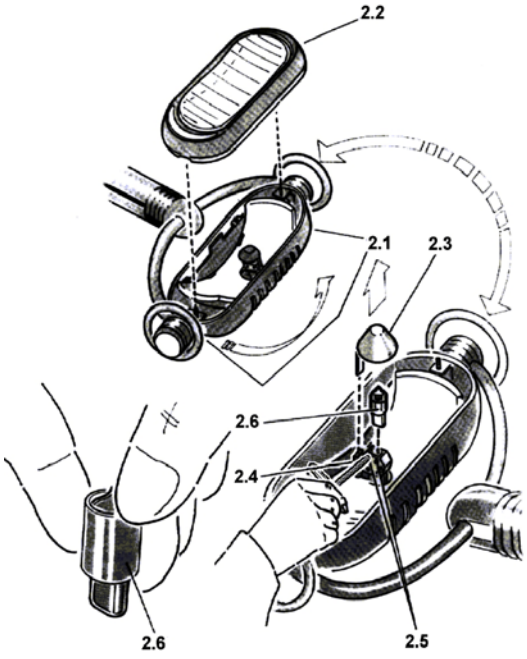
- After taking away the frontal glass, wait some minutes, and then be sure that the internal parts are cold to make any operations, because the whole lighting group reaches high temperatures during the operation.

- Unthread the lighting cover (**2.3**) from its guide (**2.4**), loosen the security dowels (**2.5**), using the hexagon wrench supplied, and take away the halogen bulb (**2.6**).

- Replace the old bulb with an identical one **avoiding to touch with the fingers the new bulb for not shorten the lenght** (to insert it into the bulb support, use, for protection, the plastic case of the wrapping).

- Screw the security dowels (**2.5**) and take away the plastic case.

- After inserting again the lighting cover (**2.3**) in its guide (**2.4**), mount the frontal glass in its side and screw the fixing screws (**2.1**), keeping it by a hand.



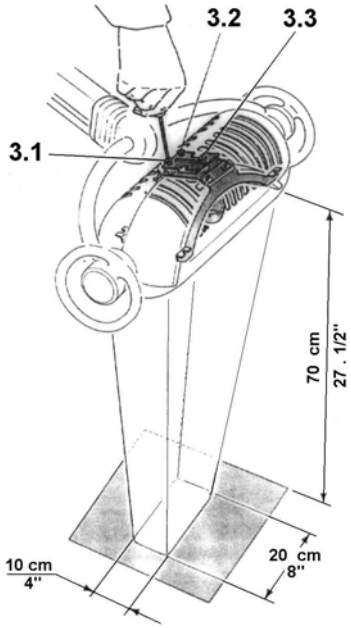
Pict. 2

FOCUSING OF THE "LUNA" OPERATING LIGHT
(Pict. 3)

The focusing of the "Luna" operating light (Pict. 3), is carried out by Castellini S.p.A, and the replacement of the bulb **doesn't** modify it;
In case of necessity, operate as follow:

-Switch on and rotate the operating light head to the floor and project the lighted beam perpendicularly upon a white drawing sheet 70 cm about far from the frontal glass.

-By means of a screwdriver adjust screws (**3.1** - **3.2** - **3.3**), which are accessible through the back slots, so as to the lighted image becoming a rectangular pattern 20 x 10 cm about.



Pict. 3

CLEANING OF THE OPTICAL PARTS

Clean periodically the mirror and the frontal glass to prevent any luminosity level dropping.
This operation must be carried out when head is cold.
Use only ethyl denatured alcohol.
Dry surfaces carefully before switching on the operating light.

PANTOGRAPH ARM REGULATION
(Pict. 5)

Whenever the head wouldn't stay in the position you desired, it would be necessary to repeat the regulation of pantographed arm self-balancement:

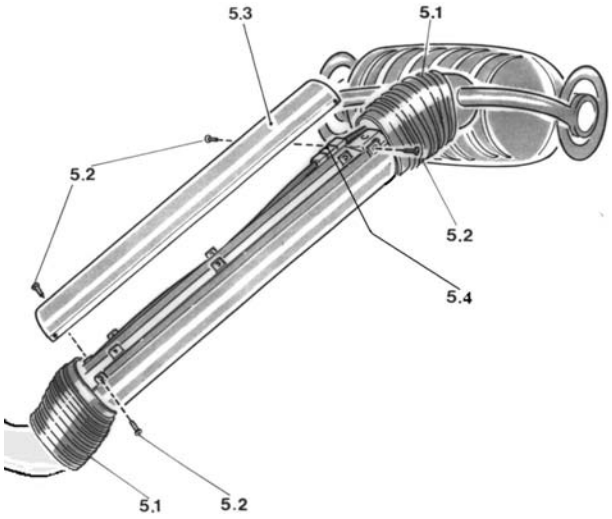
- Do place the head as shown in the picture.

- Unthread along the self-balanced arm the 2 rubber foldings (**5.1**).

- Unscrew and take away the 4 fixing screws (**5.2**) and remove the arm covering (**5.3**).

- Screwing coupling box (**5.4**, with a screwdriver or a pin) you shall increase it's spring tension; unscrewing coupling box, you'll decrease spring tension.

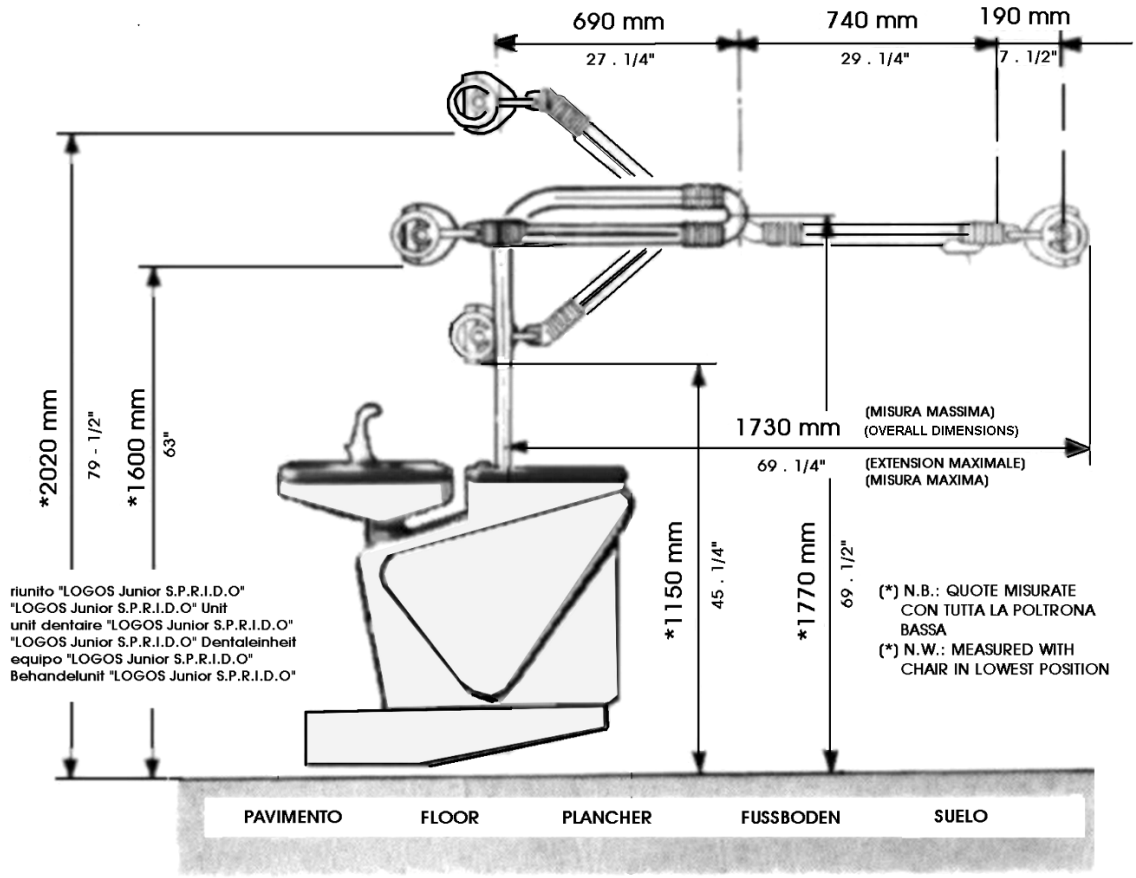
- Finally, you have to replace both arm covering that rubber foldings.

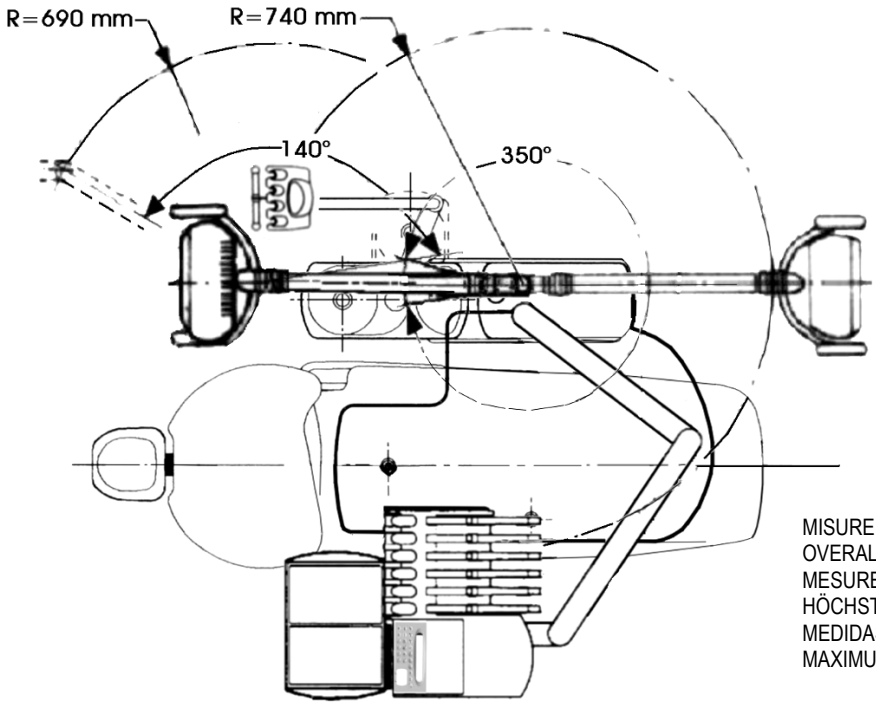


Pict. 5

LUNA Operating Light

versione applicata al riunito
unit body fitting version
version appliquè a l'unit
an dem Anlage aufgesetzte Ausfuhrung
modelo aplicado a l'equipo dental





MISURE D'INGOMBRO MASSIMO
OVERALL DIMENSIONS
MESURES D'ENCUMBREMENT MAXIMUM
HÖCHSTAUSSENMASSE
MEDIDAS DE IMPEDIMENTO MAXIMO
MAXIMUMAFMETINGEN

LOGOS Junior

PART III – OPERATING INSTRUMENTS

"MULTISTERIL 2 TITANIUM" SYRINGE

GENERAL SPECIFICATION

The **"Multisteril 2 Titanium"** syringe is available in three models: cold, warm and warm with an integrated device for lighting the operating area.
It allows supply of either water, air or spray (i.e. water and air simultaneously) by pressing control **A** (**water**), **B** (**air**) or **A** and **B** together (**spray effect**). See pict. 1.
Air supply may be adjusted according to the pressure applied on control B.
The nozzle may be rotated. It holds the bulb and the fiber optics (**C** - pict. 1) for lighting the operating field when requested,
The syringe has to be subjected to **intermittent operation** as follows: 10 s work, 5 min stand-by.

Warning! Before using the syringe be sure that nozzle and outside cover are correctly fitted on the syringe body. Don't use the syringe if it is visibly damaged. Contact an authorized technical service centre.

CONNECTION TO THE UNIT

The **"Multisteril 2 Titanium"** syringe needs specific supply circuits for air, water and power: therefore it can be fitted only on specifically arranged dental units. Its eventual connection to not originally arranged units must be carried out by skilled personnel, authorised by Castellini S.p.A.

The dental equipment has been setted by Castellini S.p.A. to supply water and air with correct pressure for the syringe:

air pressure: **min 330 kPa (3.3 bar) max 460 kPa (4,6 bar)** measured in position **2.5** - pict. 2;
water pressure: **min 90 kPa (0.9 bar) max 140 kPa (1.4 bar)** measured in position **2.4** - pict. 2

Do not exceed in any case these pressure ranges.
After having fitted the syringe on its hose, tighten ring (**3.1** - pict. 3).

INTEGRATED LIGHTING DEVICE

The bulb will light on as soon as the syringe is lifted from the dental unit table; at the same time a jet of air will flow to remove the generated heat. Light will remain on till the syringe is placed on the unit table again.
The bulb must be supplied with max 3.5 Vdc.

REPLACING THE BULB (Pict. 4)

Remove the nozzle (**5.1**) from the syringe outer body just pulling it off and, by means of a pointed device, remove the bulb (**5.2**).
Fit the new bulb into position coupling the two contacts with the socket contacts: the bulb fits properly only in this position.
Don't touch the bulb with bare hands. If this occurs, clean it with cotton and alcohol. The bulb's life is about 50 hours

USING SAFELY: rules and recommendations

To ensure that the equipment is used safely, the user must abide by the set standards of hygiene and professional diligence.
The following points should also be kept in mind:
- During use, dust and fragments of material from the patient's mouth or the device being used may be thrust into the surrounding environment (organic and inorganic particles, metal dust, liquids, potentially infected fluids and biological materials):
PERSONNEL MUST DULY PROTECT THEIR EYES, BREATHING PASSAGES, MOUTH AND SKIN by wearing safety glasses, face shields, masks and disposable gloves.
Operate the suction system at high speed in all operations likely to result in a discharge of materials, dust and aerosols to minimise their dissemination.
N.B.: it is not advisable to use drinking water to supply the dental unit, since it may lead to the formation of a biofilm in the waterlines and thus facilitate germ proliferation inside the unit itself; **It is recommended to supply the unit exclusively with dedicated liquids** (Isotonic Saline Solution or I.P.Purified Water) using the Separate Supply system.

SERVICING

It is indispensable to supply the syringe with air and water conveniently filtered. Regular maintenance of the filters in the unit and draining the condensate from the compressor tank is therefore recommemded.
Grease O-rings (**2.3** - pict. 2) with silicon lubricant S1 once a week. Wearing protective disposable gloves, apply a small amount of S1 on fingers and lubricate by it.

CLEANING, DISINFECTING, STERILIZING

Warning! The instrument is supplied not sterile.
Before use sterilize according to the above specifications.
Use gauze or cotton soaked in surgical alcohol to clean and disinfect syringe exterior.
Don't soak the syringe directly in solution. Don't use an ultrasonic cleaner.
Clean fibre-optics terminal with alcohol-soaked cotton.
In case of irregular water output, clean nozzle using the proper wire provided.
Only the outside cover of the syringe (nozzle and handle together (**2.1** - pict. 2) may be removed, just pulling it away from the inside body (**2.2** - pict. 2), which remains connected to the hose) and **sterilized in water steam autoclave up to 135 °C - 210 kPa (2.1 bar) for 20 min**. **In order to maintain a proper level of hygienic safety autoclave after the use on each patient.**

Don't remove the nozzle from the handle for sterilisation purpose.
Remove the outside cover of the siringe from autoclave immediately after the cycle.

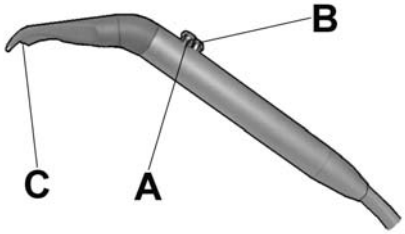
Warning! **Pay attention not to press A and B controls (Pict. 1) when removing and fitting again the outside cover. When fitting the outside cover make sure that inner slot (2.1A) is in line with screw (2.2A - Pict. 2). The outside cover must be inserted all the way.**
Important! **The nozzle (5.1 - Pict. 4) must be removed from the syringe body only when replacing the bulb.**
Warning! **Check the autoclave periodically according to the manufacturer's prescriptions! Temperature exceeding the above stated limit may damage the handpiece!**

The traditional tip (**5.1** - pict.. 4) may be replaced, *(subject to request)* with the surgical application tip (**6.1** – pict.. 6) by simply pulling it off the handle

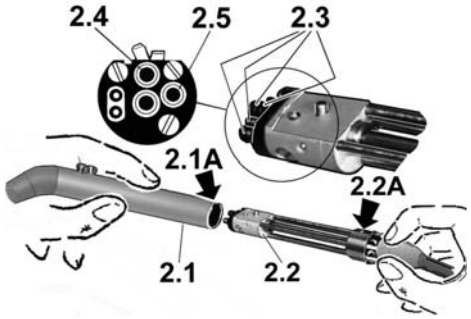
TROUBLESHOOTING

- In the event of a **poor delivery of air and/or water**, do not try to adjust the pressure controls on the unit. It is possible to clean the water duct on the nozzle by means of the supplied steel wire. If a result is not achieved, ask for Technical Assistance.
- In the event of water continuous **leakage from the syringe nozzle**, turn the main switch of the unit off and ask for Technical Assistance.
- In the event of **water leakage from the connection to the hose**, check that coupling ring (**3.1** - Pict. 3) is correctly tightened.
- In the event of **heating device failure**, ask for Technical Assistance.

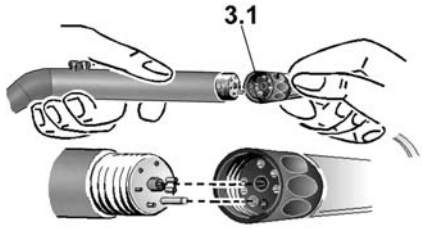
Warning! The syringe nozzle may reach **excessive temperature** if the cooling air is not supplied s imultaneously when lighting the bulb on because of a device failure on the unit. In this event, turn the light off by means of the control on the unit and ask for Technical Assistance.



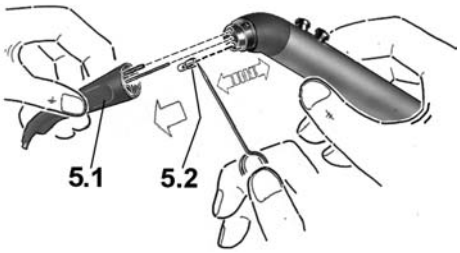
Pict. 1



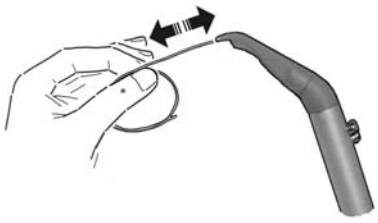
Pict. 2



Pict. 3



Pict. 4


Pict. 5

Pict. 6

"HI–POWER 2 CERAMIC" – "TITANIUM GOLD 2" - "TITANIUM GOLD 2 MINIATURE" TURBINE

GENERAL SPECIFICATIONS

	Hi-Power 2 Ceramic/Titanium Gold 2	**Titanium Gold 2 Miniature**
Speed	350.000 ÷ 366.000 rpm	380.000 ÷400.000 rpm
Air working pressure (handpiece)	260 ÷ 280 kPa (2.6 ÷ 2.8 bar)	280 ÷ 300 kPa (2.8 ÷ 3 bar)
Air delivery	48 ÷ 51 lt/1'	44 ÷ 47 lt/1'
Water pressure	70÷140 kPa (0.7÷1.4 bar)	70÷140 kPa (0.7÷1.4 bar)
Burr stem diameter	1.590 ÷ 1.600 mm (ISO 1797-1)	1.590 ÷ 1.600 mm (ISO 1797-1)
Max burr lenght	26 mm	19 mm
Min burr lock lenght	11.7	11.2
Max burr diameter	2 mm	2 mm
Classification:	IIa (93/42 EEC Directive)	

Note: The rotation velocity measurement unit SI is "rad/sec". 1 rad/sec = $\frac{\pi}{30}$ **RPM**

Warning! :
- **High speed handpiece!**
- **An excessive pressure may damage the tooth!**
- **Cool the operating area conveniently! Stop the turbine immediately if the cooling media don't flow!**
- **Do not use burrs with dimensions exceding the above mentioned limits! Do not use worn or damaged burrs! Handle burrs with care wearing protective gloves!**
- **Castellini does not supply the burrs for the turbines and handpieces and PRESCRIBES the use of only burrs (or other similar tools) that bear the EC mark of conformity with Directive 93/42 EEC.**
- **Before every use, check that the burr is correctly locked in the gripper (see section "BURR LOCKING").**
- **The burr release button becomes very hot if it is pushed while the turbine is running. Pay the greatest attention not to push it unintentionally against the Patient's oral cavity.**
- **Do not use the instrument if it is visibly damaged or if unusual noises and/or vibrations are produced. Contact an authorised technical service centre.**
- **For the use of this instrument the rubber dam must be applied on the patient.**

The high speed air turbine has to be subjected to intermittent operation: 20 min work, 10 min stand-by.

USING SAFELY: rules and recommendations

To ensure that the equipment is used safely, the user must abide by the set standards of hygiene and professional diligence.
The following points should also be kept in mind:
- During use, dust and fragments of material from the patient's mouth or the device being used may be thrust into the surrounding environment (organic and inorganic particles, metal dust, liquids, potentially infected fluids and biological materials):

PERSONNEL MUST DULY PROTECT THEIR EYES, BREATHING PASSAGES, MOUTH AND SKIN by wearing safety glasses, face shields, masks and disposable gloves.

Operate the suction system at high speed in all operations likely to result in a discharge of materials, dust and aerosols to minimise their dissemination. **N.B.: it is not advisable to use drinking water to supply the dental unit**, since it may lead to the formation of a biofilm in the waterlines and thus facilitate germ proliferation inside the unit itself; **It is recommended to supply the unit exclusively with dedicated liquids** (Isotonic Saline Solution or I.P.Purified Water) using the Separate Supply system.

HANDPIECE CONNECTION

The handpiece must be connected to its hose by means of Castellini faston coupling which has four ways plus two electric contacts coupling section.

CASTELLINI-FASTON HANDPIECE: ASSEMBLY AND DISASSEMBLY (Pict. 1)

Screw in the faston tightly to the flexible handpiece tubing. Lubricate O-Rings with specific S1 lubricant. Fit the handpiece over the faston coupling and check that it is firmly connected pulling it by hand while rotating it. To remove the handpiece, pull back and slide off as shown in pict. 1. *Don't remove the handpiece while the burr is rotating!*

REGULATING DRIVING AIR PRESSURE (Pict. 2)

Connect the fitting with the pressure gauge between the tubing and faston. Operate the high-speed handpiece and check pressure (Pict. 2).
Driving air-pressure: 260 ÷ 280 kPa (2.6 ÷ 2.8 bar) for Hi-Power 2 Ceramic e Titanium Gold 2.
280 ÷ 300 kPa (2,8÷3 bar) for Titanium Gold 2 Miniature.

REGULATING SPRAY WATER (Pict. 3)

Use the ring on the tubing coupling to control water supply.

BURR LOCKING

Burr locking: push-button type (Pict. 4)

Simply press down with thumb in the centre of handpiece head back cover to remove and introduce a new burr, and lift thumb to lock in place.

Check the correct fitting of the burr pulling it by hand. Wear protective gloves!
Push burr all the way in for correct fitting. Always use burrs with 1.590-1.600 mm standard stem (ISO 1797-1).
To prevent damage, NEVER release burr until high-speed handpiece stops turning.

REPLACING HIGH SPEED HANDPIECE ROTOR (Picts. 5 - 6)
The rotor is field replaceable. Unscrew cap of head (**4**) with the key (pict.5). Before fitting a new rotor, make sure that O-Rings (**5**) are in their correct position, i.e. in the head and cap. Now screw on cap tightly.
When replacing the rotor replace also the O-Rings and the wavy washer in the cap (Pict. 6).

LIGHTING DEVICE
The halogen microlamp on the faston coupling has to be powered with a **maximum 3.5 Vdc** source. NEVER touch it with bare hands. If this occurs, clean lamp with cotton wool and alcohol. Use the control on the dental unit table to adjust light intensity. The lamp lights automatically when the high-speed handpiece is working: when it stops, the light will stay on for a set time (up to 20 sec. maximum).

REPLACING LAMP (Pict. 7)
Disconnect the handpiece from faston coupling. Unscrew the front part (**9**) of the faston coupling and remove bulb. Put a new bulb in place and screw on part. (**9**) again. The bulb's life is about 50 hours

LUBRICATING HIGH SPEED HANDPIECE (Pict. 8)
Use the spray-can "DAILY OIL" to **lubricate at least once daily and in the hereafter indicated circumstances the high-speed handpiece**. Follow the instructions on can, remembering to apply lubricant in two short sprays. Eliminate any excess lubricant before use by operating the handpiece (hold it over cuspidor) and wiping in with gauze and cotton. Do this with burr in place to prevent mechanical damage to handpiece.
In addition it is imperative to lubricate as follows:
-Before and after autoclaving
-Before and after every AUTOSTERIL disinfecting or sterilizing cycle.
Regular use of this spray lubricant assures best working order.
Proceed as shown in Pict. 8.

02/03

Should you observe a significant increase in the build up of condensation inside the filter (**9.1** – Pict. 9) situated beneath the dental unit instrument tray, remove the cover (**9.2**) by turning it clockwise about a ¼ of a turn, replace the filtering element (**9.3**) and eliminate the liquids present; **the filtering element must be replaced for the first time within a year of the date shown on the cover and at least once a year thereafter.**

WARNING DANGER OF BACTERIAL CONTAMINATION!
The liquid condensate inside the cover must be handled and disposed of by personnel wearing disposable gloves and eye protection and always in compliance with Sanitary Regulations for the disposal of Waste associated with a High Biological Hazard.
Before replacing the cover, thoroughly wash and disinfect it. Do not use products containing denatured alcohol, since the material is not alcohol resistant.

CLEANING, DISINFECTING, STERILIZING
Warning! **The instrument is supplied not sterile**.
Before use sterilize according to the above specifications.
Wear protective gloves! Remove the burr!
Use gauze or cotton soaked in surgical alcohol to clean and/or disinfect handpiece exterior. **DO NOT soak handpiece directly in solution.** DO NOT use an ultrasonic cleaner. Clean the spray nozzle after each operation: use the steel wire supplied and the syringe to blow on the nozzle. Clean fibre-optic terminals with alcohol-soaked gauze. **In order to maintain a proper level of hygienic safety handpieces must be sterilized in autoclave with water steam up to 135°C, 210 kPa (2.1 bar) for 20min, after the use on each patient..** Never sterilize handpieces in dry-heat sterilizers.
Before and after each autoclaving, lubricate handpiece and clean fibre-optic terminals. Never leave handpieces in autoclave overnight: always remove them from autoclave after each cycle.
Warning! **Check the autoclave periodically according to the manufacturer's prescriptions!**
Temperature exceeding the above stated limit may damage the handpiece!

SERVICING THE CASTELLINI FASTON CONNECTION
Lubricate at least weekly the O-Rings with silicone lubricant S1, distributed by Castellini S.p.A. Wearing protective disposable gloves, apply a small amount of S1 on fingers and use it for lubricating.
If faston coupling leaks, replace the O-Rings: grasp them with two fingers and slide them along one side and forward to remove them. Slip on the new rings, fit them properly into the grooves and lubricate.
Important! The faston coupling **CANNOT** be sterilized in autoclave.

IMPORTANT

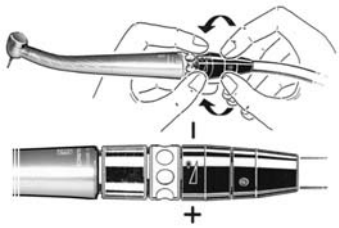
WE PRESCRIBE TO:
STOP WORKING IMMEDIATELY IN THE EVENT OF UNUSUAL NOISE,
STRONG VIBRATION OR IF BUR IS NOT KEPT FIRMLY IN POSITION.

TROUBLESHOOTING

PROBLEM	LIKELY CAUSE	REMEDY
Low power on high speed handpiece; abrupt rpm loss	Irregular air pressure	Check and adjust
	Air leaks at tubing coupling	Tighten coupling ring or replace O-Rings if worn
	Blocked air way	Check tubing or replace it
	Handpiece needs lubrication	Lubricate repeatedly between brief runs
	Worn out bearings	Replace rotor assembly
Very noisy handpiece	Misaligned or very worn bur	Fit in new bur
	Worn out bearings	Replace rotor assembly
Defective attaching or detaching bur: key-type bur clamp	Square section of shaft rounded	Replace rotor assembly
	Worn key	Order new key
	Worn clamp	Replace clamp
	Not-calibrated bur diameter	Use only quality burs
	Curved bur	Use new bur
Defective attaching or detaching bur: push-button clamp	Not-calibrated bur diameter	Use only quality burs
	Curved bur	Use new bur
	Worn clamp	Replace rotor assembly
	Button not fully pressed down	Push the button at centre all the way
Defective spray		Detach handpiece, hold tube over cuspidor and blow out air and water. N.B. Water regulator must be open
	Blocked nozzles	Clean handpiece: use supplied steel wire carefully so as not to ovalize nozzles.
No light in fibre-optic handpiece	Burned out lamp	Replace lamp
	Defective tube coupling	Tighten fully the handpiece tube coupling ring, or, if not enough, replace tube assembly
Water leaks from coupling	Light control at minimum	Adjust control on the unit table
	Loose tubing	Tighten fully coupling ring
	Worn faston O-Rings	Replace and lubricate them.

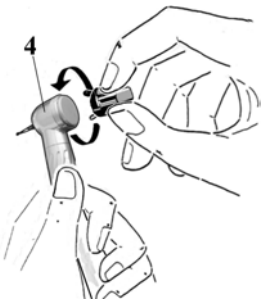
Pict. 1

Pict. 2

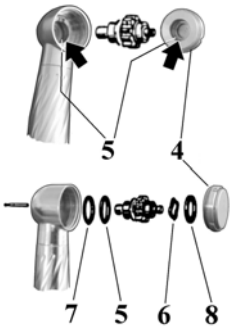


Pict. 3

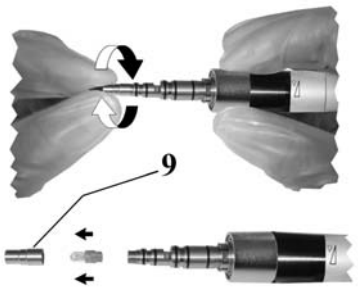
Pict. 4



Pict. 5

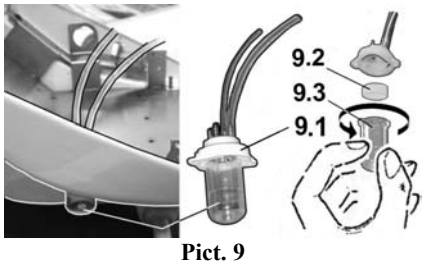


Pict. 6



Pict. 7

Pict. 8



Pict. 9

"IMPLANTOR STERIL" MICROMOTOR

IMPLANTOR STERIL

Without fiber optics

IMPLANTOR LF STERIL

With light

GENERAL TECHNICAL DATA

Micromotor supply	1 ± 0,2 ÷ 24 ± 1 Vdc
Fiber optic supply	3,5 ± 0,2 Vdc
Air supply	at the exit of the syringe 330÷460 kPa (3.3 ÷ 4.6 bar)
Air cooling consumption:	38 Nl/1 min
Spray air consumption:	~ 6 Nl/1 min
Water supply:	90÷140 kPa (0.9 ÷ 1.4 bar) at the exit of the syringe
Spray water consumption:	≥ 35 ml/min
Max Speed	40.000 ± 10% rpm
Min Speed	200 ÷600 rpm
Handpieces compliance	Compliance with the ISO 3964 standard (and INTRAmatic LUX, for Implantor LF Steril type only)
Cooling	Forced air
Intermittent operation	5 min work - 20 min stand-by
Classification:	IIa (93/42 EEC Directive)

Note: The rotation velocity measurement unit SI is "rad/sec". 1 rad/sec = $\frac{\pi}{30}$ **RPM**

Warning!

- **Implantor micromotors must be feeded exclusively by Castellini dental unit, with original supply hoses.**
- **Before every use, check that the handpiece is firmly secured to the micromotor and that the burr is correctly locked in the handpiece gripper.**
- **Cool the operating area conveniently!**
- **Castellini does not supply the burrs for the turbines and handpieces and PRESCRIBES the use of only burrs (or other similar tools) that bear the EC mark of conformity with Directive 93/42 EEC.**
- **Do not use the instrument if it is visibly damaged or if unusual noises and/or vibrations are produced. Contact an authorised technical service centre.**
- **For the use of this instrument the rubber dam must be applied on the patient.**
- **A cooling air stream through the hose is indispensable during the motor running.**
- **Do not change the technical parametrer of the functionning.**

USING SAFELY: rules and recommendations

To ensure that the equipment is used safely, the user must abide by the set standards of hygiene and professional diligence.
The following points should also be kept in mind:
- During use, dust and fragments of material from the patient's mouth or the device being used may be thrust into the surrounding environment (organic and inorganic particles, metal dust, liquids, potentially infected fluids and biological materials):

PERSONNEL MUST DULY PROTECT THEIR EYES, BREATHING PASSAGES, MOUTH AND SKIN by wearing safety glasses, face shields, masks and disposable gloves.

Operate the suction system at high speed in all operations likely to result in a discharge of materials, dust and aerosols to minimise their dissemination. **N.B.: it is not advisable to use drinking water to supply the dental unit**, since it may lead to the formation of a biofilm in the waterlines and thus facilitate germ proliferation inside the unit itself; **It is recommended to supply the unit exclusively with dedicated liquids** (Isotonic Saline Solution or I.P.Purified Water) using the Separate Supply system.

REGULATION

The input for the micromotor must be provided by the special Castellini stabilized power supply box - inside the unit - and the relative cable and wiring. To control speed or change direction of rotation, adjust the controls on the unit. The amount of water for the spray is easily regulated by opening or closing the control on the pipe connection, as shown in pict. 1. To cut off the spray, adjust the controls on the unit.

CONNECTION TO THE SUPPLY HOSE

It is advisable to take off the outside cover as shown in pict. 3.
Place the motor near the hose mating the two spray tubes (the long ones) with the two steel sockets on the hose connection (Pict. 4).
Push the motor against the hose and screw tight the locking ring. Place cover (**1**) again on to the motor and push until it clicks.

CONNECTING AND DISCONNECTING HANDPIECES

Handpieces compling with ISO 3964 or INTRAmatic ® Lux type (these ones only for Implantor Steril and Implantor LF Steril) may be fitted. Fit the handpiece over the connection stem and push until it clicks. Be sure the handpiece can swivel freely. Damaged or worn handpieces are not be used. For disconnecting a handpiece pull it out, as shown on pict. 2.

LIGHTING DEVICE *(Only for Implantor LF Steril)*

The lighting device must be supplied with max 3.5 Vdc. Use the control on the dental unit table to adjust light intensity (only if it's present). The handpiece lights up automatically when the micromotor is running: when it stops, the light will stay on for a set time (variable to a 20 s max).

REPLACING BULB

Take off the outside cover (**1**). By means of a pointed device remove the bulb. Fit the new bulb into position, paying attention not to touch it with bare hands. If this occurs, clean it with cotton and alcohol. The bulb's life is about 50 hours

SERVICING

NEVER LUBRICATE THE ELECTRICAL MICROMOTOR! Pay attention that the lubrication oil for handpieces doesn't drip into the motor body.

At least once a week remove the outside cover and lubricate the two O-rings on the micromotor body and the three spray seal rings on the handpiece connection stem (pict. 2): use the specific grease S1 distributed by CASTELLINI S.p.A. Wearing protective disposable gloves, apply a small amount of S1 on fingers and lubricate by it.

Any other technical assistance to the motor must be carried out by specialized personnel, authorized by CASTELLINI S.p.A.

CLEANING, DISINFECTING, STERILIZING

ATTENTION: The instrument is supplied not sterile.

Before use sterilize according to the following specifications.

The outside cover (**1** - Pict. 3)of the motor may be cleaned and disinfected by means of cotton soaked in ethyl alcohol at 70%. Also, it may be taken off as shown in picture and sterilized in a steam autoclave up to 135 °C, 210 kPa (2.1 bar) for 20 min.

IMPORTANT: **DO NOT AUTOCLAVE THE WHOLE MICROMOTOR!**
DO NOT SOAK THE MICROMOTOR DIRECTLY IN SOLUTION!

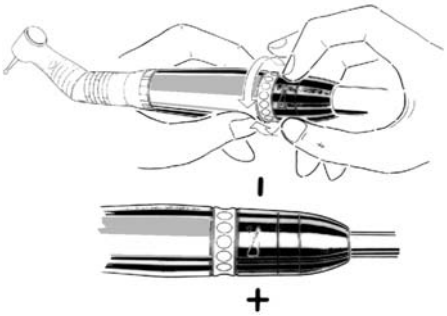
WARNING! **Check the autoclave periodically according to the manufacturer's prescriptions!**
Temperature exceeding the above stated limit may damage the handpiece!

TROUBLE SHOOTING

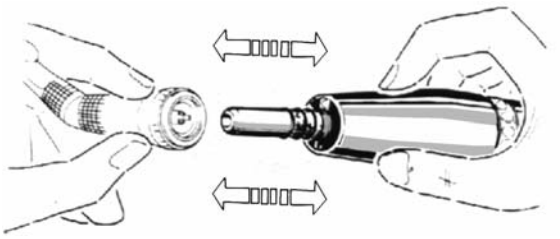
PROBLEM	PROBABLE CAUSE	SUGGESTED SOLUTION
Motor fails to rotate and no voltage at hose exit	Burnt out fuse in power supply unit	Change fuse
	Power supply box failure	Seek technical assistance
	Supply line failure	Seek technical assistance
Motor fails to rotate but there is voltage at hose exit	Motor is stuck	Seek technical assistance
	Handpiece is stuck	Remove, clean and grease handpiece. Send handpiece to manufacturer
Motor rotates, but speed cannot be regulated	Foot control potentiometer failure	Change potentiometer Seek technical assistance
	Stabilized power supply unit failure	Seek technical assistance
Motor run is intermittent	Supply cable failure	Change supply cable
	Damaged bearings	Seek technical assistance
Motor fails to provide sufficient power	Power supply unit failure / Motor failure	Seek technical assistance
The motor heats up too much	Inadequate cooling air	Seek technical assistance
Only the motor rotates but not the bur	Handpiece is fitted incorrectly	Remove handpiece and re-fit correctly
	Handpiece is broken-down	Send handpiece to manufacturer
	Connection joint damaged	Seek technical assistance
Handpiece rotates on its attachment	Handpiece is stuck	Remove, clean and grease handpiece. Send handpiece to manufacturer
Handpiece cannot be locked on the connection stem	Handpiece damaged	Change handpiece
	Latch damaged	Seek technical assistance
Water leakage from handpiece	Worn or damaged seal rings	Change the rings or seek technical assistance
Water leakage from pipe connection	Worn or damaged seal rings	Change the rings or seek technical assistance

IMPORTANT

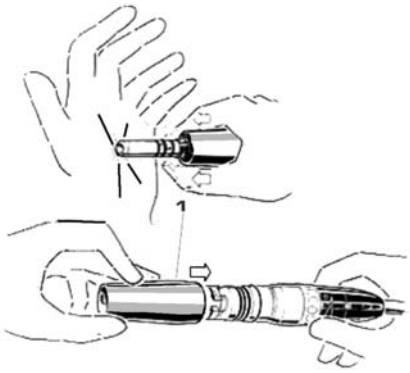
WE PRESCRIBE TO:
STOP WORKING IMMEDIATELY IN THE EVENT OF UNUSUAL NOISE, STRONG VIBRATION OR IF BUR IS NOT KEPT FIRMLY IN POSITION.



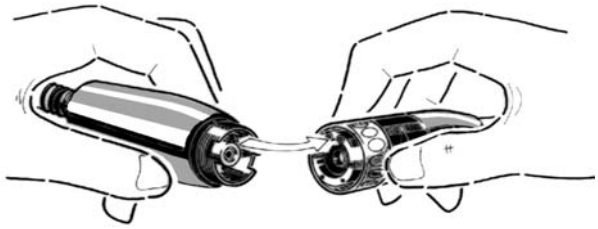
Pict. 1



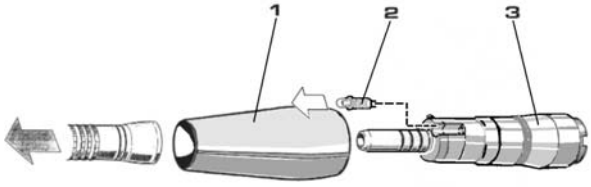
Pict. 2A



Pict. 3



Pict. 4



Pict. 5

"IMPLANTOR 2LF" MICROMOTOR

TECHNICAL DATA

Input	30 Vcc max
Max Speed	50.000±10% rpm
Min Speed	200 ±10% rpm
Max torque	4 Ncm
Cooling	Forced air
Intermittent operation	5 min work - 20 min stand-by
Air supply	420 ± 20 kPa (4,2 ± 0,2 bar) at the exit of the syringe
Water supply	120 ± 20kPa (1,2 ± 0,2 bar) at the exit of the syringe
Air cooling consumption	~ 33 Nl/min
Spray air consumption:	~ 5 Nl/min
Spray water consumption:	min 35 cc/min
Classification:	IIa (93/42 EEC Directive)

Note: The rotation velocity measurement unit SI is "rad/sec". 1 rad/sec = $\frac{\pi}{30}$ RPM

WARNING!

- **Before every use, check that the handpiece is firmly secured to the micromotor and that the burr is correctly locked in the handpiece gripper.**
- **Cool the operating area conveniently!**
- **Only handpieces and burrs (or other similar tools) EC-marked according to Directive 93/42 EEC must be used.**
- **Do not use the instrument if it is visibly damaged or if unusual noises and/or vibrations are produced. Contact an authorised technical service centre.**
- **For the use of this instrument the rubber dam must be applied on the patient.**
- **A cooling air stream through the hose is indispensable during the motor running.**
- **Do not change the technical parametrer of the functionning.**

USING SAFELY: rules and recommendations

To ensure that the equipment is used safely, the user must abide by the set standards of hygiene and professional diligence.
The following points should also be kept in mind:
- During use, dust and fragments of material from the patient's mouth or the device being used may be thrust into the surrounding environment (organic and inorganic particles, metal dust, liquids, potentially infected fluids and biological materials):
PERSONNEL MUST DULY PROTECT THEIR EYES, BREATHING PASSAGES, MOUTH AND SKIN by wearing safety glasses, face shields, masks and disposable gloves.
Operate the suction system at high speed in all operations likely to result in a discharge of materials, dust and aerosols to minimise their dissemination.
N.B.: it is not advisable to use drinking water to supply the dental unit, since it may lead to the formation of a biofilm in the waterlines and thus facilitate germ proliferation inside the unit itself; **It is recommended to supply the unit exclusively with dedicated liquids** (Isotonic Saline Solution or I.P.Purified Water) using the Separate Supply system.

REGULATION

The input for the micromotor must be provided by the special Castellini stabilized power supply box - inside the unit - and the relative cable and wiring. To control speed or change direction of rotation, adjust the controls on the unit. The amount of water for the spray is easily regulated by opening or closing the control on the pipe connection, as shown in pict. 1. To cut off the spray, adjust the controls on the unit.

CONNECTION TO THE SUPPLY HOSE

It is advisable to take off the outside cover as shown in pict. 3. Place the motor near the hose mating the two spray tubes (the long ones) with the two steel sockets on the hose connection (pict. 4). Push the motor against the hose and screw tight the locking ring. Place cover (**1**) again on to the motor and push until it clicks.

CONNECTING AND DISCONNECTING HANDPIECES

Handpieces compling with ISO 3964 or INTRAmatic ® Lux type may be fitted. Fit the handpiece over the connection stem and push until it clicks. Be sure the handpiece can swivel freely. Damaged or worn handpieces are not be used. For disconnecting a handpiece simply pull it out, as shown on pict. 2.

LIGHTING DEVICE

The lighting device must be supplied with max 3.5 Vdc. The handpiece lights up automatically when the micromotor is running: when it stops, the light will stay on for a set time (variable to a 20 s maximum).

REPLACING BULB *(only for Implantor 2LF Brushless)* **(Pict. 5)**

Take off the outside cover and pull out the lamp with a little screwdriver or another tool. Connect the lamp as to the bottom of its seat.
The bulb's life is about 50 hours.

USING THE LOW-SPEED MOTOR WITH EXTERNAL COOLING FLUID (Pict. 6)

1) Move the ring nut (**1**) into the closed position;
2) remove the cap (**2**) from the connector (**3**) and connect one end of the tube (**4**) in its place;
3) connect the other end of the tube (**4**) to the external connector on the handpiece;
4) adjust flow by means of the regulator (**5**).

To switch back to the internal cooling fluid configuration, disconnect the tube (**4**) and replace the cap (**2**) on the connector (**3**). Adjust flow with the ring nut (**1**). To replace the tube (**4**), hold the wheel of the regulator (**5**) in the completely open position. Then remove the tube and replace it with a new one. The tube (**4**) and regulator (**5**) may be sterilised in a steam autoclave at 135 °C, 210 kPa (2,1 bar) for 20 minutes. They should be autoclaved after use on each patient.

N.B.: After use of a potentially encrusting solution, we prescribe to wash the hydraulic circuit with a water flow

SERVICING

NEVER LUBRICATE THE ELECTRICAL MICROMOTOR!

Pay attention that the lubrication oil for handpieces doesn't drip into the motor body.

At least once a week remove the outside cover and lubricate the two O-rings on the micromotor body and the three spray seal rings on the handpiece connection stem (pict. 2): use the specific grease S1 distributed by CASTELLINI S.p.A. Wearing protective disposable gloves, apply a small amount of S1 on fingers and lubricate by it.

Any other technical assistance to the motor must be carried out by specialized personnel, authorized by CASTELLINI S.p.A.

CLEANING, DISINFECTING, STERILIZING

Warning! The instrument is supplied not sterile.

Before use sterilize according to the above specifications.

The outside cover of the motor may be cleaned and disinfected by means of cotton soaked in surgical alcohol. Also, it may be taken off as shown in pict. 3 and sterilized in a steam autoclave up to 135 °C, 210 kPa (2.1 bar) for 20 min. **In order to maintain a proper level of hygienic safety, autoclave after the use on each patient. Clean and desinfect prior to sterilizing.**

IMPORTANT: DO NOT AUTOCLAVE THE WHOLE MICROMOTOR!
DO NOT SOAK THE MICROMOTOR DIRECTLY IN SOLUTION!

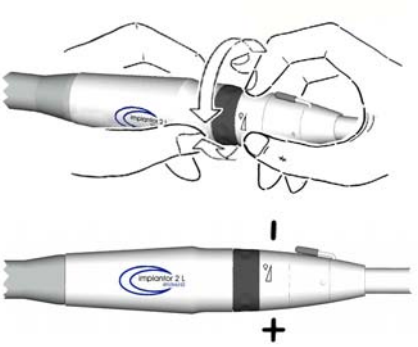
Warning! Check the autoclave periodically according to the manufacturer's prescriptions!

TROUBLE SHOOTING

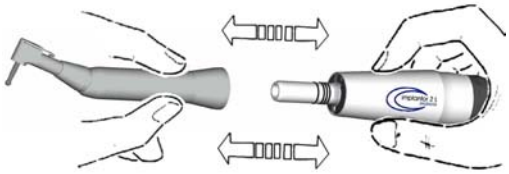
PROBLEM	PROBABLE CAUSE	SUGGESTED SOLUTION
Motor fails to rotate and no voltage at hose exit	Burnt out fuse in power supply unit	Change fuse
	Power supply box failure	Seek technical assistance
	Supply line failure	Seek technical assistance
Motor fails to rotate but there is voltage at hose exit	Motor is stuck	Seek technical assistance
	Handpiece is stuck	Remove, clean and grease handpiece. Send handpiece to manufacturer
Motor rotates, but speed cannot be regulated	Foot control potentiometer failure	Change potentiometer Seek technical assistance
	Stabilized power supply unit failure	Seek technical assistance
Motor run is intermittent	Supply cable failure	Change supply cable
	Damaged bearings	Seek technical assistance
Motor fails to provide sufficient power	Power supply unit failure / Motor failure	Seek technical assistance
The motor heats up too much	Inadequate cooling air	Seek technical assistance
Only the motor rotates but not the bur	Handpiece is fitted incorrectly	Remove handpiece and re-fit correctly
	Handpiece is broken-down	Send handpiece to manufacturer
	Connection joint damaged	Seek technical assistance
Handpiece rotates on its attachment	Handpiece is stuck	Remove, clean and grease handpiece. Send handpiece to manufacturer
Handpiece cannot be locked on the connection stem	Handpiece damaged	Change handpiece
	Latch damaged	Seek technical assistance
Water leakage from handpiece	Worn or damaged seal rings	Change the rings or seek technical assistance
Water leakage from pipe connection	Worn or damaged seal rings	Change the rings or seek technical assistance

IMPORTANT

WE PRESCRIBE TO:
STOP WORKING IMMEDIATELY IN THE EVENT OF UNUSUAL NOISE, STRONG VIBRATION OR IF BUR IS NOT KEPT FIRMLY IN POSITION.



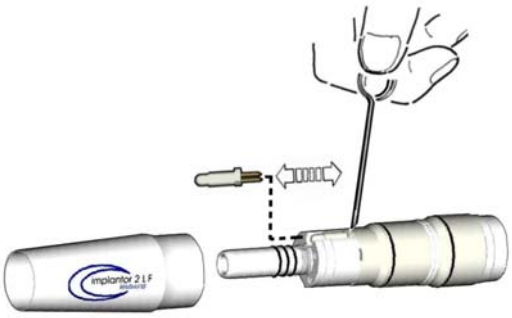
Pict. 1



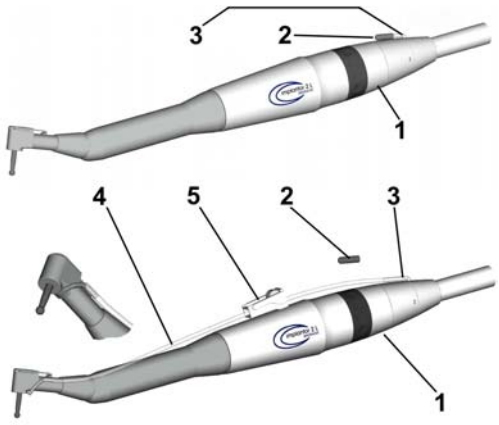
Pict. 2

Pict. 3

Pict. 4



Pict. 5



Pict. 6

Appendix

RESEARCH PROJECT CONDUCTED BY PROF. ELISABETTA COTTI AT THE UNIVERSITY OF CAGLIARI

"in vitro" and "in vivo" trials.
Instrumentation: Castellini Implantor 2LF micromotor and Sybron 18:1 geared angle handpiece

1) *Trial using Mtwo* root canal instruments (Sweden & Martina)

- Survey with K flex 08-10-15

Canal up to 20 mm: torque 35%
Canal greater than 20 mm and up to 24 mm: torque 40 - 50% } Mtwo 10.04 – 15.05
Canal greater than 24 mm: torque 50-55%

Canal up to 20 mm: torque 40 - 50%
Canal greater than 20 mm and up to 24 mm: torque 50 - 65% } Mtwo 20 – 25.06
Canal greater than 24 mm: torque 65 - 75%

2*) trial with K3* (Sybron) root canal instruments

- Survey with K flex 08-10-15-20

Orifice opener 25.10: torque 40%
Orifice opener 25.08: torque 35%
35 .06 to 3-4 mm from WL } torque 35 - 45% for canals smaller than 20 mm
30 .06 to 2-3 mm from WL } torque 45 - 65% for canals between 20 mm and 24 mm
25 .06 to 1-2 mm from WL } torque 65 - 75% for canals greater than 24 mm
20 .06 to WL.

W.L. = working length

The necessary torque values that allowed the M2 and K3 to work adequately are obtained on the basis of the length of the canals. The canals were divided into 3 groups, with increasing torque according to length of the canal. The evaluation does not take into account the torque of the canal curves as they cannot be standardised, the values described therefore have variables given by the curve (increases the torque required) and the length variable according to the group it belongs to (for example between 20 and 24 mm).

These values were obtained by working firstly on extracted teeth and subsequently on patients. The torque values were obtained by working the instruments slightly in and out of the canal and applying slight pressure during introduction. In practice, the instruments worked in an almost passive way without exerting particularly intense forces. As both instruments are manufactured with a variable coil pitch, we did not observe excessive twisting phenomena inside the canals during instrumentation, the instruments often worked almost alone making their way along. The breaking point was never reached (which also depended on other variables), the values we obtained are in our opinion close to the minimum torque limit that allows the instrument to work without being blocked inside the canal.

"PIEZOSTERIL 5" - "PIEZOLIGHT 5" SCALER HANDPIECE

GENERAL TECHNICAL DATA

Electrical supply	34 Vdc
Max Input power	15 W
Frequency	25.000 ÷ 32.000 Hz
Intermittent operation	20 min work - 10 min stand-by
Water supply	90 ÷ 140 kPa (0,9 ÷ 1,4 bar) at the exit of the syringe
Classification:	IIa (93/42 EEC Directive)

Warning!
- **Before every use check that the tip is correctly locked on the handpiece (see section "USING THE HANDPIECE").**
- **Cool the operating area conveniently!**
- **Do not use the instrument if the tip or handpiece are visibly damaged or if unusual noises and/or vibrations are produced. Contact an authorised technical service centre.**
- **For the use of this instrument the rubber dam must be applied on the patient. In treatment procedures with tips that do not allow application of a dam, the patient must be instructed to breathe through his/her nose during treatment.**
- **High frequency ultrasonic vibrations may interfere with pace-maker operation. Before treating pace-maker carriers, consult the pace-maker manufacturer.**
- **During the working, this unit will not cause radio interference to the electric network.**

USING SAFELY: rules and recommendations
To ensure that the equipment is used safely, the user must abide by the set standards of hygiene and professional diligence.
The following points should also be kept in mind:
- *during use:* dust and fragments of material from the patient's mouth or the device being used may be thrust into the surrounding environment (organic and inorganic particles, metal dust, liquids, potentially infected fluids and biological materials): **personnel must duly protect their eyes, breathing passages, mouth and skin** by wearing safety glasses, face shields, masks and disposable gloves.
- Operate the suction system at high speed in all operations likely to result in a discharge of materials, dust and aerosols to minimise their dissemination.

N.B.: it is not advisable to use drinking water to supply the dental unit, since it may lead to the formation of a biofilm in the waterlines and thus facilitate germ proliferation inside the unit itself; **It is recommended to supply the unit exclusively with dedicated liquids** (Isotonic Saline Solution or I.P.Purified Water) using the Separate Supply system.
- *after use on each patient:* **The handpiece, tips and wrench** must be sterilised in a steam autoclave at 135°C, 2.1 bars, after their surfaces have been washed and disinfected (see specific instructions).

The hygienic procedures described in this manual in the section on "Cleaning, Disinfection and Sterilisation" **must be regularly implemented**.

All the operations described in this section must be carried out wearing disposable protective gloves.

CONNECTION OF THE SCALER
The scaler must be fitted on its supply hose just by pushing it fully on the hose connector.
It's necessary to pay attention that the mating surfaces (**1** and **2** - pict. 2) be clean and dry.

ELECTRICAL SUPPLY
The input for the scaler must be provided by the specific power supply circuit -assembled in the unit- and the relative cable and wiring.
Adjust the controls on the unit table to control power and water flow.
Liquid delivery is adjusted via the regulator applied on the instrument coupling.

HANDPIECE OPERATION
The scaler must be operated only with its proper tips (pict. 7), provided in the box.
The tips have to be screwed on exclusively by means of the proper dynamometric spanner, also provided in the box (**4** - pict. 1).
The scaler has to be subjected to **intermittent operation** as follows: 20 min works, 10 min stand-by.
Irrigate abundantly during treatment. Do not operate in the absence of liquid.
When using specific tips for dry procedures, operate at intervals lasting no longer than 3 seconds.
Optimum performance is ensured at three quarter of maximum power. After having connected the handpiece to its hose, taking care to hold the handpiece in a vertical position. Run scaler for a few seconds with the tip held upwards until a constant spray is delivered. Water spray varies according to running power and tip. The handpiece with tip **C1 must not** be operated perpendicularly to the tooth or from the front, but rather tangentially (as shown in Pict. 6). Applying slight lateral pressure, move the handpiece back and forth as if erasing with a rubber.
Tips **C2 and P1 can** also work perpendicularly to the tooth surface.
It is thus ABSOLUTELY ESSENTIAL to replace worn or damaged tips.
DO NOT CHANGE the structure of the tips by bending or filing them!
WARNING: Do not use the handpiece on metal or ceramic fixtures. The high-frequency oscillations may damage them.

LIGHTING DEVICE *(only for Piezolight 5)*
The halogen bulb housed in the hose connection must be powered at a maximum of 3.5 Vdc. It must never be touched with bare hands: should this occur accidentally, clean it with a cotton wad dipped in alcohol.
To replace the bulb (Pict. 4), disconnect the handpiece from the hose and, with the aid of a pointed tool, gently pry the bulb from the hose connection. Insert a new bulb, taking care to line up its contacts with those in the socket: the bulb can be fitted properly only in this position.
The bulb's life is about 50 hours

FITTING TIPS INTO THE PIEZOLIGHT 5

After screwing in the tip, continue turning the wrench until the arrow on the wrench itself is aligned with the notch on the front end of the handpiece (Pict. 5).

SERVICING

It is requested a weekly lubrication of the O-ring on the water connection (**3** - pict. 2), by means of the proper S1 silicon lubricant distributed by Castellini S.p.A. Wearing protective disposable gloves, apply a small amount of S1 on fingers and lubricate by it.
Screw off a tip at least once a month to prevent autolocking.

CLEANING, DISINFECTING, STERILIZING

Warning! The instrument is supplied not sterile.
Before use sterilize according to the above specifications.

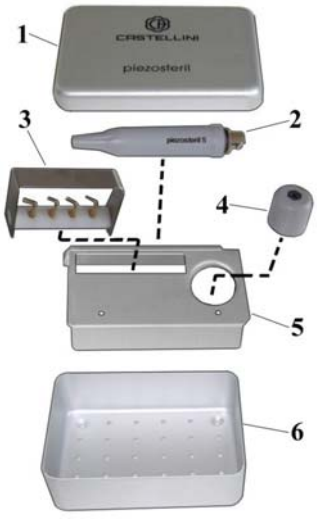
Use gauze or cotton soaked in surgical alcohol to clean and/or disinfect handpiece exterior. Do not use an ultrasonic cleaner.
Do not soak a scaler directly in solution.
Scaler tips may be disinfected by immersion in surgical alcohol
Clean and disinfect handpiece and tips before sterilizing. Clean tips with running water before sterilizing.
The scaler must be sterilized in **autoclave** with water steam up to **135 °C 210 kPa (2.1 bar) for 20 min.** Never sterilize it in dry-heat sterilizer.
When sterilizing the handpiece, take care the tip has been removed.
Never leave a scaler in autoclave, always remove it from autoclave after each cycle.
In the same way it's possible to sterilize tips, tips-holder, dynamometric spanner and the whole box.

Warning! Check the autoclave periodically according to the manufacturer's prescriptions!
Temperature exceeding the above stated limit may damage the handpiece!

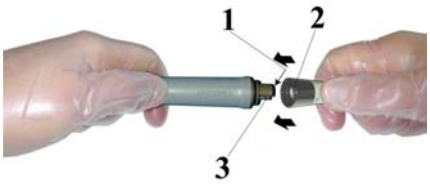
TROUBLESHOOTING

Unsatisfactory power	Be sure that the handpiece is correctly fitted on its hose
	Check the setting of the power control on the unit table
	Be sure that tip is screwed on properly
	Check that tip is not worn out
	Ask for Technical Assistance
No vibration	Do not insist with foot-control Ask for Technical Assistance
Poor water flow	Check the setting of the water control on the unit table or on the hose connection
	Be sure that water passage on the tip is not clogged. Eventually blow it with air by means of the syringe
	Ask for Technical Assistance

PIEZOSTERIL 5

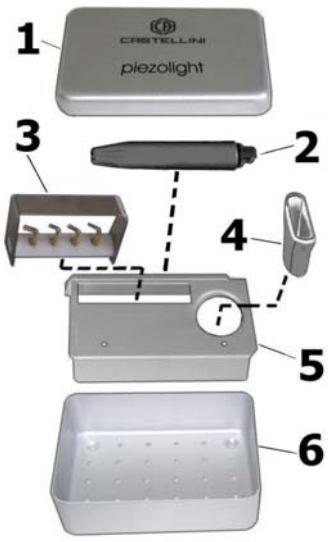


Pict. 1

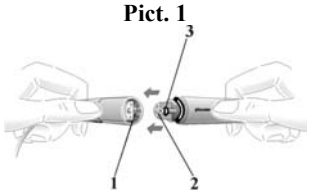


Pict. 2

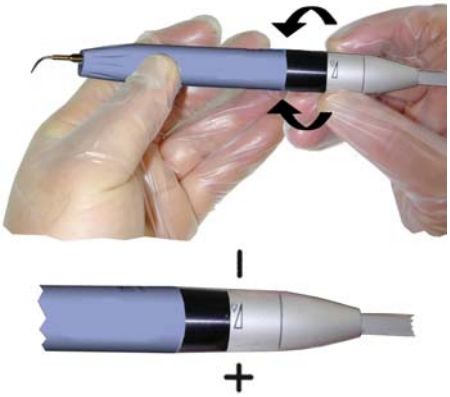
PIEZOLIGHT 5



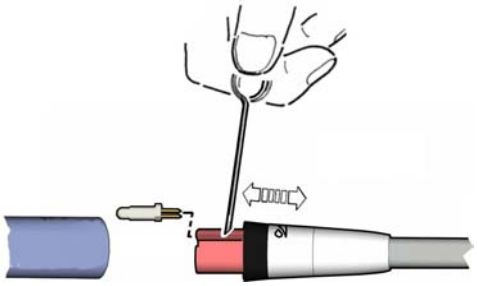
Pict. 1



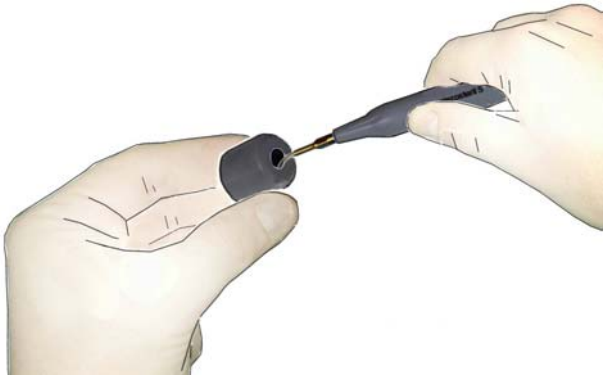
Pict. 2



Pict. 3



Pict. 4



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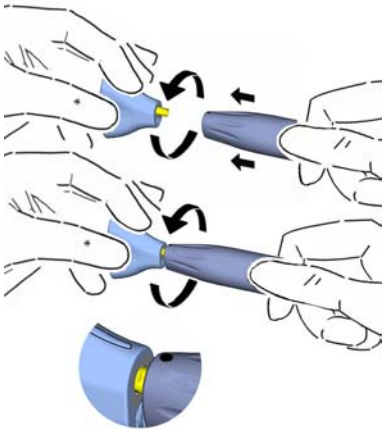
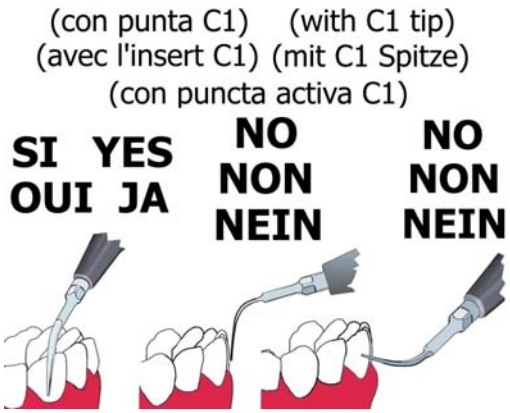
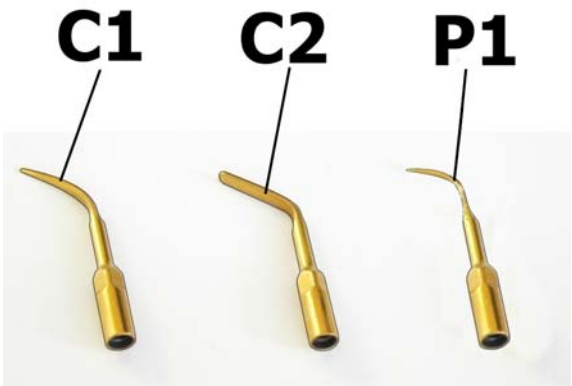


(only for "PIEZOLIGHT 5")

Pict. 5



Pict. 6



Pict. 7

"POLYLIGHT STERIL 2" POLYMERIZING LIGHT

GENERAL TECHNICAL DATA

Electric feeding	8 Vdc
Absorbed power	50 W
Wave lenght	400 ÷ 515 nm
Air cooling pressure	≥420 ± 20 kPa (4,2 ± 0,2 bar)
Intermittent operation	25 min work - 60 min rest
Classification:	IIa (93/42 EEC Directive)

USING SAFELY: rules and recommendations

To ensure that the equipment is used safely, the user must abide by the set standards of hygiene and professional diligence.
PERSONNEL MUST DULY PROTECT THEIR EYES by wearing safety glasses, face shields, masks and disposable gloves.

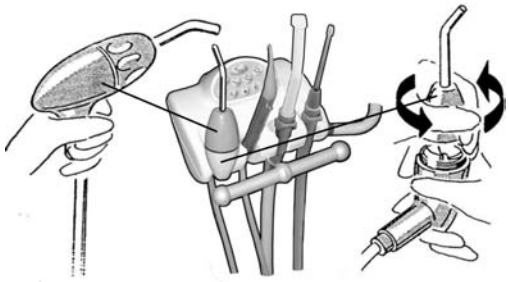
The polymerizing light electric feeding is connected by the Castellini specified feeder fitted on the unit and the proper connection cable.
The 50-W **Polylight Steril 2** halogen light generates a light beam in the 400, 515 nm spectrum which is capable of polymerizing composite photosensitive materials.
To operate, first insert the optical terminal guide and, while holding the handpiece, push and release the foot switch lever control.
The light will remain active for 25 seconds after having pushed the foot lever control.
The lamp is cooled by means of appropriately filtered and dehumidified compressed air from the dental unit. Cooling start upon the handpiece being removed from its seat. The handpiece is internally fitted with temperature sensor, which shuts off the lamp if the values established by current regulations are exceeded. in order to keep the temperature within the prescribed safety limits even in case of cooling system malfunction.For access to the halogen lamp, unscrew the top half of teh ahndpiece, taking care to keep the handpiece in a vertical position as shown in the picture. The top half of the handpiece and the optical terminal guide can be autoclaved.

REPLACEMENT OF THE HALOGEN LAMP

To gain access to the halogen lamp and replace it, proceed as follows:
1. Switch off the dental unit (main switch lever in position 0).
2. Keep the instrument vertical with your hand and unscrew the two parts of the handpiece.
3. Grasp the top edge of the dichroic reflector (one piece with the halogen lamp) and pull it upwards to remove it.
4. Install the new lamp by fitting the two pins into the slots of the lamp holder. Press down the outer edge of the reflector with your fingers till it contacts the lamp holder. Do not touch the bulb with your fingers.

We recommend to exclusively use replacement lamps supplied by Castellini.

ATTENTION:
- While operating, the halogen lamp reaches very high temperatures. Before gaining access to the lamp inside the handpiece, therefore, allow sufficient time for cooling.
- Never touch the halogen lamp or mirror with your fingers, In case of accidental contact, carefully clean the contact surface with a cotton pad soaked in surgical alcohol.
- The halogen lamp, mirror and the tip of the fiber optics must be always kept perfectly clean in order to ensure efficient polymerization.
- Take care not to direct the polymerizing light beam towards the eyes.
  During the use wear suitable glasses that can be bought from your usual supplier of dental materials.
- Avoid to cause accidental fall of the handpiece. The fall could has as a consequence the breaking of parts of the item for which the Company cannot be held responsible.
- Do not use the instrument if the glass fibre optical guide or the handpiece are visibly damaged or if unusual noises and/or vibrations are produced. Contact an authorised technical service centre.



CLEANING, DISINFECTING, STERILIZING

Warning! The instrument is supplied not sterile.
Before use sterilize according to the above specifications.

The optical guide and the body of the handpiece can be cleaned with cotton woolsoaked in surgical alcohol.
Cleaning should be performed only when the handpiece is cold and care should be should be taken to avoid any of the liquid penetrating into the internal parts of the handpiece. The optical guide and the upper part of the polymerizing light handpiece can be autoclaved at a temperature of 135 °C, 210 kPa (2,1 bar) for 20 min.
Warning! Check the autoclave at regular intervals in accordance with the manufacturer's instructions.
Temperatures higher than the stated limit can damage the materials.
The sterilisation of the above said parts must be done before the use on each patient.

"POLYLIGHT STERIL 3" POLYMERIZING LIGHT

Polylight Steril 3 is a 52 W halogen lamp generating light within the 400 to 515 nm range, suitable for curing light-activated composite materials. It is intended to be used by dentists only, who may avail themselves of the assistance of authorized personnel.

GENERAL TECHNICAL DATA

Power supply	10 Vdc
Bulb wattage	52 W
Wavelength (range)	400 - 515 nm
Intermittent operation	60 s on - 60 s off
Classification:	IIa (93/42 EEC Directive)

USING SAFELY: rules and recommendations

To use the equipment safely, it is essential to abide by the rules of hygiene and good professional practice.
Do not use this device in presence of flammable substances.
USERS MUST ADEQUATELY PROTECT THEIR EYES by wearing glasses, full face shields.

The lamp must be powered by means of a specific Castellini power supply device installed in the dental unit and the connecting cord provided.

Lamp operation

- Insert the light guide just pushing it all the way in.
- Select the desired time, between 5 and 60 seconds, by means of control (**5A** - Pict. 1). The set time will be shown on the display (**4A** - Pict. 1).
- To operate the lamp at half power, press control (**2A** - Pict. 1); the corresponding green LED will light up. Pressing the same control again will switch back to full power operation.
- To increase the light intensity gradually, press control (**3A** - Pict. 1); the corresponding green LED will light up. Pressing the same control again will disable this function.

After setting the time and any of the other functions described, press button (**1A** - Pict. 1) to turn on the lamp. As long as you press the button, you will have light for aiming; when you release the button the curing light will be emitted. The lamp turns off automatically at the end of the set time and emits a sound signal (3 beeps in rapid succession). You can turn off the lamp before the set time elapses by again pressing button (**1A**). During operation a beep is emitted every 5 seconds. Inside the handpiece there is a cooling device and temperature sensor, which stops the lamp if it exceeds the temperature values established by applicable standards. The lamp must be allowed to cool down before work may resume.

REPLACING THE HALOGEN BULB

To access and replace the halogen bulb, carry out the following steps in sequence:

1. disconnect the dental unit from the power supply (lever of the main switch set on 0).
2. hold the instrument upright as shown in figure 2; remove the light guide (**6A**), unscrew part. (**7A**) and then the filter holder (**8A**).
3. take hold of the upper edge of the dichroic reflector, which is attached to the halogen bulb, and pull it upward to remove it.
4. fit a new bulb by inserting the two pins in the sockets provided in the bulb holder; press with your fingers on the outer rim of the reflector to fit it all the way back onto the bulb holder, without touching the bulb with your hands.

Use only replacement bulbs supplied by Castellini; Code E24M0000
Light guide Code 681C1200

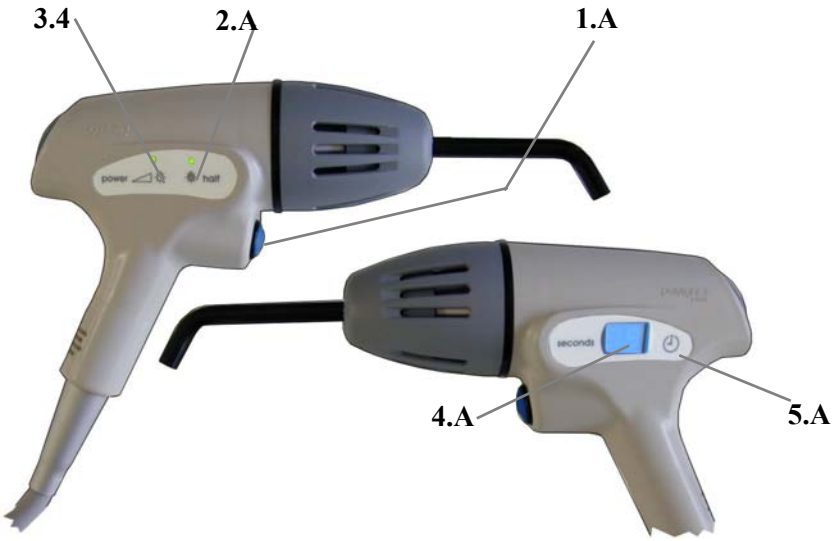
Apart from replacing the bulb and the light guide, the device is not field-repairable.

WARNING:

- During operation, the halogen lamp reaches very high temperatures. Therefore, allow it to cool down before attempting to access the inside of the handpiece.
- Do not touch the halogen bulb or the mirror with your fingers. Should accidental contact occur, carefully clean the bulb or mirror with cotton dipped in alcohol.
- Always keep the terminal surface of the optic fibre thoroughly clean to ensure effective curing.
- **Do not direct the light emitted from the lamp toward the patient and the dental practitioner's eyes.** During use wear protective glasses and/or a shield, which may be purchased from distributors of dental supplies.
- Avoid impacts that could cause the handpiece to fall accidentally, resulting in the probable breakage of components for which the manufacturer cannot be held liable.
- Should you observe any visible damage to the fibre optic guide or detect any unusual noises and/or vibrations, or unusual heating do not use the instrument. Contact an authorised service centre.

CLEANING, DISINFECTION AND STERILISATION

The light guide and handpiece casing can be cleaned with Ster 1 Plus and disinfected with cotton moistened with surgical grade alcohol.
Cleaning is permitted only when the handpiece is cold. Avoid allowing liquids to penetrate inside the handpiece.
The light guide and upper part of the handpiece (**7A** - Pict. 2) can be autoclaved for 20 min at a temperature of up to 135 °C, 210 kPa (2.1 bars).
Warning! Periodically check the efficiency of the autoclave according to the manufacturer's directions!
Temperatures beyond the specified limit may damage the materials!
The instrument is supplied in a non-sterile condition. Before using it, sterilise it as directed above.



Pict. 1

Pict. 2

"MINITOM 2" ELECTROSURGERY HANDPIECE

Single-pole electrosurgical instrument for dentistry with active handpiece insulated from earth (type BF) and with handpiece for patients indirectly referred to earth for high frequencies (hereafter referred to as "neutral electrode").

GENERAL TECHNICAL DATA

Power supply (at the power feed)	32 Vdc
Output power	45 W ± 10%
Load impedance	800 OHM
Working frequency	500 KHz ± 10%
Intermittent operation	15 s work cycle – 30 s rest cycle
Max peak no-load voltage	965 Vpp
Peak voltage with load of 800 ohms	530 Vpp
Classification	IIb (93/42 EEC Directive)

USING SAFELY: rules and recommendations

To ensure that the equipment is used safely, the user must abide by the set standards of hygiene and professional diligence.

PERSONNEL MUST DULY PROTECT THEIR EYES, BREATHING PASSAGES, MOUTH AND SKIN by wearing safety glasses, face shields, masks and disposable gloves.

Operate the suction system at high speed in all operations likely to result in a discharge of materials, dust and aerosols to minimise their dissemination.

POWER SUPPLY

The power supply must be transmitted to the electrosurgery handpiece through the special Castellini power feed fitted on the dental unit and handpiece cable connection.

In the **"MINITOM 2"** model, the handpiece can be disconnected from the electric cable by unplugging the connector provided.

Prior to use, WE PRESCRIBE TO read the following sections on PRECAUTIONARY MEASURES, IMPORTANT WARNINGS and INSTRUCTIONS FOR USE carefully.

GENERAL PRECAUTIONS FOR USING THE ELECTROBISTOURY

The following PRECAUTIONS should be taken in order to reduce the risk of burns:

1) Make sure that the patient securely grips the entire surface of the neutral electrode and check that the plug at the end of the wire is properly inserted in its socket.

2) Make sure that the patient does not come into contact with metal structures. It is recommended to use anti-static sheets to preclude the possibility of contact.

3) Take care to avoid skin-to-skin contact (e.g. between the patient's arms and body). If necessary, place a sheet between the arms and body.

4) If the electrobistoury and monitoring devices or other devices that may be affected by high frequency are to be used simultaneously on the same patient make sure that every electrode of such devices is positioned as far away as possible from the electrodes of the electrobistoury unless provided with filter coils or resistors.

5) Check that the wires of the neutral and active electrodes are not in contact with the patient or with other conductors.

6) Always use the bipolar technique to avoid undesired coagulations during surgical treatments on parts of the body having a small cross-section.

7) Always select the lowest possible output power setting.

8) Remember that an excessively low output power or malfunctioning of the electrobistoury may be due to a faulty application of the neutral electrode or a poor contact in its connections.

9) Do not use inflammable anaesthetics, nitrous oxide or oxygen during surgery. Any inflammable substances used for cleaning or disinfection must be allowed to evaporate before you start using the electrobistoury. Remember that certain materials such as cotton wadding or gauze impregnated with oxygen may catch fire as a result of the sparks produced by the device in normal conditions.

10) Do not use the electrobistoury on patients with PACEMAKERS since the radio frequency output by the electrobistoury can generate interference that is hazardous for the patient and may damage the stimulator. When in doubt it is advisable to consult a CARDIOLOGY specialist.

11) Remember that during operation the electrobistoury may generate interference with other electromedical equipment

12) Remember that a fault in the device may lead to an increase in the output power. Should you detect or even only suspect the existence of a fault, do not use the device. Contact an authorised Service Centre.

13) Remember that even though the device is a single-pole electrobistoury for dental use and has been designed also to work without the neutral electrode, it is advisable always to have the patient hold the neutral electrode provided in order to obtain consistently good results during use.

IMPORTANT WARNING

A) Please note that, when in operation, the electrosurgery handpiece may generate interference that can disturb the normal functioning of other electronic equipment.
- Do not use any other electronic equipment on the patient at the same time as the electrosurgery handpiece.

B) The equipment is fitted with the following accessories manufactured by Castellini:
- an active handpiece (**2.2**, - pict. 5), connected to a special cable suitable for the high frequency produced when in operation;
- a set of special operating electrodes (**2.2b**, pict. 5) suitably shaped, to be inserted in the active handpiece gripper;
- a neutral electrode (**2.2a**, - pict. 5) connected to a special cable complete with a plug to be fitted into the corresponding socket on the tool tray. In order to avoid problems of incompatibility due to the high frequency generating circuit which may interfere with the equipment's normal and safe operation, **WE PRESCRIBE TO use only accessories designed and supplied by the MANUFACTURER.**

C) To ensure proper and safe functioning, we also recommend that each time you are about to use the elecrosurgery handpiece you inspect all accessories indicated at point B to ensure that they are perfectly efficient, and check, in particular, that the cable insulation is not damaged, worn or cracked.
Should cables or other accessories show signs of deterioration, do not use the instrument and contact an authorised technical service centre; order spare parts exclusively from the manufacturer.

D) In order to obtain the best operating results and to ensure the successful outcome of all operations, we recommend you always use the neutral electrode, although the equipment can operate without it.

E) It is advisable to activate the device only when the electrode is in contact with the tissues you need to operate on.
Some practical tips for using the electrobistoury are provided below.
Annexed to this manual you will also find diagrams indicating the output powers at the full and halfway settings on load resistances ranging from 50 to 2000 ohms and diagrams indicating the output powers at various settings on a load resistance of 800 ohms.

INSTRUCTIONS FOR USE

To activate the electrosurgery handpiece, follow the sequence of operations listed below:

1) Insert plug of the neutral electrode's cable into the socket placed in the lower part of the tool table and ask the patient to hold the electrode.

2) Extract the active handpiece and insert it into the gripper of the electrode required to perform the operation.

3) Choose the desired function by setting the controls on the desired option among the following:

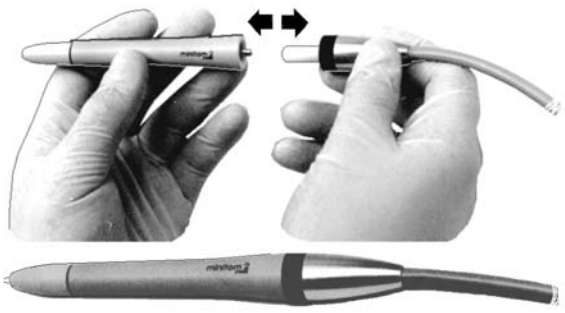
CUT ONLY **CUT AND COAGULATE** **COAGULATE**

4) Adjust output power using the controls checking the setting on the numerical display

5) Activate the equipment by pressing the foot lever in the direction indicated with **G** in the picture.
A continuous tone indicates that the electrosurgery handpiece is in operation.
When the foot lever is released, it is immediately deactivated.

We recommend that you activate the appliance only when the electrode is in contact with the tissue on which the operation is to be performed. Below we set out some practical advice on how to use the electrosurgery handpiece.
Attached you will also find the diagrams indicating output power on maximum and medium settings with load resistances from 50 to 2000 ohm and diagrams indicating power output at various settings with an 800 ohm load resistance.

CLEANING, DISINFECTING AND STERILISING



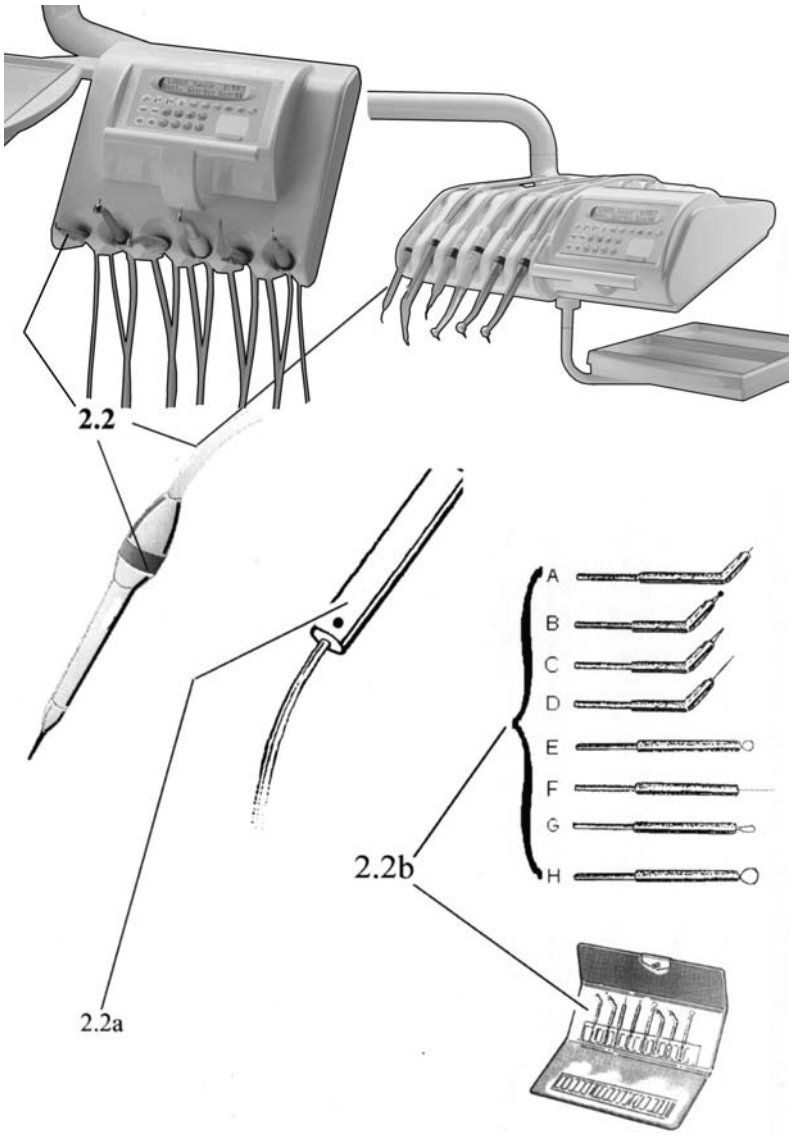
Pict. 5a

ATTENTION! The instrument is supplied not sterile.
Before use sterilize according to the above specifications.

The handle, terminal and neutral electrode of the active handpiece may be cleaned with cotton wool and surgical alcohol. After disconnecting it (see pict. 5a), the handle of the "MINITOM 2" active handpiece may be sterilised in an autoclave at 135 °C, 210 kPa (2,1 bar) for 20 min (Pict. 5a).
Electrodes can be sterilised in an autoclave at 135 °C, 210 kPa (2,1 bar) for 20 min.

Warning! Check the autoclave at regular intervals in accordance with the manufacturer's instructions. Temperatures higher than the stated limit can damage the instrument.

The sterilisation of the above said parts must be done before use on each patient.



Pict. 5

PRACTICAL ADVICE

* Before using the electrosurgery handpiece on a patient for the first time, we recommend that you practice using lean raw beef, so as to assess the correct amount of power needed to operate with different types of electrodes, testing the different functions.
  Do use the neutral electrode even when performing these tests.

* Always keep the electrode as perpendicular as possible in relation to the tissue surface, to allow the cell volatilisation process to be as full and effective as possible.

* In order to always obtain satisfactory results while operating on patients, always ask them to hold the neutral electrode and always keep the electrodes clean and polished.
  An insulating layer of burnt tissue forms on the surface of dirty electrodes which causes sparking and carbonises the surfaces it comes into contact with.

* Activate high frequency tension only when the electrode is in contact with the tissue.
  If you activate it too soon, an electric arc may form as the electrode approaches the tissue, carbonising the surface and thus forming an insulating scab.

* Always adjust power output on the lowest setting compatible with the operation to be carried out, in relation to electrode size, tissue condition, depth of the incision and speed of operation.

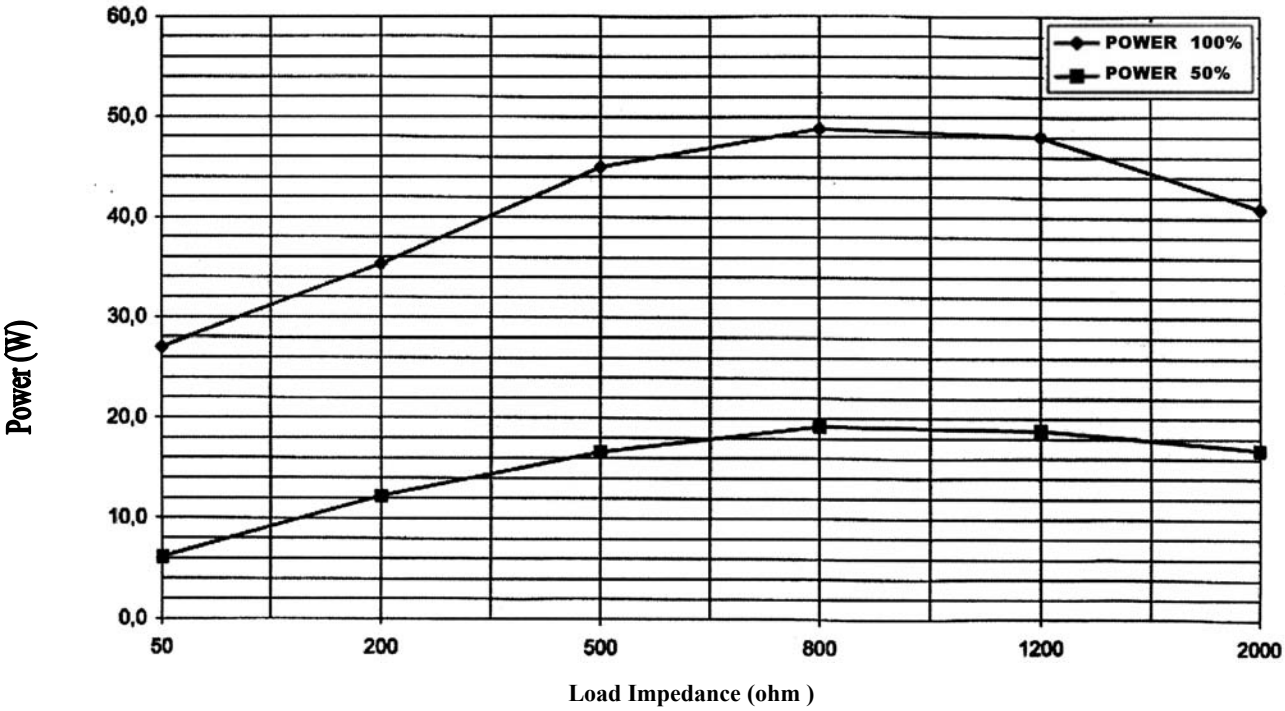
* Extract excess saliva only with plastic saliva ejector tubes, trying to leave only the tissue area slightly moist.

* When cutting only, use small section electrodes (thin needles) and move the electrode on the tissue as quickly as possible.

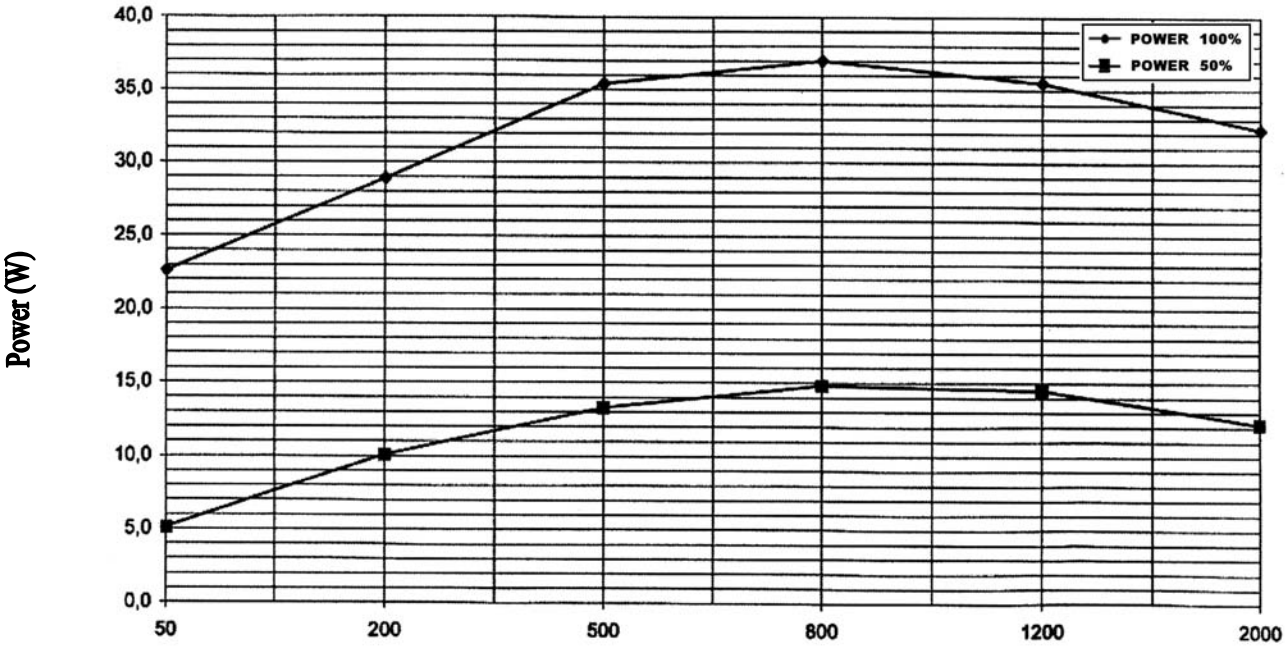
* For cutting and coagulating, use larger section electrodes (larger needles) and move the electrode slightly more slowly.

* For coagulating only, use the special spherical or truncated cone electrodes. If you cannot avoid using small section electrodes, adjust power and, where necessary, operating time on the minimum setting.

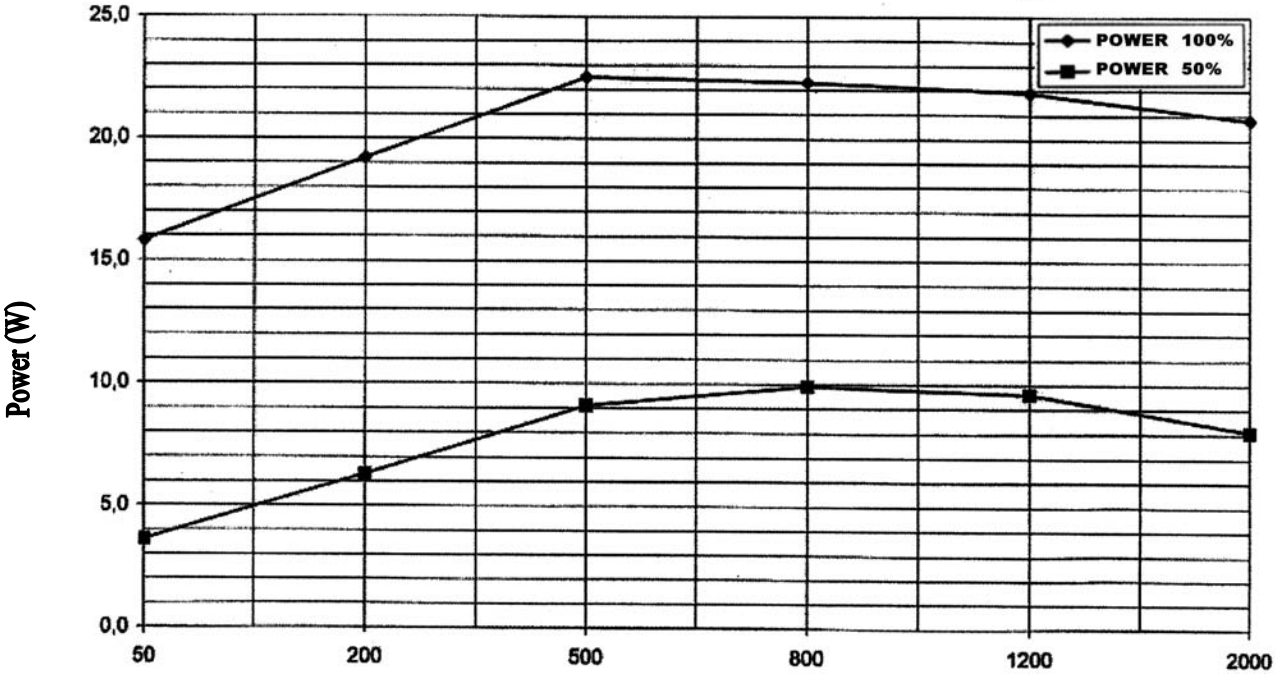
Electrosurgery "Minitom 2" Power Diagrams - Cut Position



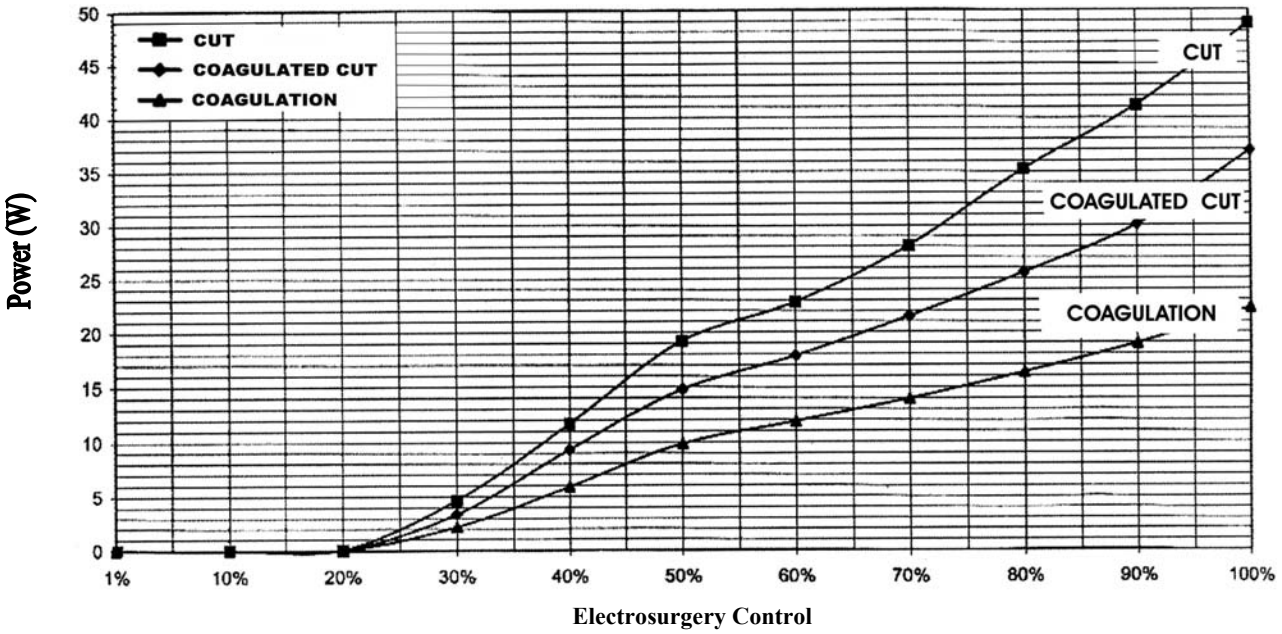
Electrosurgery "Minitom 2" Power Diagrams - Blend Position



Electrosurgery "Minitom 2" Power Diagrams - Coag. Position

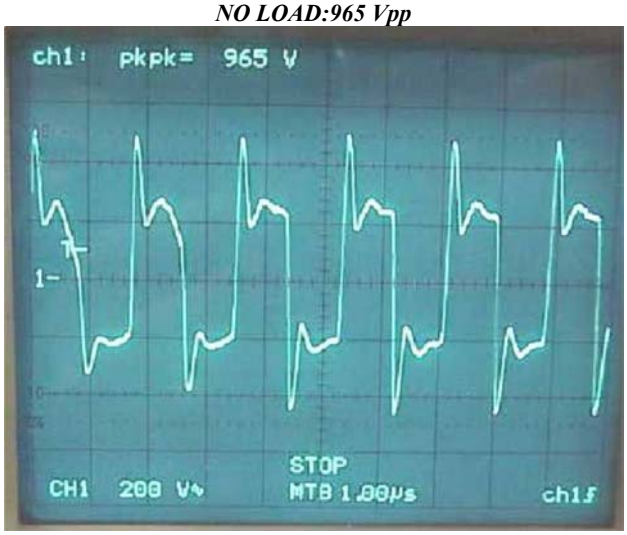


Electrosurgery "Minitom 2" Control Linearity Diagrams (Load Impedance = 800 Ω)

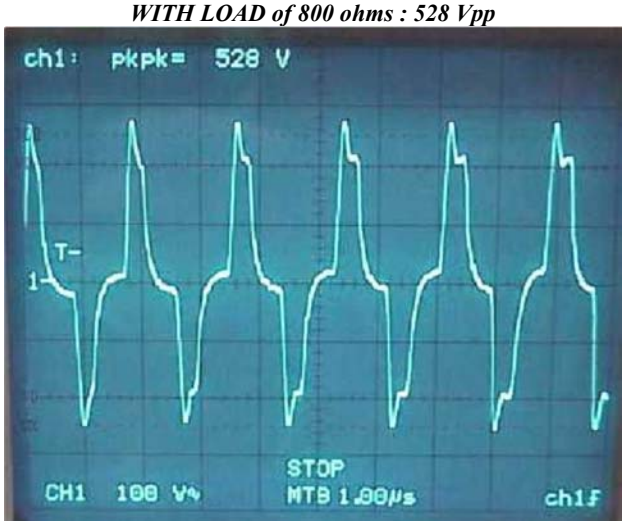


DIAGRAMS INDICATING THE MAXIMUM PEAK VOLTAGES THAT MAY BE OUTPUT ACCORDING TO THE AVAILABLE FUNCTIONS (CUT – COAGULATING CUT – COAGULATION)

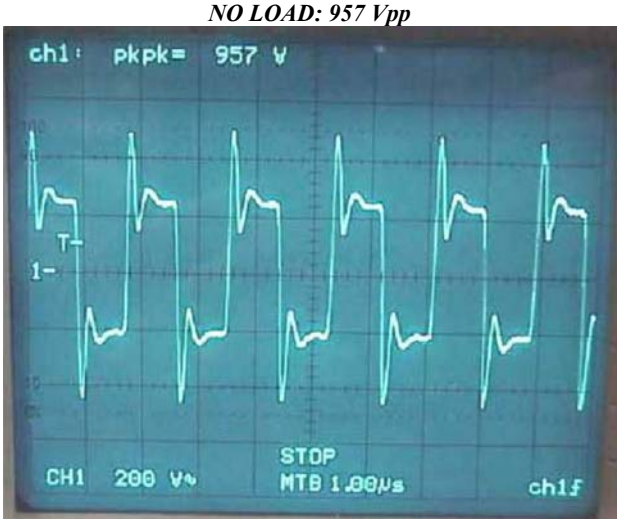
FUNCTION: PURE CUT (CUT)
NO LOAD:965 Vpp



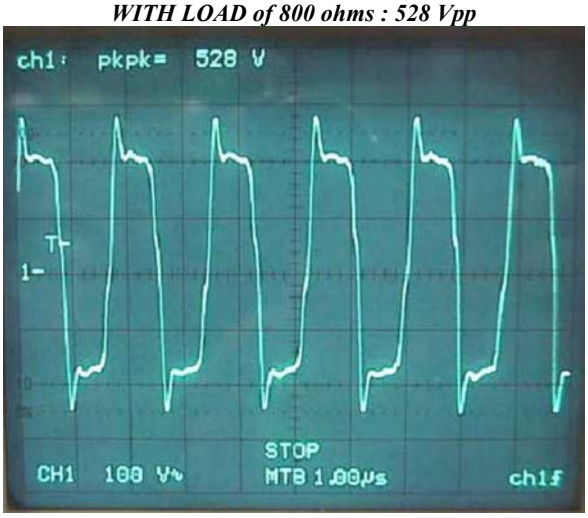
FUNCTION: PURE CUT (CUT)
WITH LOAD of 800 ohms : 528 Vpp



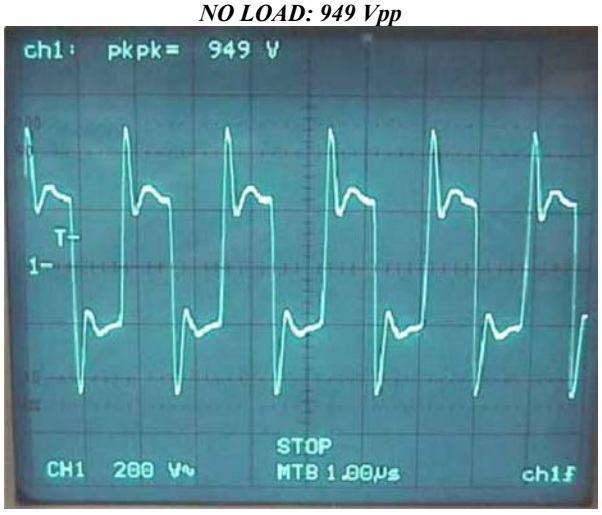
FUNCTION: COAGULATING CUT (BLEND)
NO LOAD: 957 Vpp



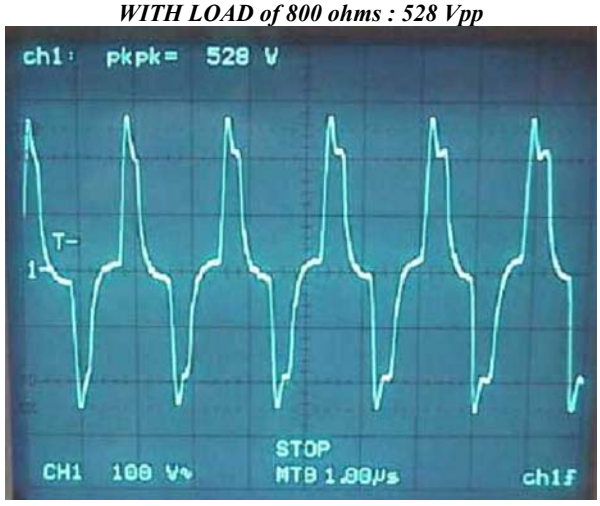
FUNCTION: COAGULATING CUT (BLEND)
WITH LOAD of 800 ohms : 528 Vpp



FUNCTION: COAGULATION (COAG)
NO LOAD: 949 Vpp



FUNCTION: COAGULATION (COAG)
WITH LOAD of 800 ohms : 528 Vpp



LOGOS Junior

PART IV - INSTRUCTIONS FOR THE INSTALLATION

ESSENTIAL REQUIREMENTS

PREMISE

THIS EQUIPMENT MUST BE INSTALLED only by specially trained and qualified technicians, carrying a valid "Authorised Castellini Technician" identification card.

The use of persons not meeting the above requirements, or in possession of an expired Castellini identification card, will automatically and immediately invalidate the equipment guarantee and all certifications, exonerating Castellini from any form of responsibility and transferring it de iure et de facto onto the person responsible for the operation, together with any criminal or civil proceedings undertaken by Castellini and claims for any damages suffered by third parties, including any further and/or greater damages.

The specially trained and qualified technician, carrying a valid Castellini identification card must not make alterations without prior authorisation, arbitrarily tamper or incorrectly carry out maintenance operations (i.e., not in compliance with the instructions issued by Castellini itself) and must not use non-original spare parts and/or components, nor connect Castellini products to any medical devices not approved by Castellini or not in compliance with the compatibility parameters specified by Castellini itself.

The specially trained and qualified technician, carrying a valid Castellini identification card is not authorised to alter or in any way interfere with the electric mains supply system as the law requires such operations to be carried out by specially authorised technical personnel (see applicable law)
Furthermore, no alterations or technical operations of any kind or nature may be performed on the water mains supply and water treatment systems or, generally, to the area in which the equipment is to be installed, as any works of this nature are the personal responsibility of the person legally responsible for the dental surgery (see "Important Warnings", page 4, Operator's Instructions).

Any violation of the above renders the identification card null and void and requires its immediate surrender to Castellini. Castellini reserve the right to undertake civil or criminal proceedings and to apply for compensation of any damages incurred, including any further and/or greater damages, notwithstanding any applicable legal sanctions.

The technician, as defined above, must be aware of the contents of the entire manual, including the section entitled "Operator Instructions" and must follow them scrupulously.

During installation, the technician must follow all the instructions and recommendations contained in this manual as well as the **"Installation Check-list"** attached to the equipment. The **"Installation Check-list"** must be signed by both the technician and the client.

The technician must also scrupulously fill in the documents and perform the duties for which he is competent, as described in the **"Installation Certificate"** attached to the equipment, signing the sections that concern him and asking the client and the sales personnel to sign those that concern them.

*A copy of the **"Installation Certificate"** and of the **"Installation Check-list"** must be forwarded to Castellini S.p.A. on the day the equipment is installed.

The technician must hand to the client a **"Malfunction/accident report"** form, inviting him to keep it safe and explaining that such form is to be used by technicians only to report any specific malfunction and/or accident to Castellini S.p.A.

The owner of the equipment is responsible for booking the services of the Castellini technician at all times.
The technician who performs the scheduled maintenance operations is responsible for correctly and accurately filling in the attached forms (see "Scheduled maintenance operations"), and must sign them, taking the responsibility for their accuracy upon himself.

The technician must explain to the user and any assistants how to use and maintain the device according to the directions provided herein.

The technician must thoroughly explain to the user and any assistants how to properly perform the maintenance operations described in the "*Protocol for Hygiene and Maintenance of Dental Unit".* (Also see, Protocol for Hygiene and Maintenance of the Castellini Dental Unit).

The technician must inform the user that all routine maintenance and sanitation of the dental unit must be performed exclusively with the products (lubricants included) specified by Castellini (see, "*Routine Maintenance Program"* and "*Products to be used with the Castellini Dental Unit"*). It is forbidden to use any product other than those explicitly named in this manual and in the "*Protocol for Hygiene and Maintenance of Dental Unit".*

* The equipment is fitted with an I.M.Q. certified, 10 A - 380 V FAO BRETER power switch (to simultaneously separate the positive and negative poles).

The equipment **MUST** be fitted at source with a wall-mounted automatic differential switch manufactured in compliance with European standards, with a minimum of 16 A - 250 V and IΔN differential power supply not above 0.03 A
Where the above mentioned switch is not already available, it must be fitted by personnel licensed to operate on the electricity mains supply system, in the manner and under the terms envisaged in the relevant laws.

The Manufacturer warns that any failure to comply with the above prescription will be considered improper use in contradiction with the manufacturer's directions and as a result will compromise the essential safety requisites prescribed by Directive 93/42 EEC, thereby invalidating the EC mark placed on the device.

Technicians are obliged to compile the **"Non-conformity Report"** form and send it to Castellini S.p.A.'s main office whenever they observe:
- that other medical devices and/or accessories not authorised by Castellini, or in any case outside the specifications of compatibility indicated by Castellini S.p.A., have been connected to Castellini products;
- evidence of unauthorised modifications, arbitrary tampering or maintenance work not complying with the directions provided by Castellini;
- evidence of previous use of non-original spare parts and/or components.

* The dental unit **MUST** be provided with an earth connection in compliance with BS standard.

* The dental unit is designed to be permanently connected to the power mains, by means of a suitable input terminal board.

* The safety fuse is inserted on the live pole (conductor with brown insulation sheath marked with wiremarker **L**).
Access to the fuse (part. **6.3** – pict. 4) is only possible by means of a special screwdriver.

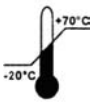
* In order to correctly connect the dental unit to the mains, the dentist's chair to the dental unit and, where applicable, the air extractor to the dental unit, follow instructions at the pictures 1.1, 1.2, 1.3, 1.4, 1.5, 1.6.

If the installation of an air compressor is required, separate power supply and protection device are necessary.

* Before proceeding with the installation the pipework should be thoroughly cleaned to avoid the penetration of any sediments in the water and compressed air circuit of the dental unit and the water pipes should be bled to eliminate any air bubbles.

* In order for the dental unit to work efficiently, it is essential that the room in which it is to be installed is adequately prepared, that care is taken in transporting special fittings, that all components are correctly installed and that the maintenance operations schedule recommended by the manufacturer is followed.

PERMITTED ENVIRONMENTAL CONDITIONS FOR TRANSPORT AND STORAGE



- Ambient temperature between - 20 ° and + 70 °C;

- Relative humidity between 10 and 100 %;

- Atmospheric pressure between 500 and 1060 hPa (500 ÷ 1060 mbar).

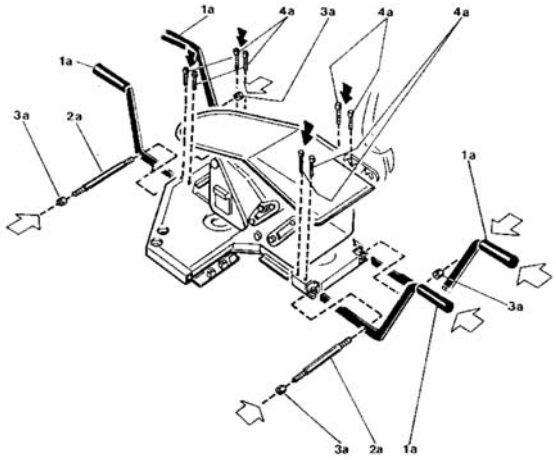
- The appliance **MUST NOT** be removed from its packaging during transport and storage.

- After installation the first test operation must not be performed until the appliance has reached ambient operating temperature (10 ÷ 40 °C).

INSTALLING THE CHAIR AND THE UNIT

TRANSPORTATION OF THE CHAIR (Pict. A)

In order to transport the chair more easily to the installation area, it is advisable to use the appropriate handles (**1a**) mounting them on the steel frame of the chair base using the securing pins (**2a**) nuts (**3a**) and setscrews (**4a**).

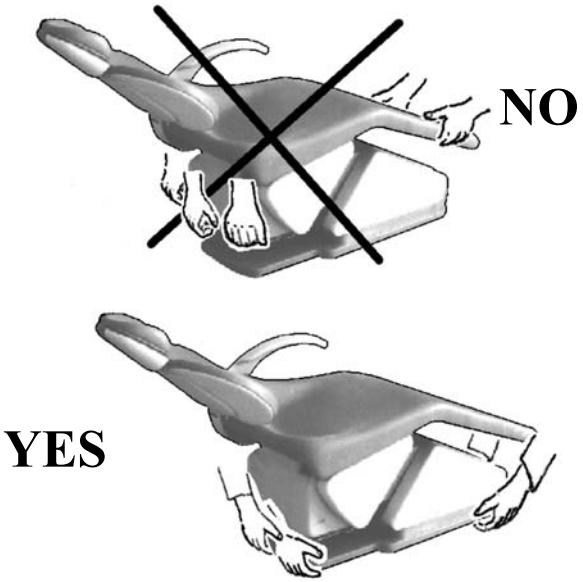


Pict. A

INSTALLING THE "THESI 2" CHAIR (Pict. B)

First lift the mobile part of the seat, and remove the cover housing of the "feed-in section", then place the chair to correspond with the power supply lines on the floor and secure it by means of the two bolts. To prevent likely damage when handling, do not hold the chair by the rear cover housing (pict. B) or by the chair's front end (footrest). Always hold the chair by the floor base or use the lift equipment shown in picts. 1A and 2A.

It is advisable to complete all the chair's installation steps before fitting the upholstery to the chair's seat.



Pict. B

INSTALLATION OF SUCTION STOP DEVICE IN CHAIR BASE *(only on request)* **(Pict. F)**

The suction stop device must be installed before the plastic cover is fit on the chair base. Connect the suction stop device (**F1**) to the electric wire (**F2**) situated inside the base itself, using the two fastons (**F3**), and fasten it to the metal base with the two screws provided (**F4**).

Position the cover on the base. Make sure the control of the suction stop device fits correctly through the corresponding hole (**F5**).

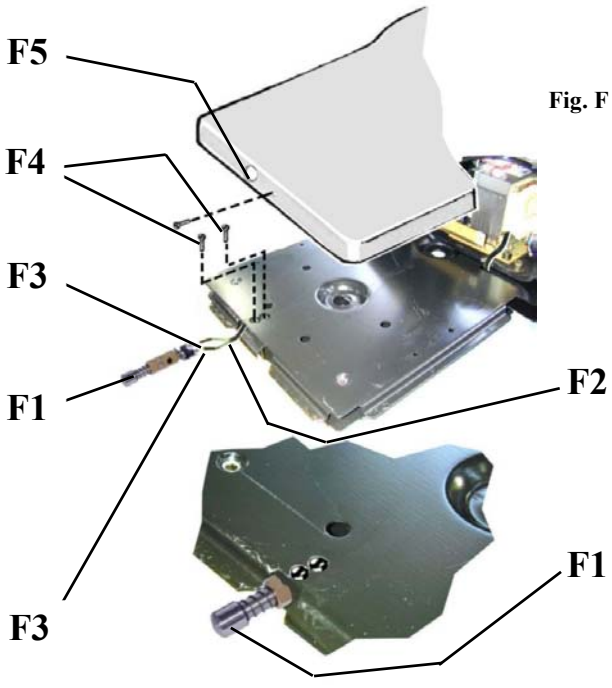
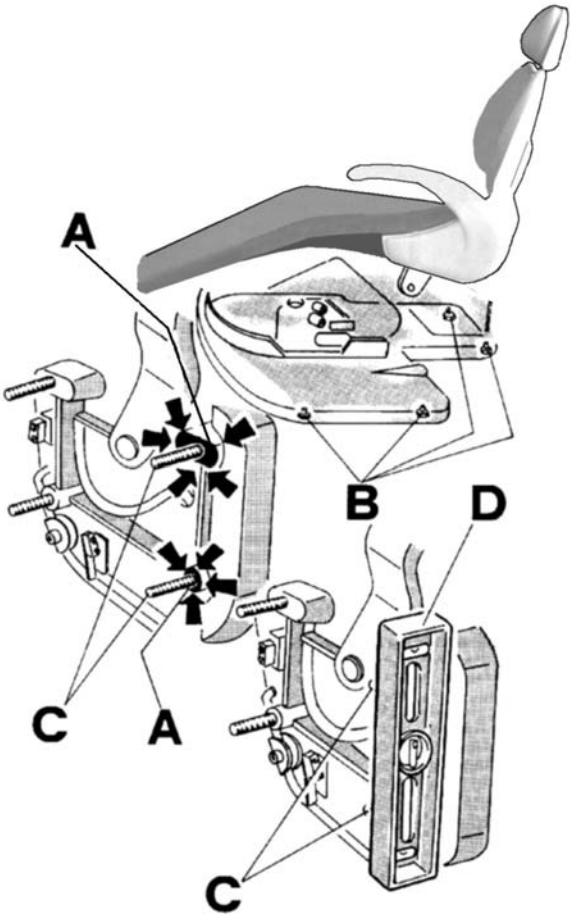


Fig. F

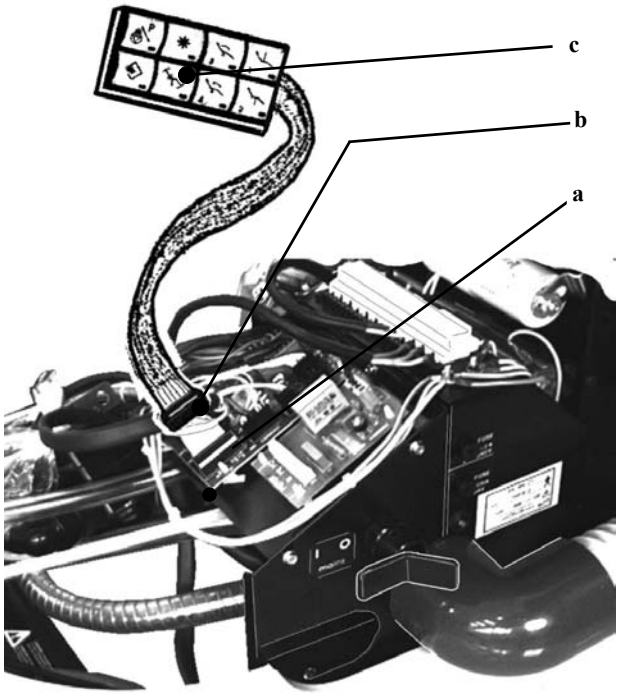
Pict. F

LEVELLING THE BASE OF THE "THESI 2" CHAIR (Pict. C)

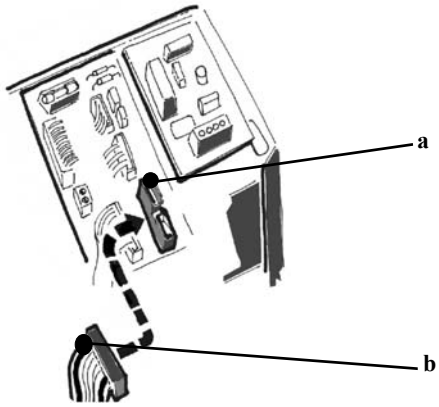
In order to ensure adequate stability of the chair even on slightly uneven floors, the chair base is provided with four adjustment pins (B see picture).
Place the chair in the desired location of the dental surgery and proceed as follows:
- Check that the chair is correctly levelled by placing a level (**D**) on the two reference planes (**A**) next to the two securing pins (**C**).
- Tighten or loosen the adjusting pins (**B**) to obtain proper levelling and maximum stability of the chair.



Pict. C

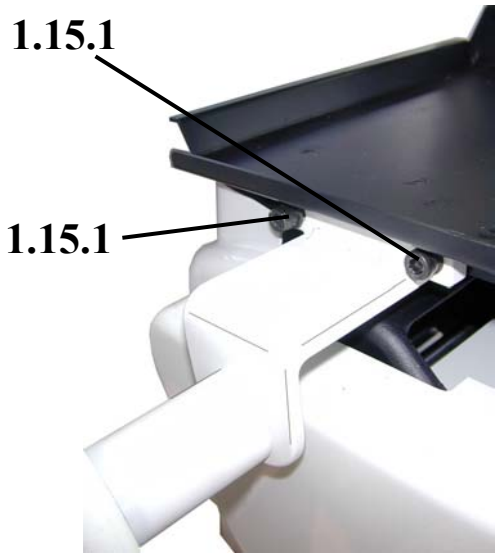


Pict. D

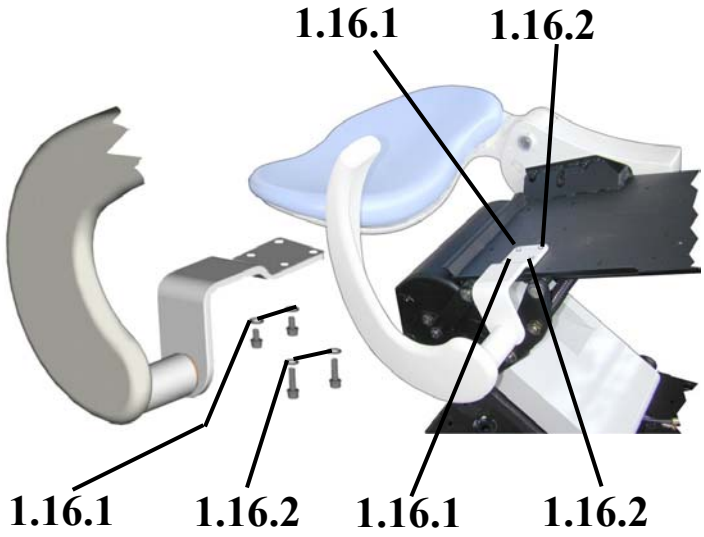


CONNECTING THE TEMPORARY CONTROL PANEL (Pict. D)

It is recommended to carry this step out now so as to facilitate the up-and-down movement of the chair which is necessary when assembling the dental unit.
Before starting, make sure that the power supply is off. Next replace connector in the chair's circuit seat (**a**) with the cable link connector (**b**) of the control panel (**c**). Connector (**a**) on the control panel side is to be connected so that the flat link cable (**c**) issues towards the bottom of the control panel (shown in working position).
Now turn on the power, and the chair can be controlled manually. Once the dental unit has been fully installed, turn off the power supply and detach the temporary control panel, reconnect the chair's power cable.



Pict. 1.15



Pict. 1.16

INSTRUCTIONS FOR INSTALLING THE RIGHT ARM REST ON "THESI 2" DENTAL CHAIR (Pict. 1.16, 1.17)
(only on request)

The "THESI 2" dental chair is delivered with the right arm rest not installed. A bag containing no. 4 socket head screws (2 short screws marked with **1.16.1** in Pict. 1.16 and 2 long screws **1.16.2**) and relative washers for fastening to the seat is included in the package.

Place the arm rest on the seat as shown in figure 1.16 and fix it by means of the screws (**1.16.1, 1.16.2**) provided..

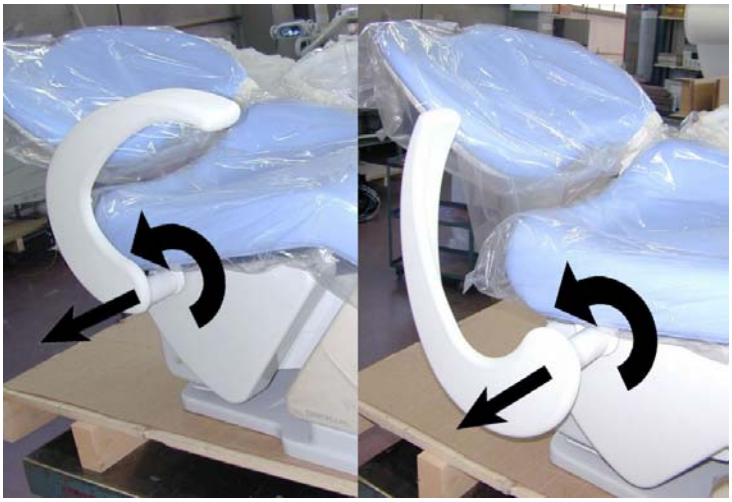
Apply the upholsery on the seat, pull the arm rest outwards and turn it clockwise up to reach the working position (see Pict. **1.17**). To let the patient get on to or down from the chair, pull the arm rest outwards and turn it anticlockwise.

INSTRUCTIONS FOR INSTALLING THE RIGHT ARM REST ON "THESI 2S" DENTAL CHAIR (Picts. 1.15, 1.17)
(only on request)

The "THESI 2S" dental chair is delivered with the right arm rest not installed. A bag containing no. 2 socket head screws and relative washers for fastening to the seat (**1.15.1** see Pict. 1.15) is included in the package.

Place the arm rest on the seat as shown in figure 1.15 and fix it by means of the screws (**1.15.1**) provided..

Apply the upholsery on the seat, pull the arm rest outwards and turn it clockwise up to reach the working position (see Pict. **1.17**). To let the patient get on to or down from the chair, pull the arm rest outwards and turn it anticlockwise..



Pict. 1.17

INSTALLING THE DENTAL UNIT (Pict. C1)

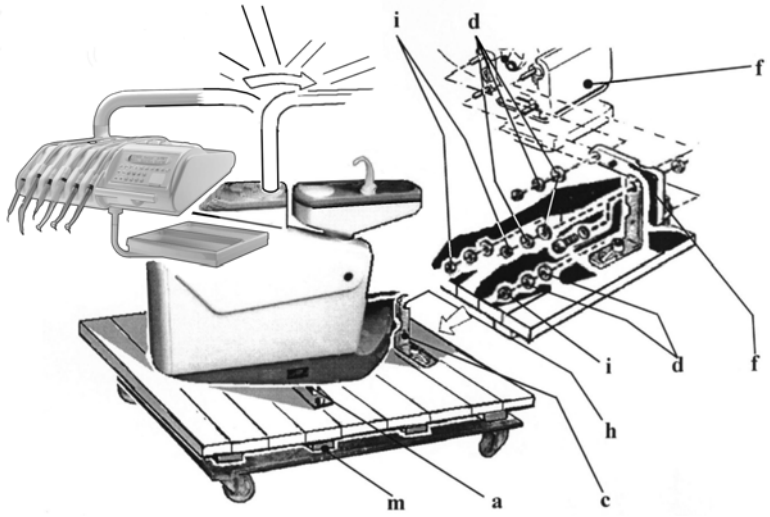
Make sure that all pre-installation work has been performed according to the instructions shown on the 1:1 scale installation plan diagram and in this manual, then carry out the following operations in the stated order:

1) Using dolly (**m**), place crate containing the unit near the chair.

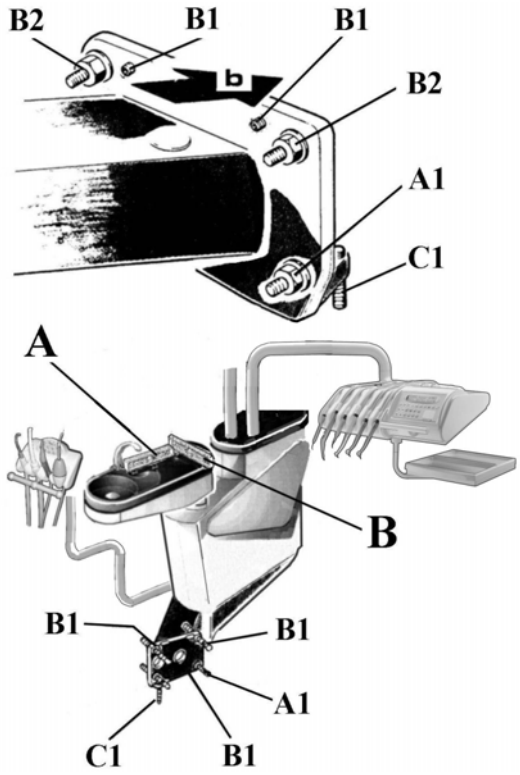
\2) Remove the cover to open and take out all the accessories attached to the unit.

3) Push on stay (**c**) so as to turn the unit around pin (**a**) a until plate (**h**) is parallel to the chair.

4) Place the dental unit trolley alongside the chair, then perform the following operations to allow the chair to be operated and to facilitate the procedure:
   4.1 - Connect a temporary push button panel to the chair, as shown in Pict. D and connect the electricity supply as shown in Pict. 1.3.
   4.2 - Activate the seat raising mechanism until the coupling (**f -** Pict. **C1**) is at the same height as the plate (**h**), then bring the trolley carrying the packed dental unit near the chair until the plate (**h**) meets the coupling (**f**) and insert the threaded pins in the holes provided on the plate (**h**).
   4.3 - Insert the flat notched washers (**d**) and apply the four nuts (**c**). Before tightening the nuts all the way, level the dental unit, following the directions provided in the chap. **"LEVELLING THE DENTAL UNIT"** (Pict. D1).
   Caution: The safety binding that prevents the tray arm from rotating **MAY BE REMOVED ONLY AFTER** the dental unit has been completely fastened to the chair.



Pict. C1



Pict. D1

LEVELLING THE UNIT (Pict. D1)

First check that the chair base is properly secured to the floor and the stand is set in working position. Now check that unit is perfectly flat by placing the level at point **A** then at point **B**.
Correct level at point **A** by tightening or loosening the dowel (**C1**); then thoroughly tighten the two nuts (**A1**).
Correct the level at point **B** by tightening one by one the two dowels (**B1**); then thoroughly tighten the two nuts (**B2**).
These steps are necessary when the floor is not perfectly level.

INSTALLING THE UNIT'S FEED BOX (Picts. 1.1, 1.2 and 1.3)
The service technician is also to secure at installation the supply box and make the hydro-pneumatic and wiring connections as shown in Pict. 1.1, 1.2, 1.3.
After turning off all power at the mains switch, complete the following steps in the order given below:
1) Attach electrical contact (**1.1.6**) in the mains switch housing (pict. 1.1) by snapping into place the two couplings (**1.1.9**).
2) Unloose the three screws (**1.2.1** - Pict. 1.2) and lift the circuit supporting plate (**1.2.2**), than fix the **"feed support"** (**1.2.4**) on the chair matal base, by means of three suitable screws (**1.2.5**), by usisng the present fixing points.
Check the free insertion of the pipe elbow the union elbow (**1.2.6**) between two plates (**1.2.4** and **1.2.7**).
Then cut the cables fastoner (**1.2.8**), reassemble the circuit supporting plate (**1.2.2**) and fix it by means of the three suitable screws (**1.2.1**).
3) For electrical links see pict. 1.3:
- Cut the cable wrap-tie wich ties all the cables and connect the following parts:
- Connect the yellow-green wire's eyelet terminal to one of the earthing screws and lock in place by means of the nut with its special washer.
- Insert chair cable connectors (**1.3.2** and **1.3.3**) into the corresponding jacks, which are soldered to the lower part of printed circuit E6000401.
4) Now connect the air and water supply and the drain lines to their matching floor lines (see pict. 1.1 and unit's installation diagram, scale 1:1). See (pict. 1.3) and related instructions for connection to central aspiration system.

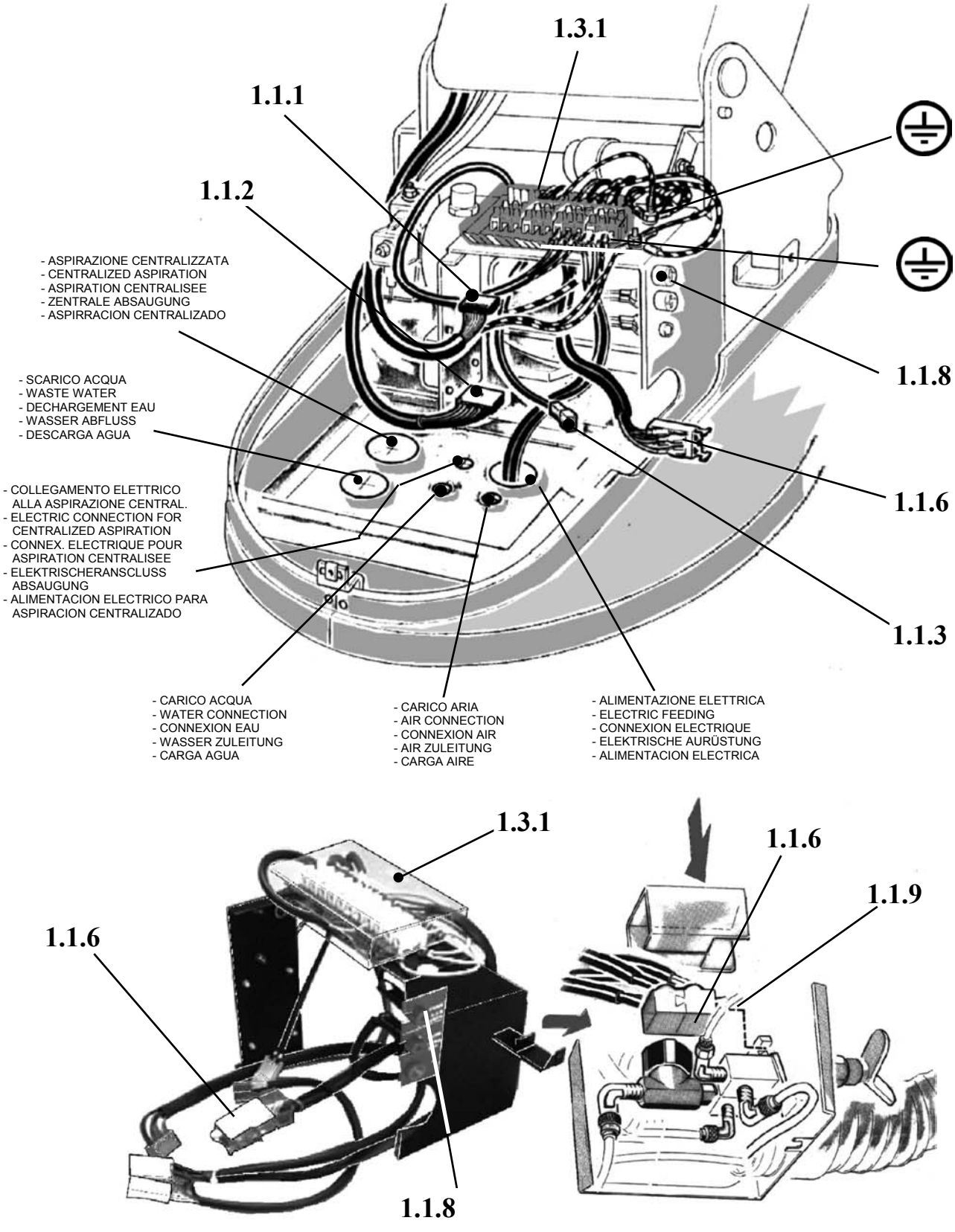
FOOT PEDAL CONNECTION (Picts. 1.4 and 1.5)
Raise chair to maximum height and unscrew the seven fastening screws (**1.4.3**) in order to remove the base plastic semi-covers (**1.4.1** and **1.4.2** - Pict. 1.4/A).
Remove the two screws (**1.4.4**), the washers (**1.4.5**) and the cable clamp (**1.4.6**) (Pict. 1.4/D).
Insert the electric connector (**1.4.7**) through the opening (**1.4.8**) in the base frame (as shown in Pict. A). After having bent the leads in order to minimize space occupied and having pushed the foot pedal cable out of the hole (**1.4.9**), check for free cable movement throught hole (**1.4.10**).
Following the above steps, insert rilsan tubes (**1.4.11**), having first taken care to wrap them in adhesive tape so as to facilitate insertion (see Pict. 1.4/B).
Upon cables and tubes coming out, pull both simultaneously by hand (as shown in pict. 1.4/C).
Insert the connector (**1.4.7)** into the appropriate seat on E6000401 circuit and then, by means of the appropriate couplings, connect the three foot pedal tubes (**1.5.1**, **1.5.2** and **1.5.3**) to the corresponding dental unit tubes.
Remount the cable clamp (**1.4.6**) on the fairlead (**1.4.12**), securing it by means of the appropriate screws (**1.4.4**) and washers (**1.4.5**).
Remount the two plastic semi-covers (**1.4.1** and **1.4.2**) securing them by means of the appropriate screws (**1.4.3**).

CONNECTION TO AN AIR OR LIQUID-RING CENTRALIZED SUCTION SYSTEM (Pict. 1.3)
Connect the cable protruding from the floor, which is in turn connected to the centralized suction system control unit, to the main terminal board (Pict. 1.3), in a position corresponding to the terminals marked "**ASPIRATOR**", after lifting the cover (**1.3.1**).
The cable has three wires marked **1-2-3**; insulate wire number **3** and connect wires **1-2** to the terminals **C1 - C2** respectively.
Then insert the electropneumatic valve (**2**) directly in the suction tube laid in the floor, as shown in the figure.
To ensure a perfect seal between the valve and tube, it is recommended to use a specific sealing compound for PVC.
Then close the cover (**1.3.1**) and fit it securely in place, after having first switched on the dental unit and checked the general functions.
IMPORTANT: - METASYS SEPARATORS - If a METASYS separator is installed in the dental unit, there is no need for the electropneumatic valve; tube F (Pict. 1.3) should be directly connected to the centralized suction tube protruding from the floor.

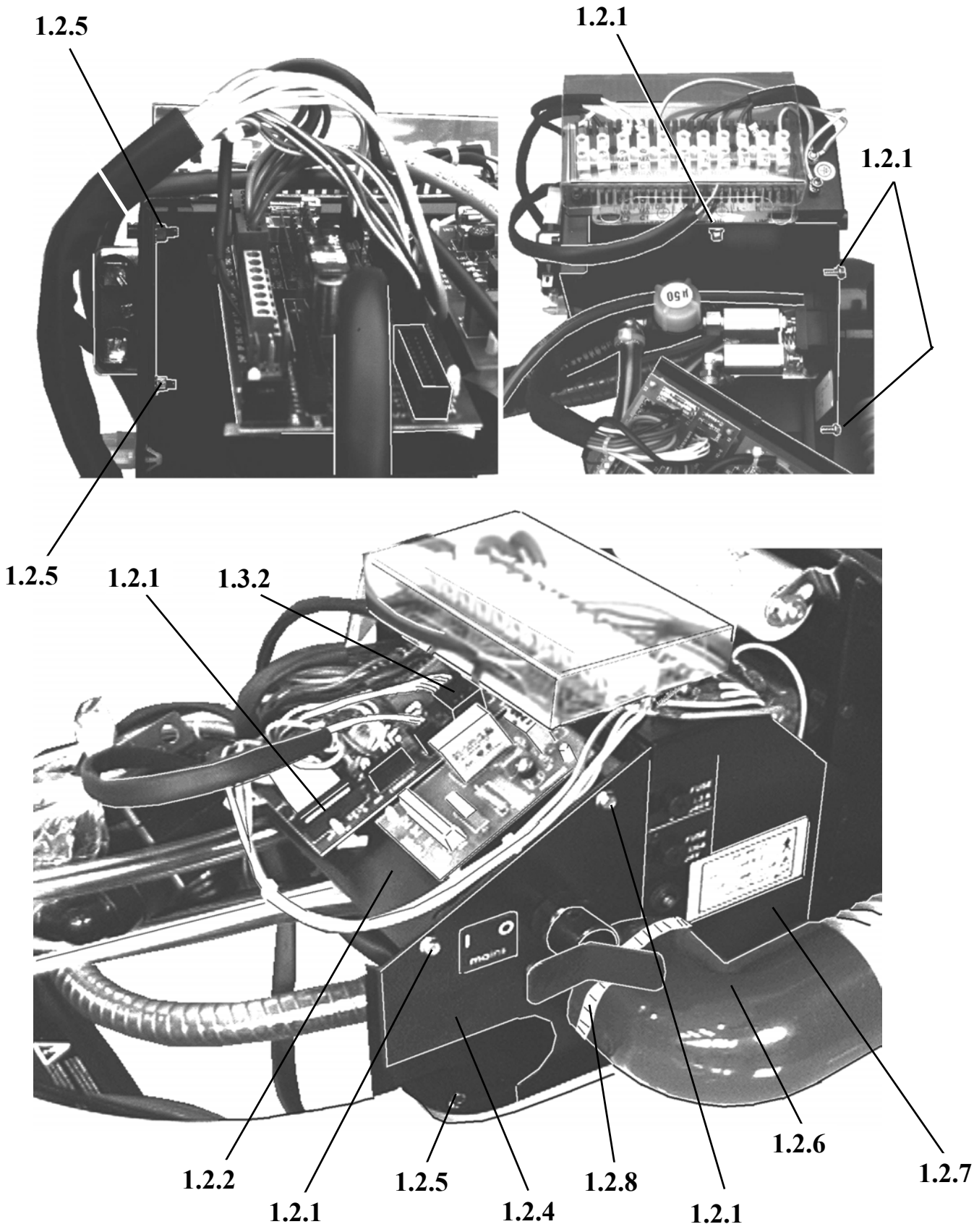
CONNECTION TO TYPE "S" SUCTION SYSTEM (Pict. 1.1 - 1.3 and 1.6).
- Suction tube **F** (**Pict. 1.3**) must be connected to aspirator motor as shown in (**Pict. 1.6**), after it has been passed through the opening provided in the electric box.
- The cable with three wires for the power supply to the aspirator motor must be connected to the terminal board of the chair (**1.3.1** - Pict. 1.1),

to the terminals marked **MA** - **MA** ⏚ **ASPIRATOR**.
The cable itself must then be secured in place using the clamp provided (**1.6.8** - Pict. **1.6)**.
IMPORTANT: After completing the above steps, switch on the dental unit and activate the suction, taking a tube from its receptacle. Aspirate some water and check to make sure that when the level of the liquid in the mini separator reaches the two longest probes the drainage pump runs for a few seconds. Also make sure that when you have set the tube back in place the suction system shuts off after about 5 seconds.
After completing the above checks, set the chair pump motor cover in place and fasten it with the screws provided.

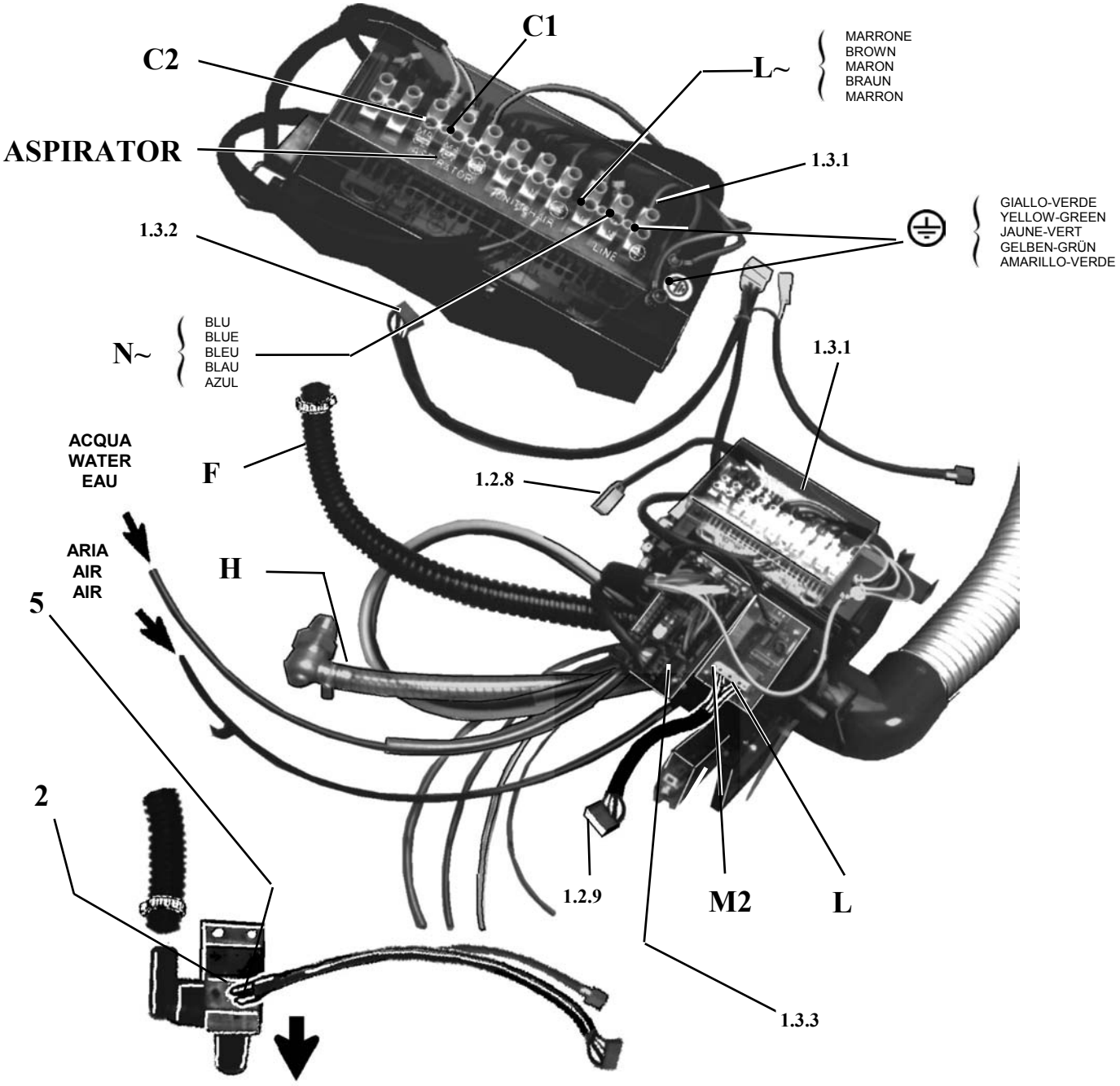
CONNECTION TO CENTRALISED SUCTION SYSTEM, "DÜRR" MODEL (Pict. 1.7A)
- Take the cover off the motor pump unit of the chair.
- Connect the suction tube with the corresponding tube placed inside the supply compartment (Pict 1.1 and detail F Pict 1.3).
Connect the two electric wires provided with the DÜRR centralised suction system to the terminals marked **C1 – C2 ASPIRATOR** on the general power terminal board (Pict. 1.3).
N.B.: After completing the above operations, turn on the main switch of the dental unit and activate the suction; take a tube from its holder and check whether the system works properly by aspirating water.
Set the tube back in place and repeatedly activate the cuspidor rinse, making sure that the drained water activates the system for a few seconds.
This setup does not provide for a connection between the dental unit liquid drainage system and the main drainage pipes.
After completing the above operations and checks, replace the cover on the motor pump of the chair and fasten it with the screws provided.


1.3.1
1.1.1
1.1.2
- ASPIRAZIONE CENTRALIZZATA
- CENTRALIZED ASPIRATION
- ASPIRATION CENTRALISEE
- ZENTRALE ABSAUGUNG
- ASPIRRACION CENTRALIZADO
1.1.8
- SCARICO ACQUA
- WASTE WATER
- DECHARGEMENT EAU
- WASSER ABFLUSS
- DESCARGA AGUA
1.1.6
- COLLEGAMENTO ELETTRICO ALLA ASPIRAZIONE CENTRAL.
- ELECTRIC CONNECTION FOR CENTRALIZED ASPIRATION
- CONNEX. ELECTRIQUE POUR ASPIRATION CENTRALISEE
- ELEKTRISCHERANSCLUSS ABSAUGUNG
- ALIMENTACION ELECTRICO PARA ASPIRACION CENTRALIZADO
1.1.3
- CARICO ACQUA
- WATER CONNECTION
- CONNEXION EAU
- WASSER ZULEITUNG
- CARGA AGUA
- CARICO ARIA
- AIR CONNECTION
- CONNEXION AIR
- AIR ZULEITUNG
- CARGA AIRE
- ALIMENTAZIONE ELETTRICA
- ELECTRIC FEEDING
- CONNEXION ELECTRIQUE
- ELEKTRISCHE AURÜSTUNG
- ALIMENTACION ELECTRICA
1.3.1
1.1.6
1.1.9
1.1.6
1.1.8

Pict. 1.1



Pict. 1.2

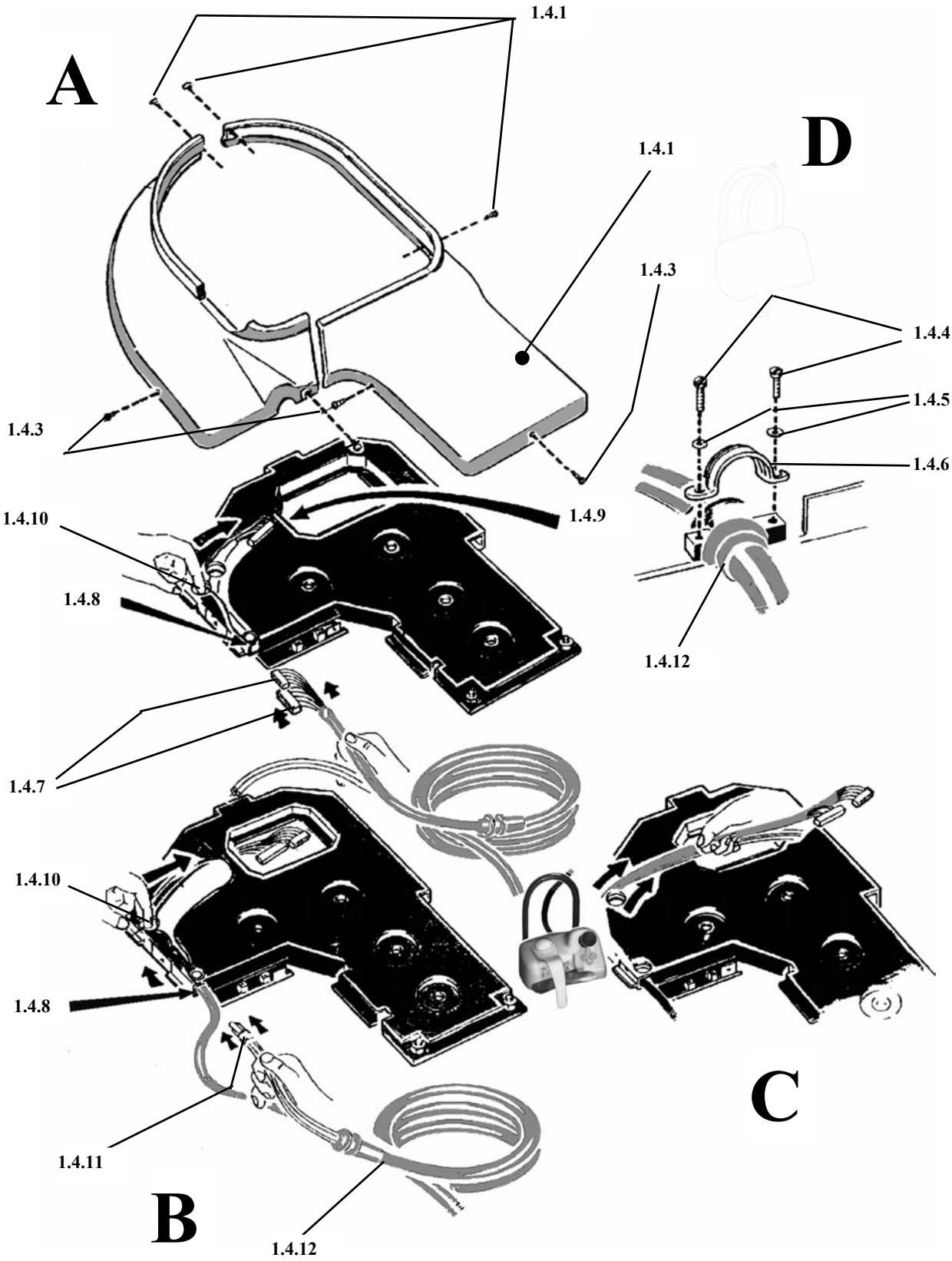


Pict. 1.3

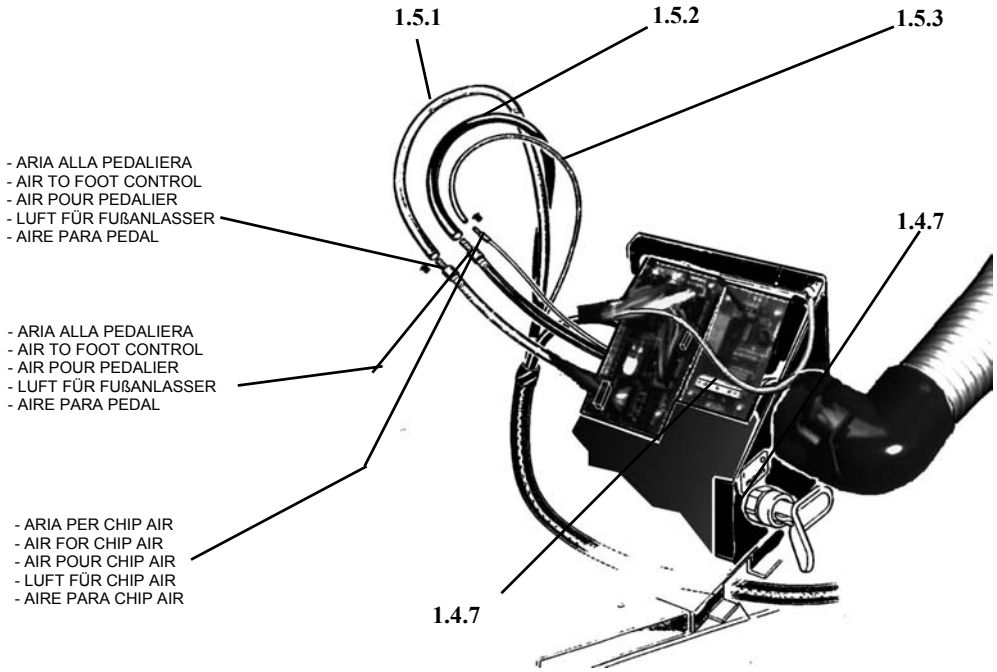
CONNECTION TO ELECTRICITY MAINS (Pict. 1.3)

To ensure a proper connection to the electricity mains, you must closely follow the directions below.
- switch off the main power supply of the surgery;
- take off the cover of the chair "Pump/Motor" unit as directed in the chap. "Protective Covers".
- lift the protective cover (**1.3.1**) and connect the power cable protruding from the floor to the three terminals identified by **"LINE"** on the main terminal board: i.e. the **brown** wire to the terminal marked **L~**, the **blue** wire to the terminal marked **N~**, the **yellow-green** wire to the terminal marked ⏚.
- After making the connections, fit each of the 3 wires into the guides provided beneath the terminal board, then replace the cover (**1.3.1**) and fit it securely back into place.

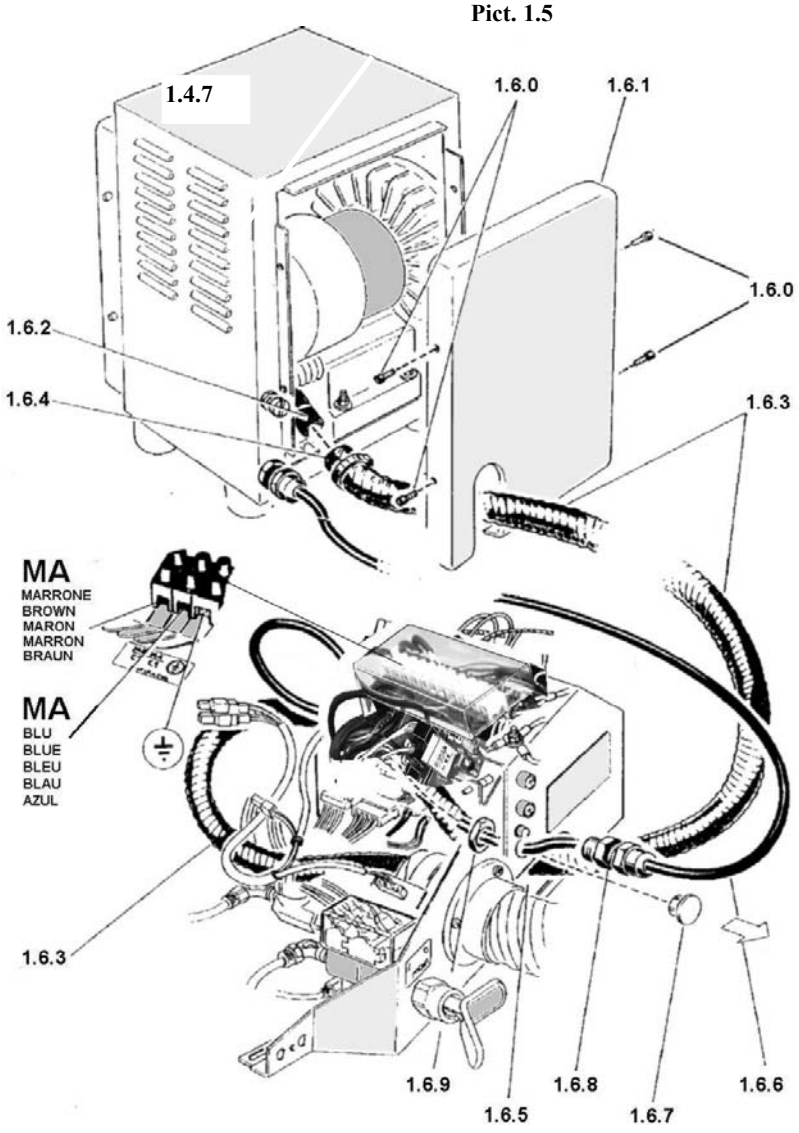
⚠ **CAUTION:** After the main power supply of the surgery is switched back on, the power terminals and contacts of the main switch of the dental unit (**6.1** - Pict. 4) will always be live.
After replacing the cover of the "Pump/Motor", fasten it in place with the screws provided (chap. "Protective Covers").


A
1.4.1
1.4.1
1.4.3
1.4.3
D
1.4.4
1.4.5
1.4.6
1.4.10
1.4.9
1.4.8
1.4.12
1.4.7
1.4.10
1.4.8
C
1.4.11
B
1.4.12

Pict. 1.4

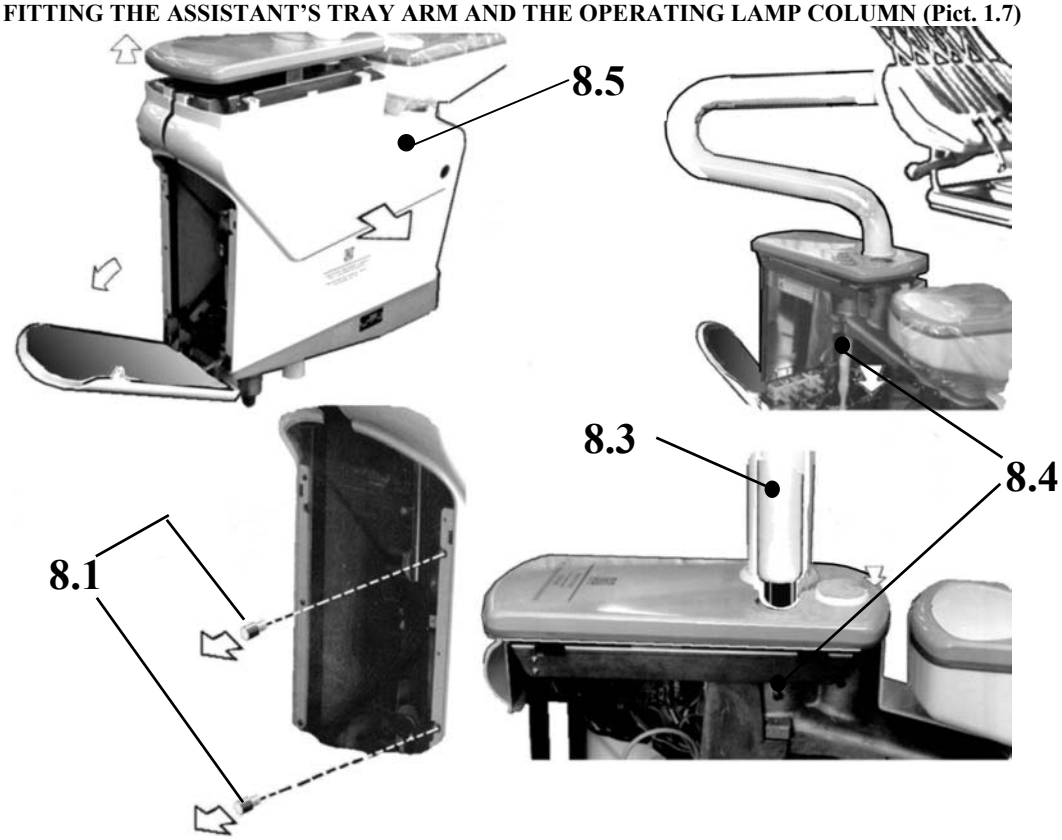


Pict. 1.5



Pict. 1.6

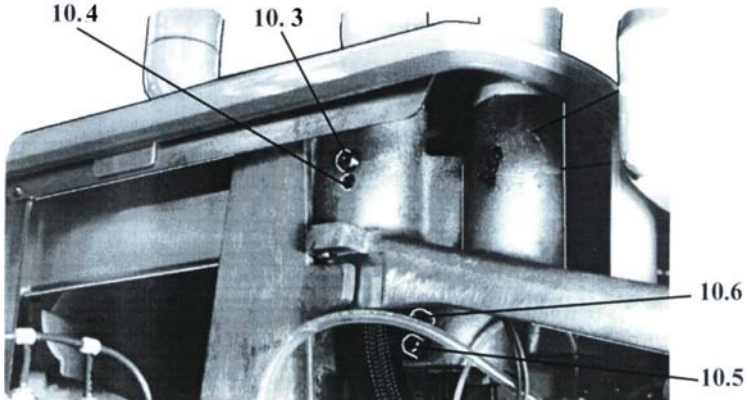
FITTING THE ASSISTANT'S TRAY ARM AND THE OPERATING LAMP COLUMN (Pict. 1.7)



Pict. 1.7

- Before beginning installation, you must gain access to the internal part of the dental unit. Proceed as follows:
  a) twist the side cover downwards and raise the top cover on the main section of the dental unit, keeping it raised by means of the special bracket.
  b) unscrew and remove the threaded knobs (**8.1**) and pull off the side cover using both hands (**8.5**).
- Slacken the securing dowel (**10.4**) and the clutch adjusting screw (**10.3**) (as shown in pict. 17A)
- Lift the operating light and fit the supporting pole (**8.3**) into its seat after inserting the electrical power cables (**8.4**).
  N.B.: To prevent damage, this cable **must not be pulled too hard from inside the main section of the dental unit.**

ADJUSTING THE CLUTCHES AND ARM STOPS (Pict. 1.7A)



After fitting the two columns into their seats, adjust the clutches and the stops as follows:
- Rotate the dentist's tray and operating lamp arms as required to reach the correct working positions relative to the chair.
- Tighten the security dowels as far as they will go and tighten or slacken the clutch adjustment screws to obtain reasonably free rotational movements.
  For ease of identification of the clutch stop and adjustment parts, refer to the following table:

Pict. 1.7A

Part of dental unit	Rotation stop dowel (part no.)	Clutch screw (part no.)
Operating lamp	**10.4**	**10.3**
Dentist's tray	**10.5**	**10.6**

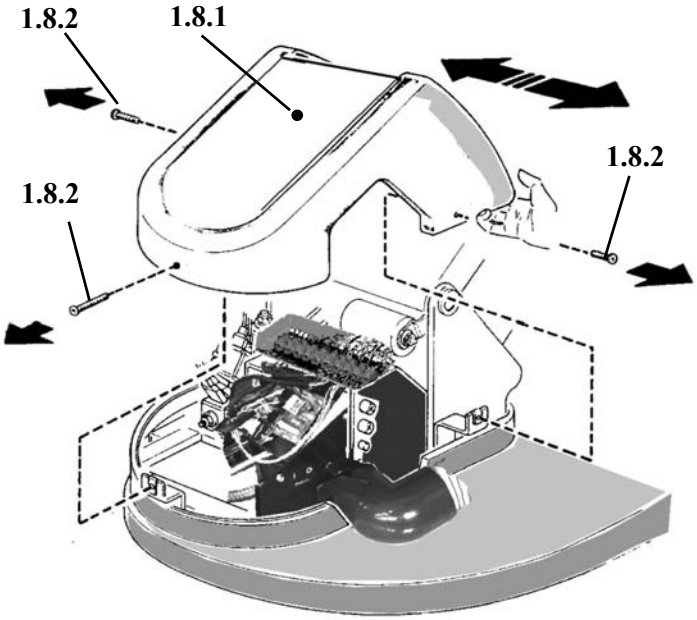
- After making the specified adjustments, make the necessary electrical and hydraulic connections then refit the guards and the locking knob (**8.1**).

SAFETY COVERS (Pict. 1.8)

COVER FOR THE CHAIR PUMP-MOTOR UNIT AND POWER UNIT.

The Castellini Company strongly recommend that cover (1.8.1), which prevents access to parts connected to the electrical mains, be removed with the following procedure only by qualified persons trained and authorized by Castellini:
- Raise the chair to its highest position and turn off the power (set the main switch to the **O** position).
- Unscrew the three screws (**1.8.2**).
- Grasp the cover at the rear, widen it slightly, and remove it by sliding upwards.

Attention: the power terminal board and main switch contacts are always live! After cover (**1.8.1**) has been replaced, the three securing screws (**1.8.2**) must be tightened.



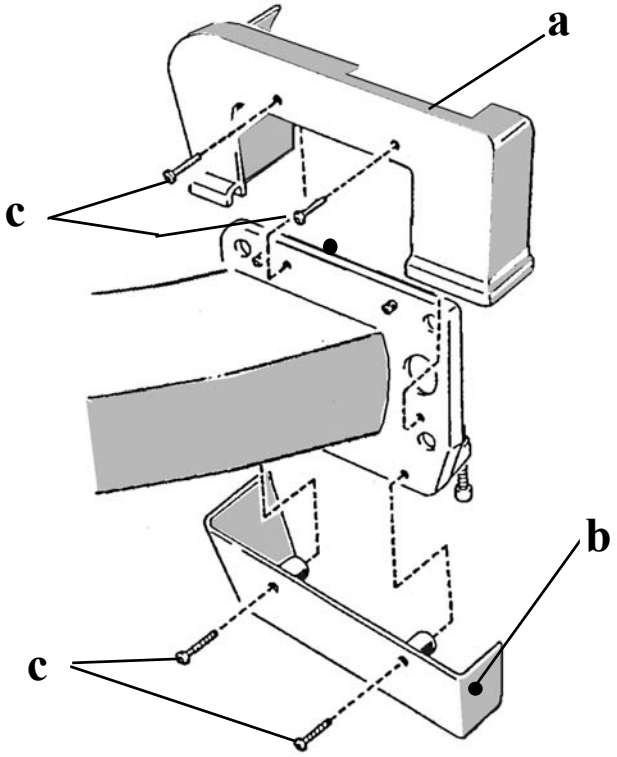
Pict. 1.8

WATER UNIT COVERS (Pict. 1.7)

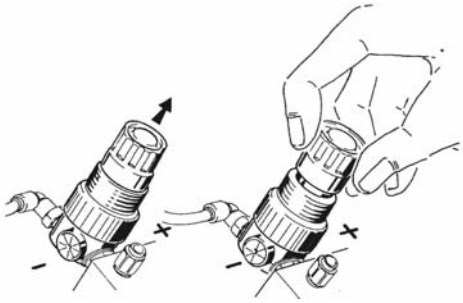
The plastic covers protecting the water unit are fastened to the inside metal frame.
To gain access to the pressure regulators of the water and air circuits, to the main electric panel of the secondary low-voltage circuits collector block and to the corresponding fuses, it is necessary to remove the cover (**8.5**) as shown in Pict. 1.7, after having first switched off the power supply to the dental unit (lever positioned on **O**).

MOUNTING OF THE COVERING CARTER OF UNIT SUPPORT (Pict. 1.8A)

After having fixed the unit to the chair and after having levelled it correctly, it is necessary to mount the covering carter (**a**) and (**b**) following these instructions:
1) Mount the carter (**b**) and fix it by the two screws (**c**).
2) Then mount also the carter (**a**) and fix it by the other two screws (**c**).



ADJUSTING THE WORKING PRESSURES



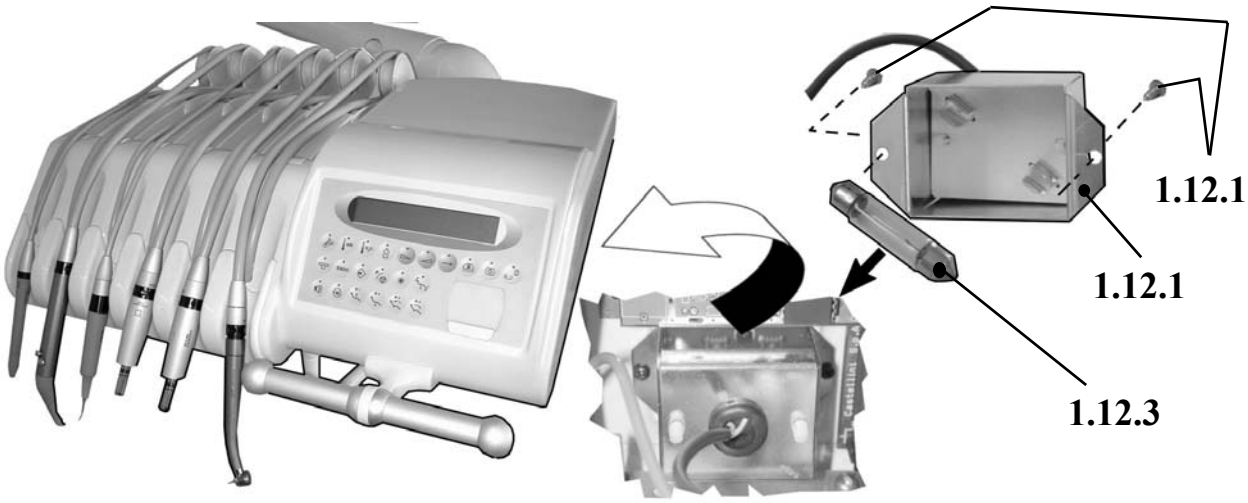
The air and water pressures have been factory-set to ensure the proper operation of the dental unit.
The manufacturer is not responsible for faulty operation that may result from any tampering with these settings.
All future adjustments of the pressure regulators must be done as follows only by qualified personnel authorized by the Castellini Company:
- Pull the knob outwards to unlock the regulator. Then turn it clockwise to increase the pressure, or counterclockwise to reduce the pressure.
- After the pressure has been adjusted, lock the pressure regulator by pressing the knob in.

PRESSURE SETTINGS

Drinking water - syringe - instrument spray water 90÷140 kPa (0,9÷1,4 bar)
Air for turbine and air micromotor 250÷270 kPa (2,5÷2,7 bar)
(measured with the appropriate pressure gauge placed between the connector and the turbine, Code N. L0001076).
N.B.: For a correct pneumatic feeding of the unit, the manometer placed on the general panel inside the unit body must show: 430÷470 kPa (4,3÷4,7 bar)

REPLACEMENT OF THE NEGATOSCOPE LAMP (Pict. 1.12)

Replacements of the lamp as indicated below are to be carried out exclusively by qualified and authorised CASTELLINI technical personnel according to the following instructions.



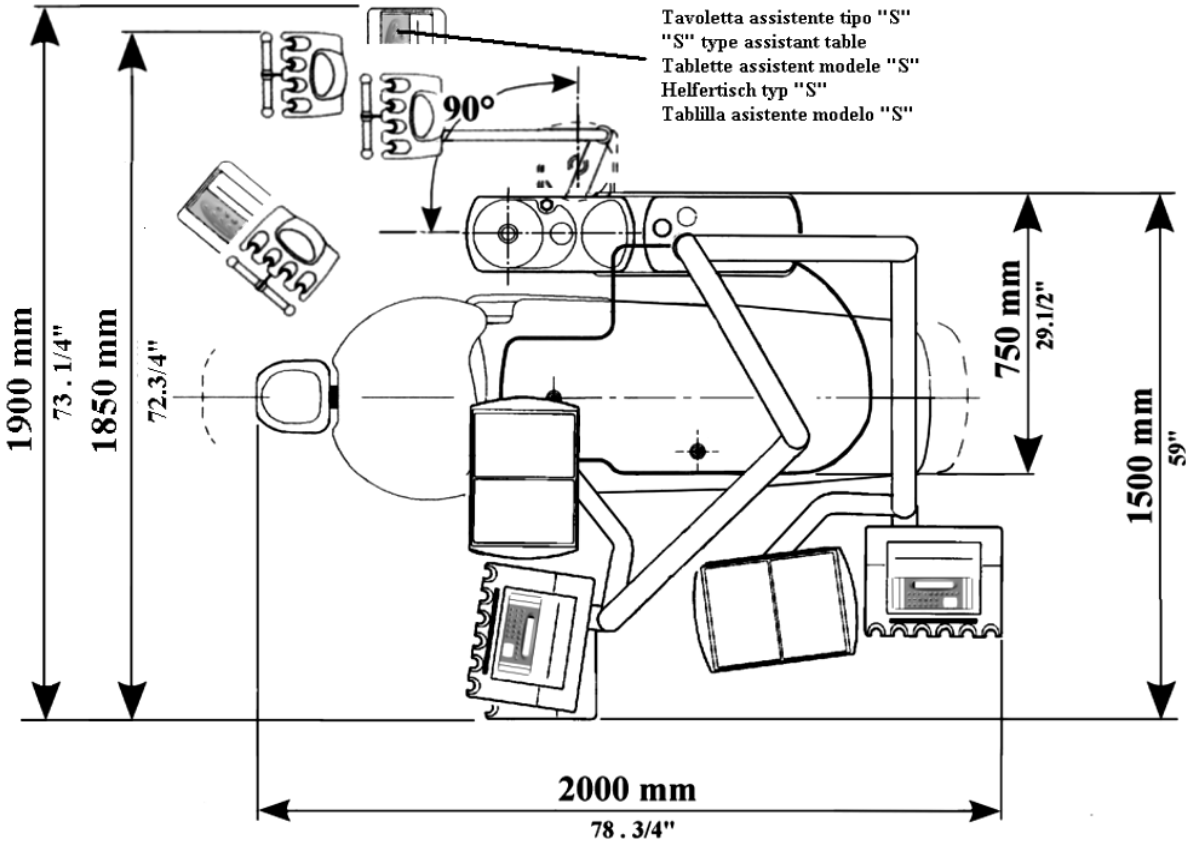
Pict. 1.12

A) Replacement of the negatoscope lamp for endoral radiographs (Pict. 1.12):

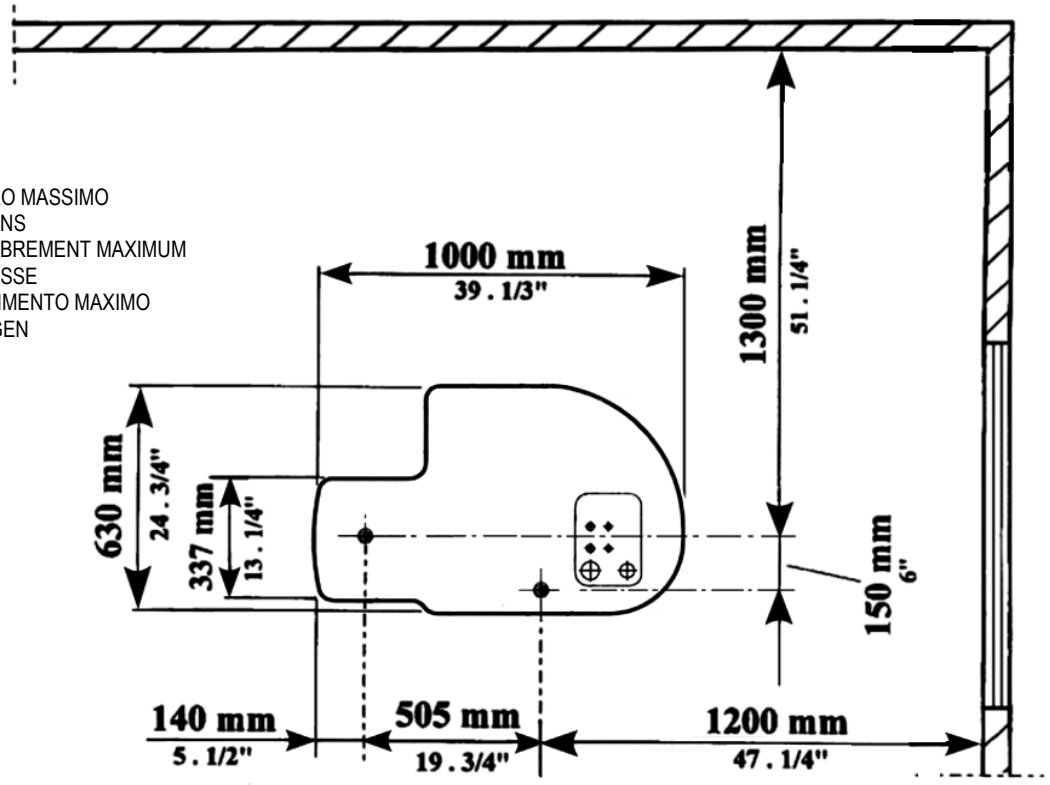
To gain access to the lamp, proceed as follows:
1. switch off the dental unit and remove the instruments and the tips of the assistant tray from their receptacles.
2. loosen the fixing screws located on the back of the assistant tray cover.
3. lift the cover and fix it to the rods that prevent the cover from turning completely over.
4. remove the two fixing screws (**1.12.1**) from the negatoscope body (**1.12.2**).
5. replace the lamp only with original parts supplied by the manufacturer. Check that the power rating of the lamp (4 W) corresponds to the power rating of the negatoscope.

"LOGOS Junior C.P." Unit + "THESI 2" Chair

(4-way assistant table)

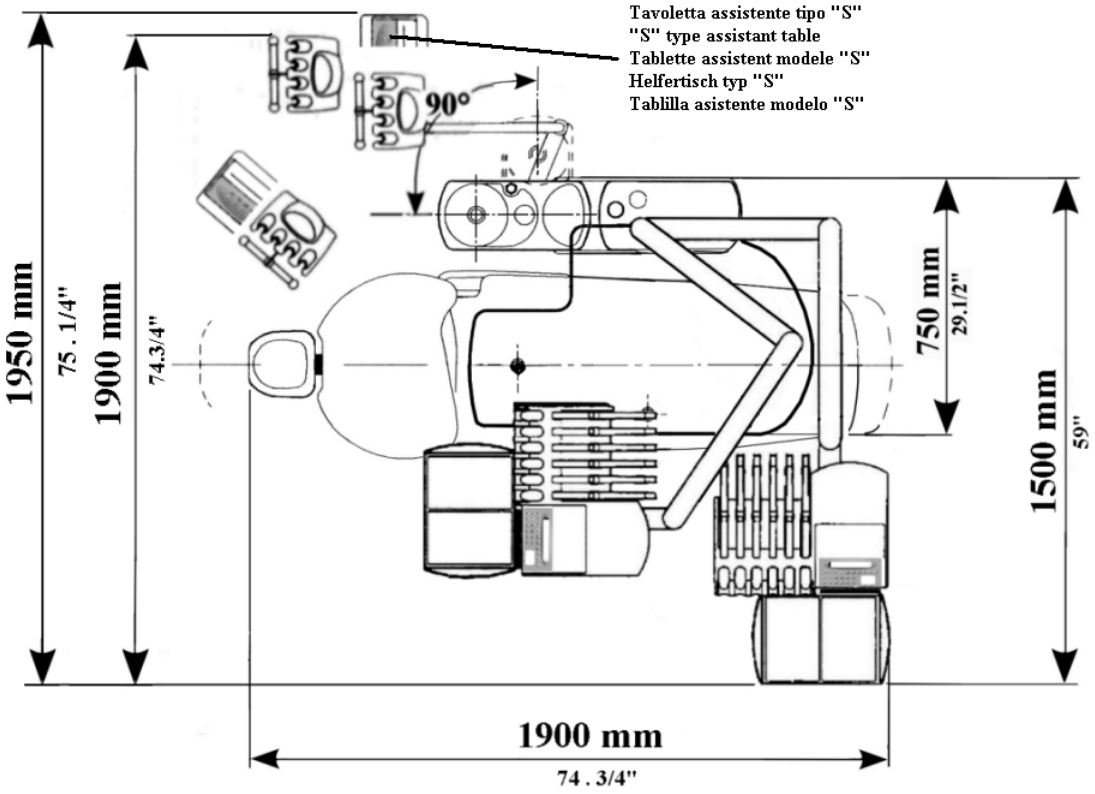


MISURE D'INGOMBRO MASSIMO
OVERALL DIMENSIONS
MESURES D'ENCUMBREMENT MAXIMUM
HÖCHSTAUSSENMASSE
MEDIDAS DE IMPEDIMENTO MAXIMO
MAXIMUMAFMETINGEN

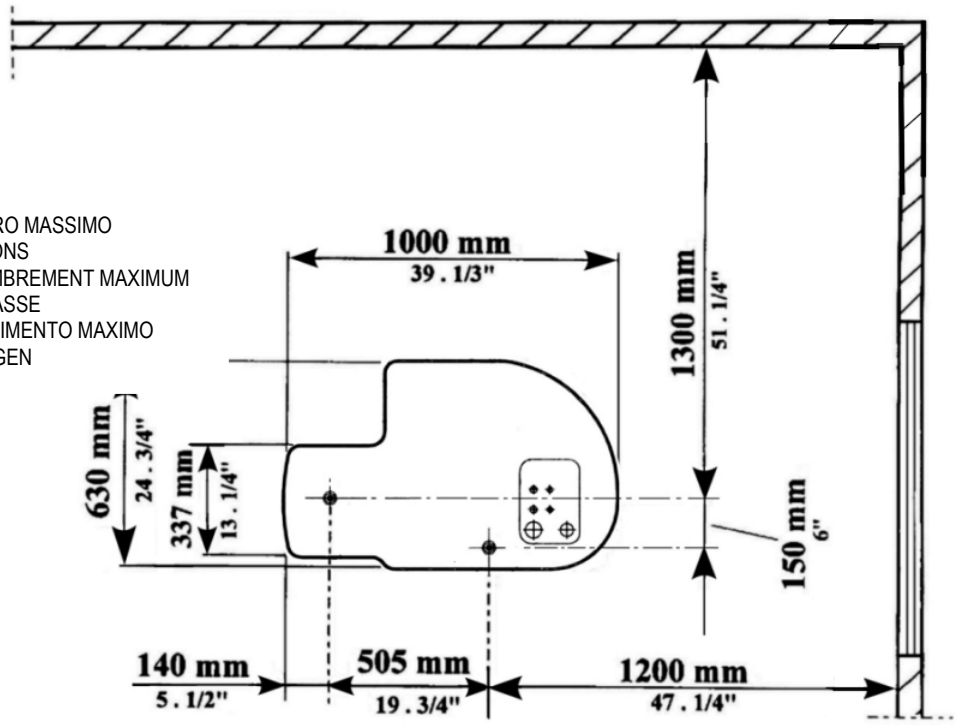


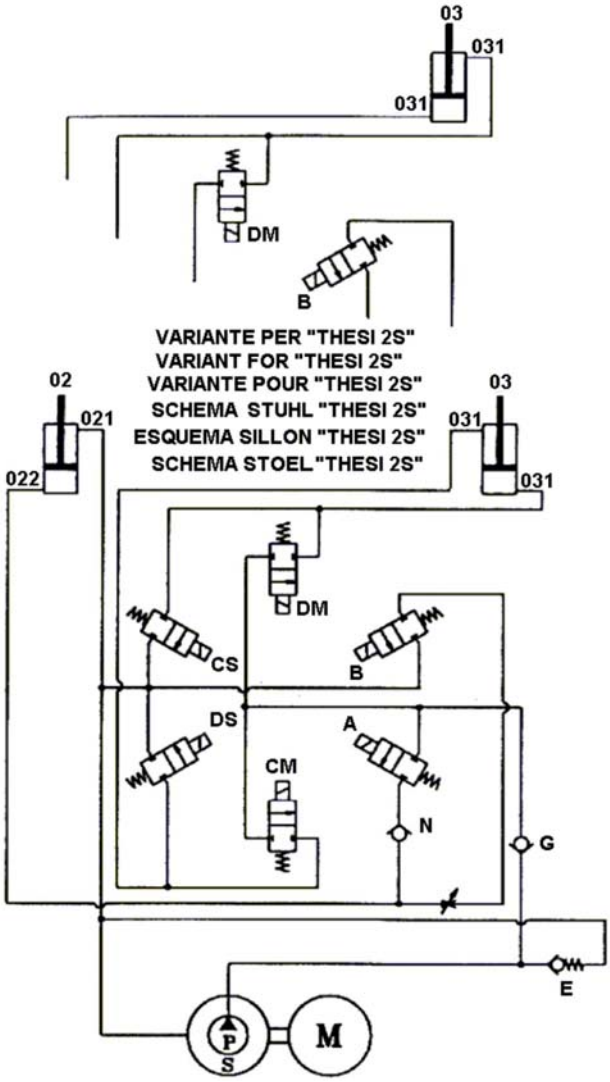
"LOGOS Junior S.P.R.I.D.O." Unit + "THESI 2" Chair

(4-way assistant table)



MISURE D'INGOMBRO MASSIMO
OVERALL DIMENSIONS
MESURES D'ENCUMBREMENT MAXIMUM
HÖCHSTAUSSENMASSE
MEDIDAS DE IMPEDIMENTO MAXIMO
MAXIMUMAFMETINGEN



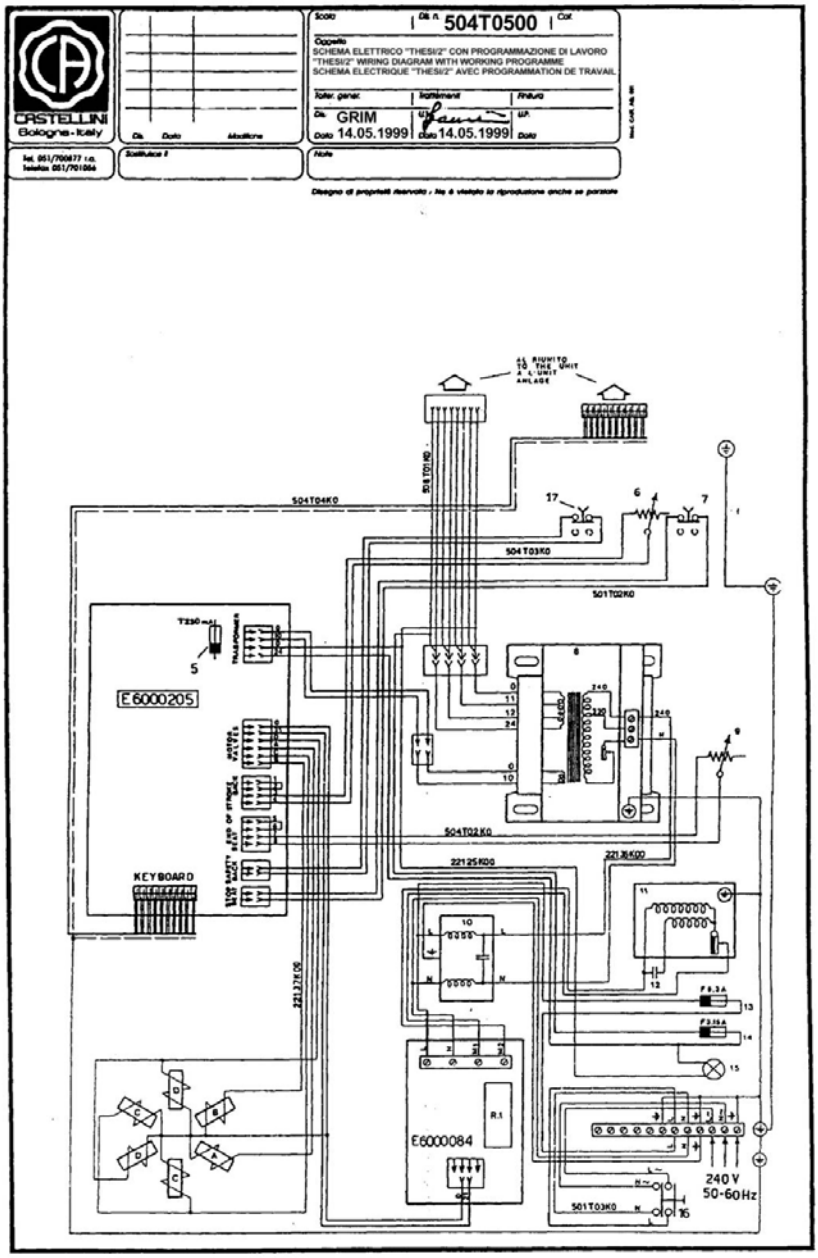


"THESI 2" CHAIR HYDRAULIC DIAGRAM

(CODE 501U0000)

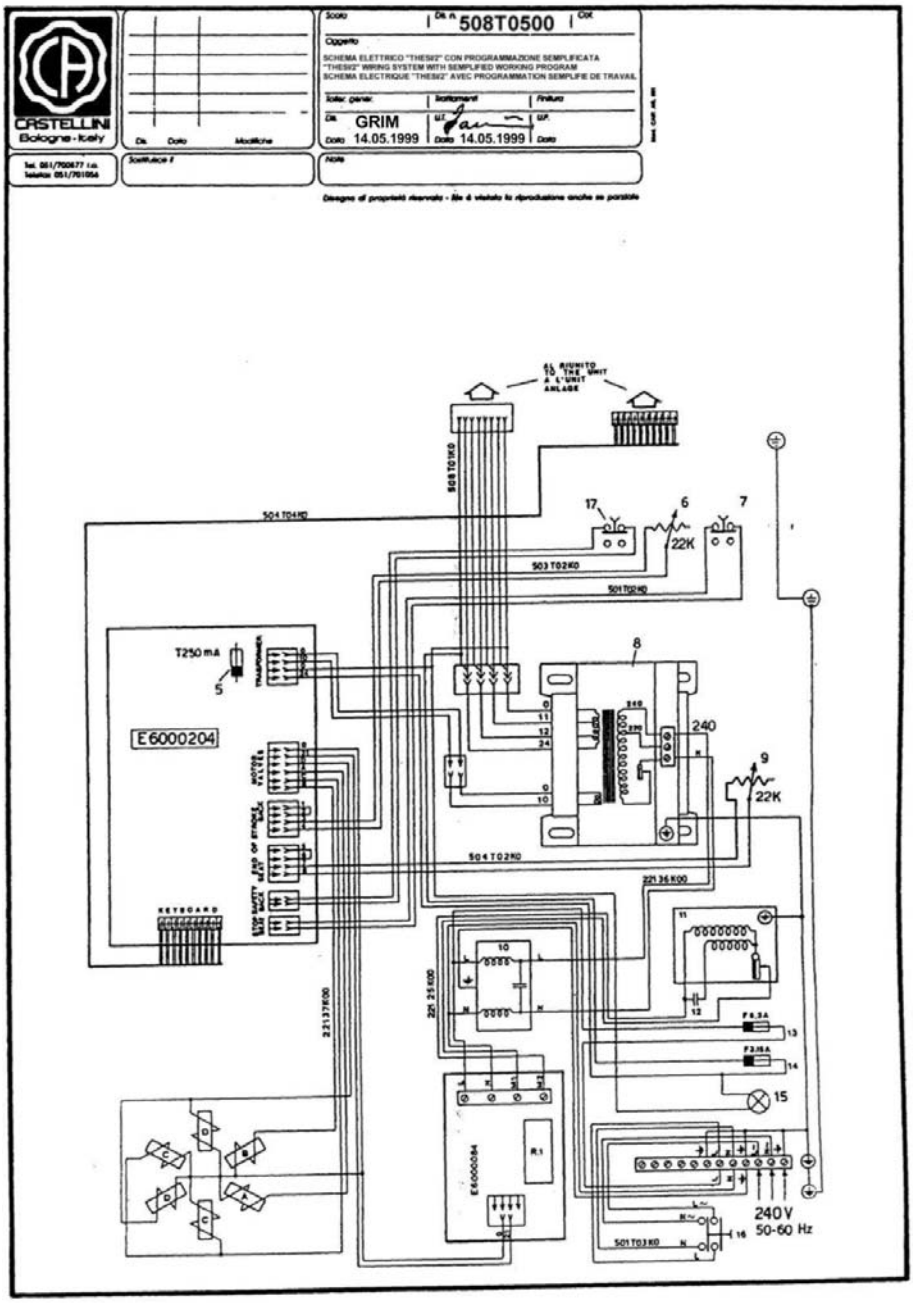
02 - Up cylinder.
021 - Extraflex line D. 6x8.
022 - Flexamid line 4x800 BB 10 parallel.
03 - Back-rest cylinder.
031 - Flexamid line 4x980 BB 10 parallel
A - Up solenoid.
B - Down solenoid.
CM - Back-rest return solenoid (throw).
CS - Back-rest return solenoid (release).
DM - Back-rest angle solenoid (throw).
DS - Back-rest angle solenoid (release).
E - By-pass valve control.
F - Down speed control.
G - Back-rest non-return valve.
N - Up-down non-return valve.
M - Motor.
P - Pump.
S - Oil tank.

"THESI 2" CHAIR WIRING DIAGRAMS



WIRING DIAGRAM WITH PROGRAMMING
(CODE 504T0500)

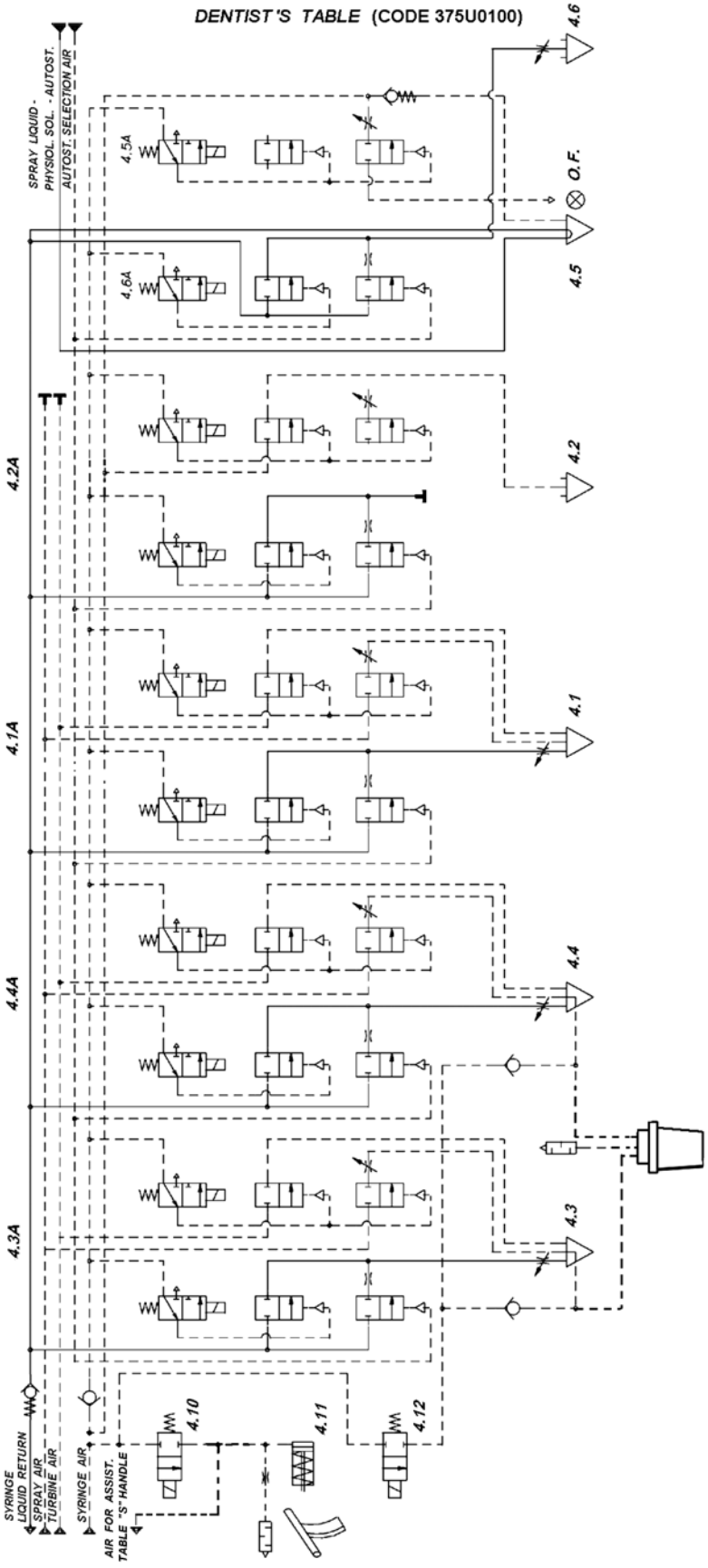
1 - Up control.
2 - Down control
3 - Back-rest angle control.
4 - Back-rest return control.
* - Rinse control.
0 - Reset.
P/S- Program set control and stop of all functions.
M - Memory control.
5 - T 250 mA program circuit delayed safety fuse.
6 - Back-rest program potentiometer.
7 - Safety microswitch.
8 - 22048000 transformer.
9 - Seat program potentiometer.
10 - Interference suppressor.
11 - Electric motor.
12 - 20 µF - 450 V condenser.
13 - F 6.3 A Motor and transformer primary fast safety fuse.
14 - F 3.15 A Solenoid fast safety fuse.
15 - 24 V general warning lamp.
16 - Main switch.
A - Up solenoid.
B - Down solenoid.
N - Back-rest return solenoid.
D - Back-rest movement solenoid.
R1- Motor relay.
17 - Backrest safety microswitch.



WIRING DIAGRAM WITH SEMPLIFIED WORKING PROGRAM (CODE 508T0500)

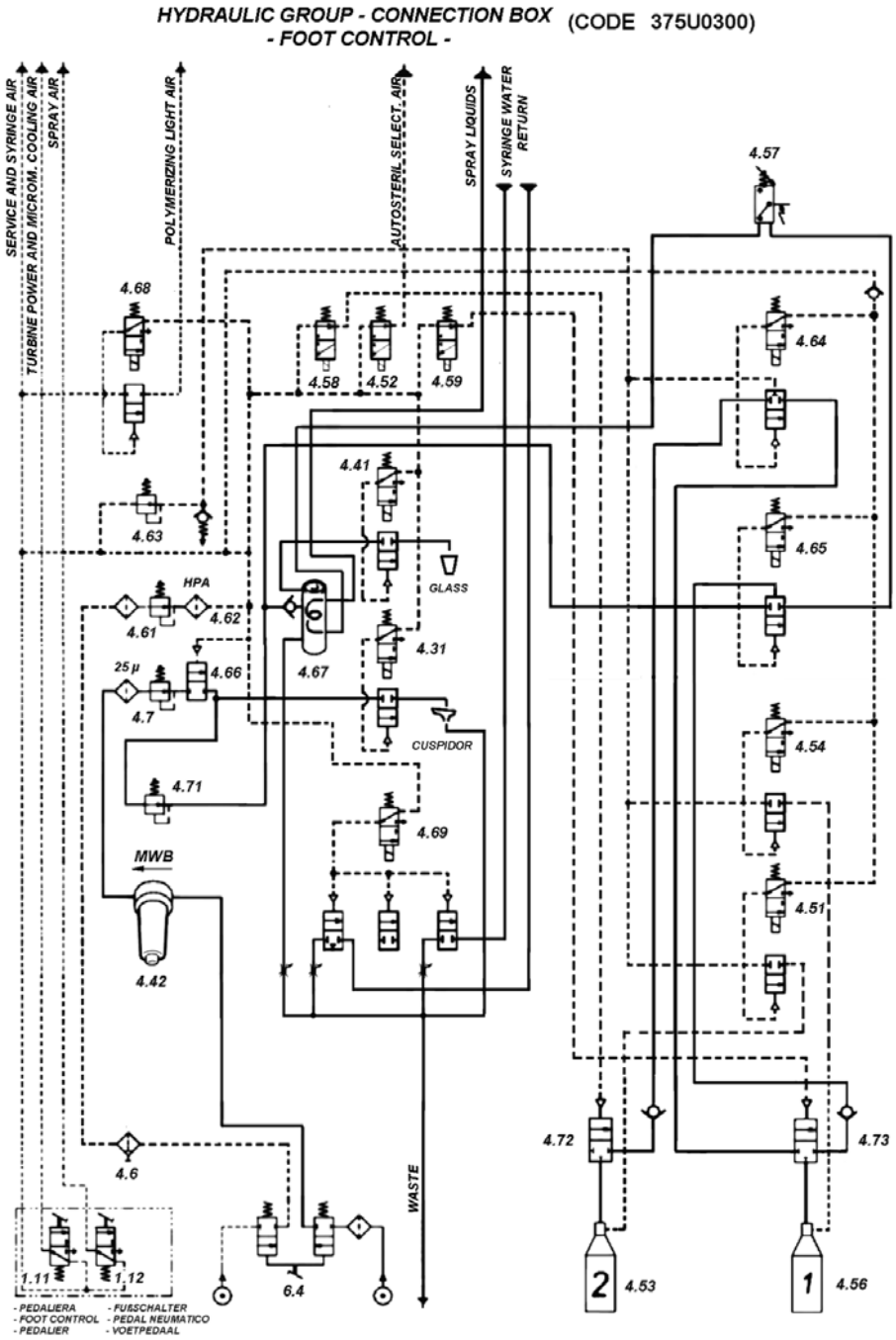
1 - Up control.
2 - Down control.
3 - Back-rest angle control.
4 - Back-rest return control.
* - Rinse control.
0 - Reset control.
P/S- Stop set.
M - Memory control (program only).
5 - T 250 mA reset circuit delayed safety fuse.
6 - Back-rest reset microswitch. (22 Ω)
7 - Safety microswitch.
8 - 22048000 transformer.
9 - Seat reset microswitch. . (22 Ω)
10 - Interference suppressor
11 - Electric motor
12 - 20 µF - 450 V condenser
13 - F 6.3 A motor and transformer primary fast safety fuse
14 - F 3.15 A solenoid fast safety fuse
15 - 24 V general warning lamp
16 - Main switch
A - Up solenoid
B - Down solenoid
C - Back-rest return solenoid
D - Back-rest movement solenoid
R1- Motor relay
17 - Backrest safety microswitch

UNIT HYDRAULIC DIAGRAMS



DENTIST'S TABLE (CODE 375U0100)

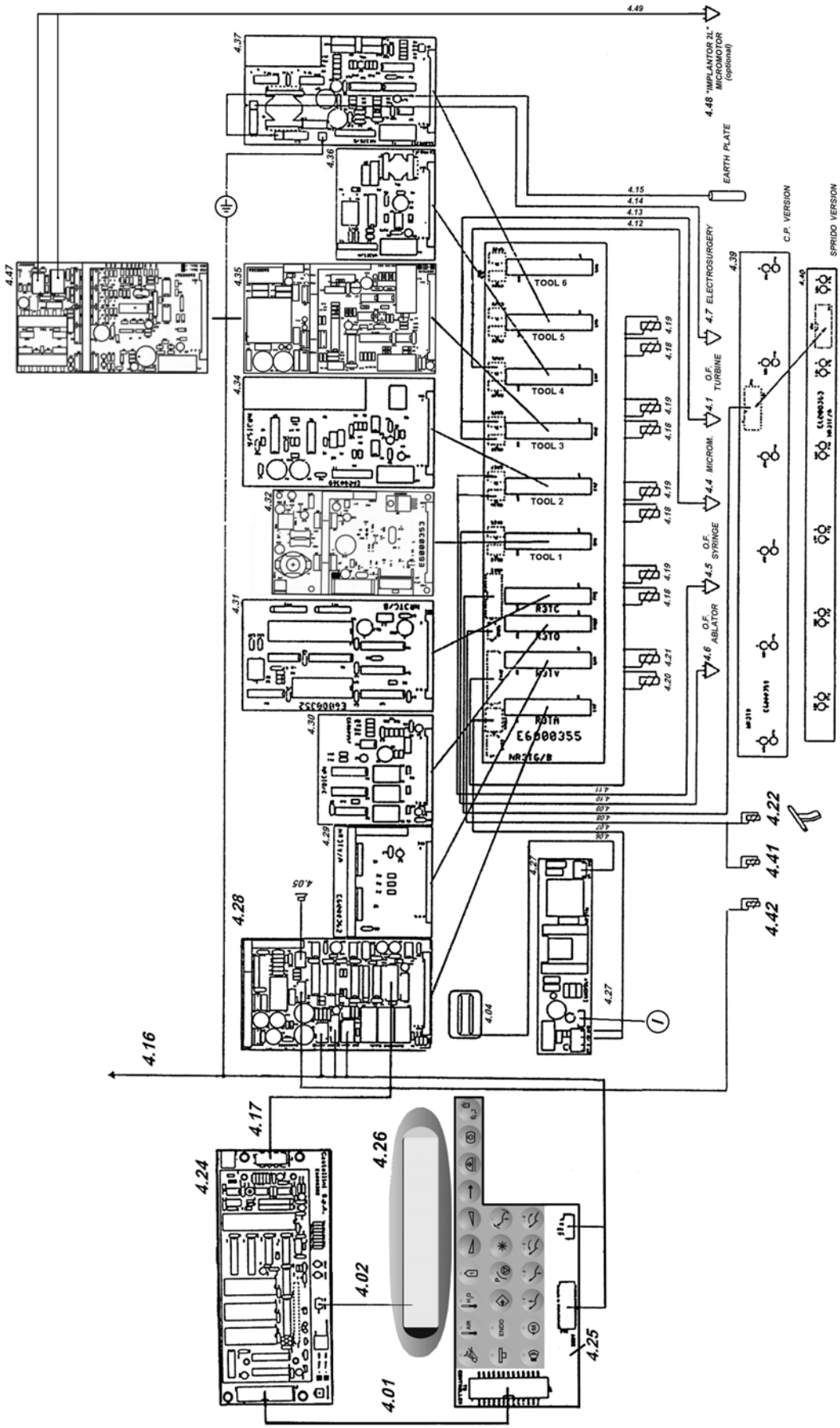
4.1 - Micromotor
4.2 - Curing light handpiece
4.3 - Turbine
4.4 - Turbine
4.5 - Syringe
4.6 - Scaler handpiece
4.1A - Micromotor selection solenoid valve
4.2A - Cooling air solenoid valve for curing light
4.3A - Turbine selection solenoid valve
4.4A - Turbine selection solenoid valve
4.5A - Cooling air solenoid valve for syringe with F.O.
4.6A - Water solenoid valve for scaler
4.10 - Air solenoid valve for handle release
4.11 - Air-cylinder for handle release
4.12 - Solenoid valve anti-backflow turbine



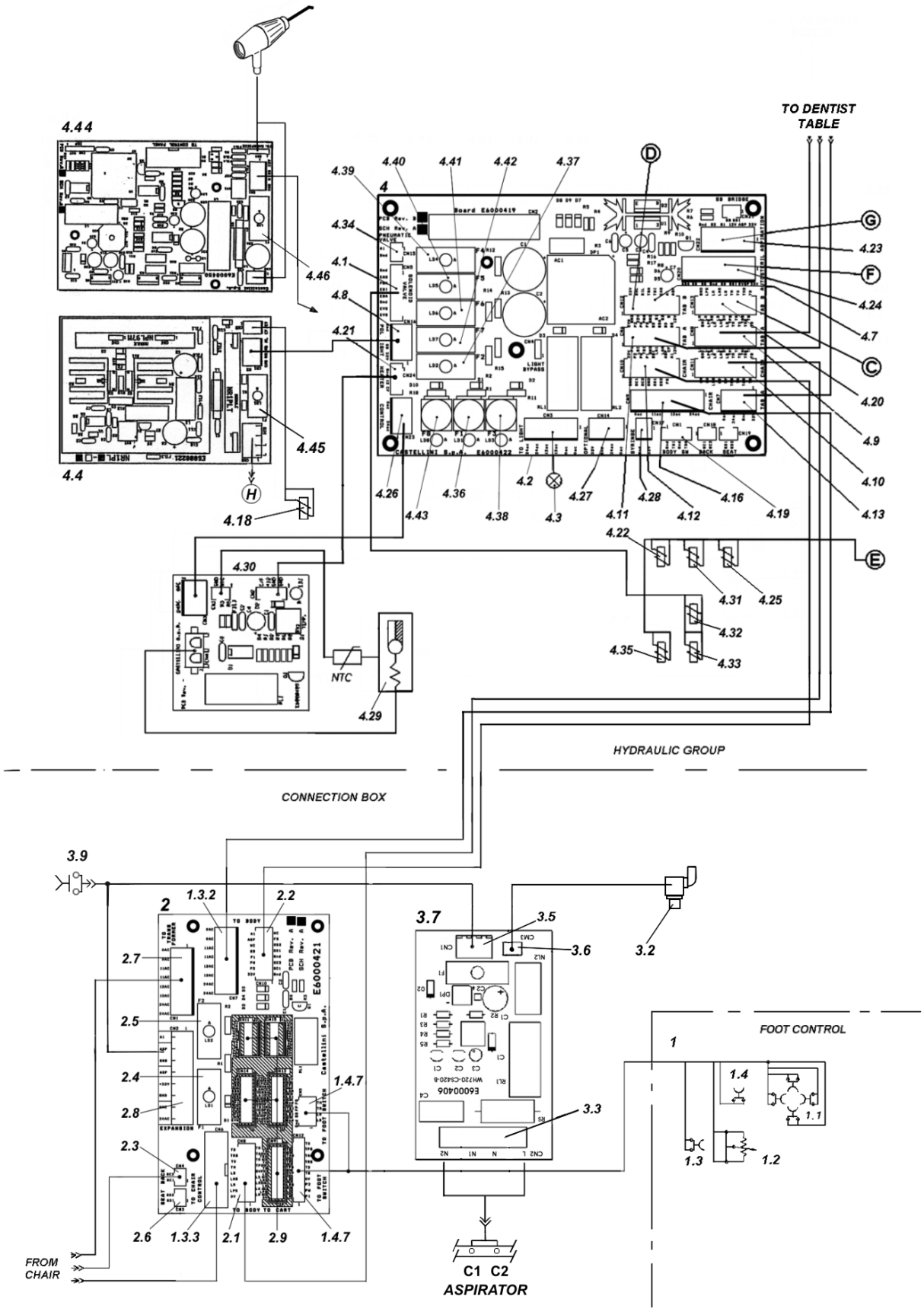
HYDRAULIC GROUP – CONNECTION BOX – FOOT CONTROL (CODE 375U0300)

1.11 - High-speed control and micromotor cooling air valve
1.12 - Spray air valve and chip-air valve
2.26 - Connection box for aspirator filter
6.4 - Air and water main valves
4.31 - Solenoid valve for water to the cuspidor
4.41 - Solenoid valve for water to the glass
4.51 - Solenoid valve controlling air and liquid for Autosteril tank
4.52 - Air valve for Autosteril selection
4.53 - Autosteril tank
4.54 - Solenoid valve controlling air and liquids for dedicated liquids tank
4.56 - Separated spray system tank
4.57 - Pneumatic switch for Autosteril system
4.58 - Normally open air valve for Autosteril tank cap control
4.59 - Normally open air valve for dedicated liquid tank cap control
4.6 - Main air filter
4.61 - Air pressure reducer
4.62 - HPA air filter
4.63 - Pressure reducing valve for tanks and tube drying
4.64 - Air valve for tube drying
4.65 - Water solenoid-valve
4.66 - Instruments water cut-off valve
4.67 - Heater for water dispensed in cup and spray and syringe liquids
4.68 - Cooling air solenoid valve for curing light
4.69 - Water return solenoid valve for continous autlet system
4.7 - Pressure reducer for water to the bowl
4.71 - Pressure reducer for water to the glass and to the instruments spray
4.72 - Autosteril tank cap
4.73 - Dedicated liquid tank cap

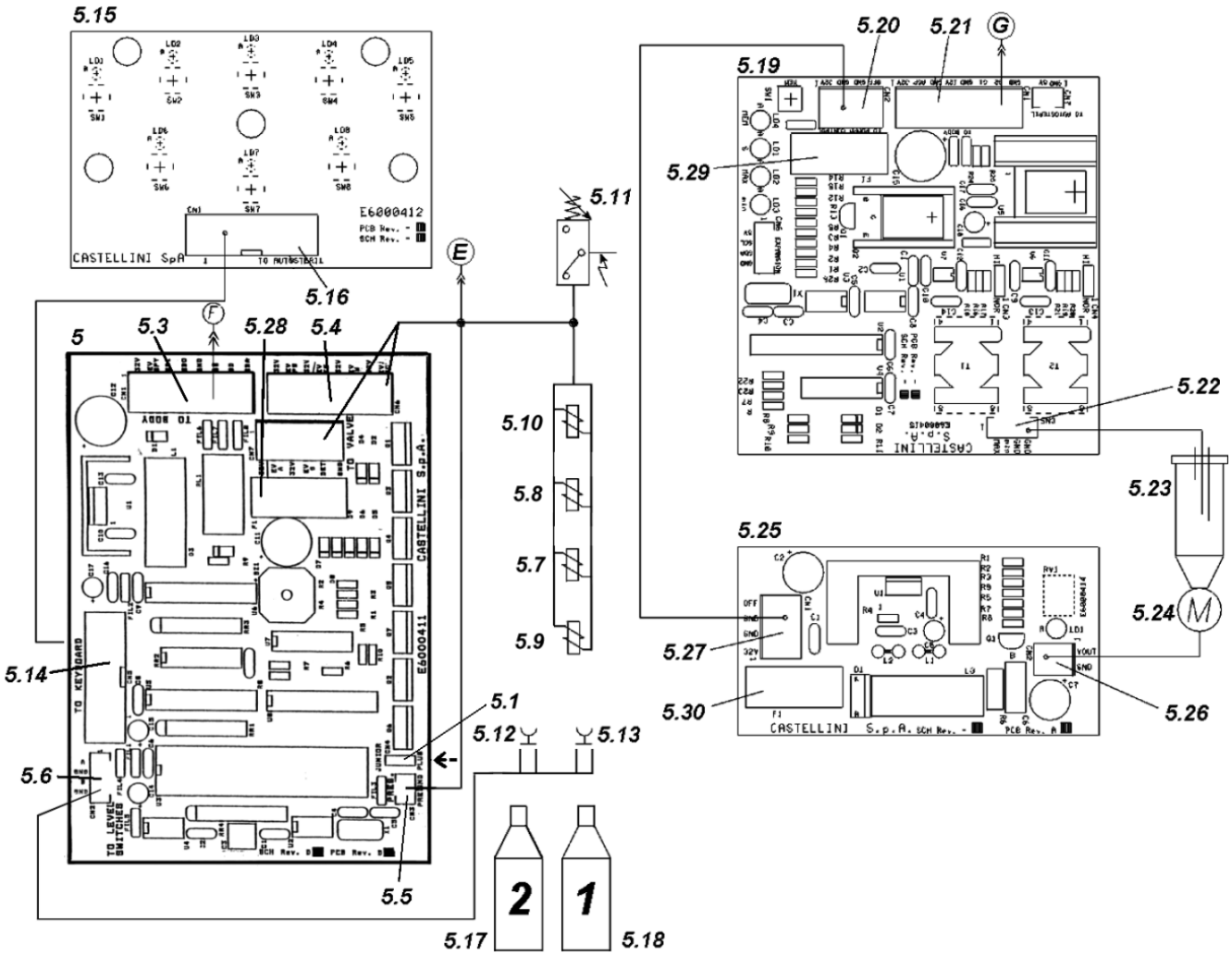
DENTIST'S TABLE (CODE 375T0100)

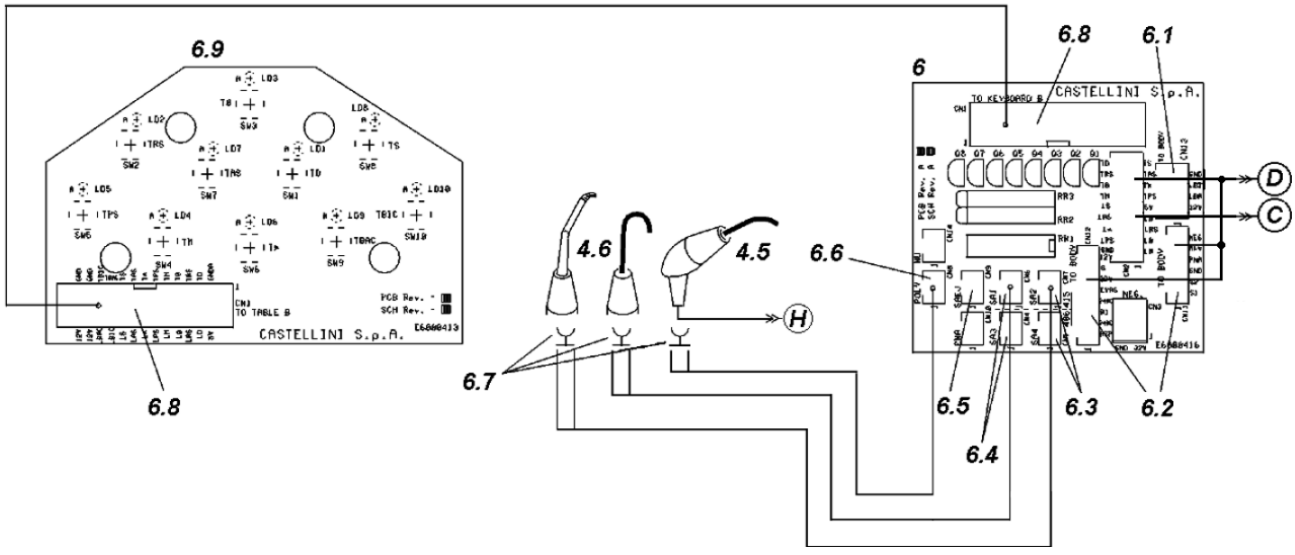


HYDRAULIC GROUP - CONNECTION BOX - FOOT CONTROL - (CODE 375T0500)

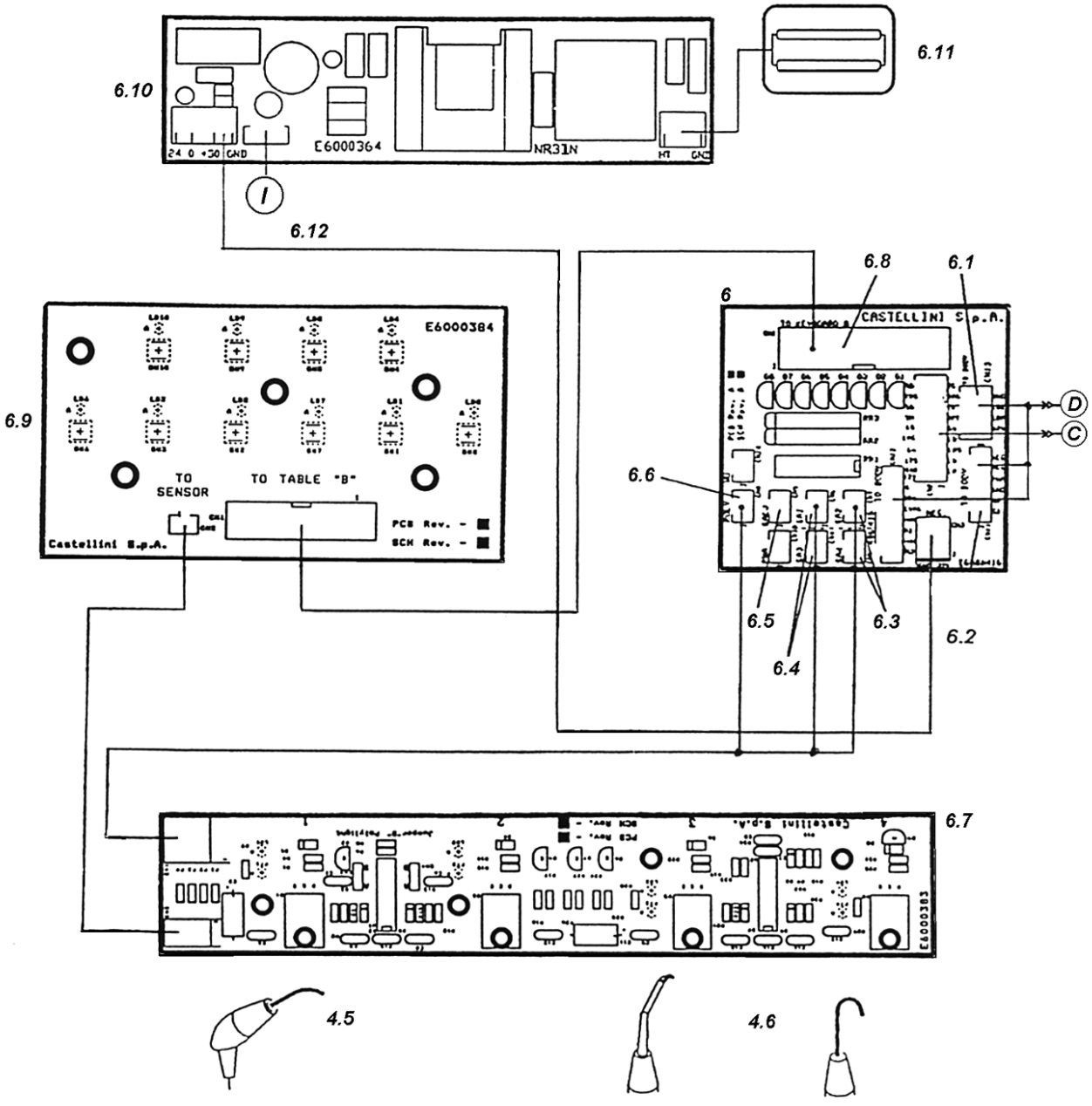


AUTOSTERIL - ASSISTANT'S TABLE (CODE 375T0600)





"TYPE S" ASSISTANT TABLE (CODE 375T0400)



UNIT WIRING DIAGRAMS

DENTIST'S TABLE WIRING DIAGRAM (CODE 375T0100)

4.01 - LCD interface cable
4.02 - LCD power cable
4.03 - LCD interface cable
4.04 - Panoramic negatoscope
4.05 - Buzzer
4.06 - Panoramic negatoscope power cable
4.07 - Dentist's tray handle release solenoid valve cable
4.08 - Instrument selection cable
4.09 - Scaler cord
4.10 - Syringe cord
4.11 - Instrument selection solenoid valve cable
4.12 - Micromotor cord "Implantor L"
4.13 - Turbine cord
4.14 - Electrosurgery cord
4.49 - Micromotor cord "Implantor 2LF" (optional)
4.15 - Electrosurgery neutral electrode cable
4.16 - Dentist's tray cable
4.17 - LCD controller circuit connection cable
4.18 - Spray water solenoid valve
4.19 - Rotation air and spray air solenoid valve
4.20 - Scaler water solenoid valve
4.21 - Syringe optical fibre air solenoid valve
4.22 - Handle release solenoid valve
4.23 - Piezo interface cable
4.24 - Keyboard and LCD controller circuit
4.25 - Dentist's tray keyboard circuit
4.26 - LCD circuit
4.27 - Panoramic negatoscope circuit
4.28 - Dentist's tray power supply circuit
4.29 - Instrument solenoid valve driver circuit
4.30 - Instrument selection optical detector driver circuit
4.31 - Dentist's tray controller circuit
4.32 - Oscillator for piezo handpiece
4.33 - Piezo interface circuit
4.34 - Syringe circuit
4.35 - Micromotor circuit
4.36 - Fibre optic turbine circuit
4.37 - Electrosurgery circuit
4.38 - Dentist's tray bus circuit
4.39 - Hanging cord tray optical detector circuit
4.40 - S.P.R.I.D.O. tray optical detector circuit
4.41 - Solenoid valve anti-backflow turbine
4.42 - Fiber optic circuit
4.47 - "Implantor 2L" circuit micromotor (optional)
4.1 - Fiber optic turbine
4.4 - "Implantor LF Steril"fiber optic micromotor
4.5 - Fiber optic syringe
4.6 - Scaler
4.7 - Electrosurgery handpiece
4.48 - "Implantor 2LF" micromotor (optional)

ELECTRONIC CARDS FUSES

E6000380 -	F1	- F 3.15 A
	F2	- F 2 A
	F3	- F 1 A
E6000351 -	F1	- F 5 A
E6000354 -	F1	- T 1 A
E6000356 -	F1	- F 5 A (Implantor LF Steril)
E6000367 -	F1	- F 5 A (Implantor 2LF) (optional)
E6000358 -	F1	- T 3.15 A
E6000360 -	F1	- T 2 A
E6000361 -	F1	- T 1 A

HYDRAULIC GROUP – CONNECTION BOX – FOOT CONTROL (CODE 375T0500)

1 - Electrical foot control
1.1 - Chair controls
1.2 - Potentiometer for electrical micromotor speed control (4,7 kΩ)
1.3 - Instruments control microswitch
1.4 - Instruments spray control microswitch

2 - Connection box circuit code E6000421
1.4.7 - Connector for foot control cable
1.3.2 - Connector for secondary low voltage connection
1.3.3 - Connector for chair controls connection
2.1 - Connector for chair controls to the unit
2.2 - Connector for foot pedal and dental unit controls
2.3 - Connector for dental chair safety system
2.4 - F1 (T 3,15A fuse)
2.5 - F2 (F2A fuse)
2.6 - Connector for dental chair safety system
2.7 - Connector for secondary low voltage connection from the transformer
2.8 - Connection board for aspirator control

3 - Suction system circuit control
3.2 - Suction system solenoid valve
3.3 - Terminal block for suction motor activation
3.5 - Connector for suction system circuit
3.6 - Connector for pneumatic valve
3.7 - Aspirator motor control circuit
3.9 - Suction stop control on chair base (only on request)

4 - Hydraulic group circuit (code E6000422)
4.1 - Connector for solenoid valve controlling water to cup and cuspidor
4.2 - Connector for operating light connection
4.3 - Operating light
4.4 - Curing light circuit (optional)
4.5 - Curing light handpiece on the assistant's table (optional)
4.6 - Suction system cannulas
4.7 - Connector for instrument tray control
4.8 - Connector for curing light circuit
4.9 - Connector for chair controls from the dentist's table
4.10 - Connector for chair controls from electric box
4.11 - Connector for unit controls from the dentist's table
4.12 - Connector for chair safety system and spray control
4.13 - Connector for dentist's table circuit connection
4.16 - Connector for secondary low voltage from the connection box
4.18 - Air solenoid valve for curing light cooling
4.19 - Connector for cup/cuspidor controls from the body of the dental unit (optional)
4.20 - Connector for glass and cuspidor controls from the assistant's table
4.21 - Connector for water heater circuit control
4.22 - Air valve for Autosteril tank cap control
4.23 - Connector for suction system circuit
4.24 - Connector for Autosteril system circuit
4.25 - Air valve for dedicated liquid tank cap control
4.26 - Connector for water heater circuit power supply
4.27 - Connector for optional
4.28 - Connector for warm syringe circuit
4.29 - Water heater tank
4.30 - Water heater tank control circuit
4.31 - Autosteril selection solenoid valve
4.32 - Solenoid valve for water to the glass

4.33 - Solenoid valve for water to the cuspidor
4.34 - Connector for pneumatic valve
4.35 - Solenoid valve for continuous drainage
4.44 - "Polylight Steril 3" curing light circuit code E6000450 (optional)
4.45 - F1 (F5A curing light fast fuse)
4.46 - F1 (T3,15A "Polylight Steril 3"delayed fuse)

HYDRAULIC GROUP CIRCUIT FUSES (E6000422)

4.36 - F1 (F6.3A - AC low voltage fuse)
4.37 - F2 (T500 mA 12 Vdc fuse)
4.38 - F3 (T8A - operating light fuse)
4.39 - F4 (F2A - saliva ejector solenoid valve fuse)
4.40 - F5 F2A - pneumatic aspirator solenoid valve fuse
4.41 - F6 (F2A - water to the glass solenoid valve fuse)
4.42 - F7 (F2A - water to the bowl solenoid valve fuse)
4.43 - F8 (F6,3A - water heater tank fuse)

AUTOSTERIL – ASSISTANT TABLE (CODE 375T0600)

5 - Hydraulic Group – Autosteril system (E6000411)
5.1 - Jumper for selecting LOGOS Junior or PUMA PLUS
5.2 - Continous waste water solenoid valve
5.3 - Connector for Autosteril system circuit power supply
5.4 - Connector for solenoid valves for water, Autosteril system, time flushing system and continuos drainage
5.5 - Connector for pneumatic switch
5.6 - Connector for tanks control level microswitches
5.7 - Air valve for dedicated liquid tank
5.8 - Air valve for mains water
5.9 - Air valve for Autosteril tank
5.10 - Air valve for tube drying
5.11 - Pneumatic switch for separated liquid flow
5.12 - Control level microswitch for Autosteril tank
5.13 - Control level microswitch for separated liquid tank
5.14 - Connector for Autosteril and Time Flushing controls
5.15 - Control circuit for Autosteril and Time Flushing system
5.16 - Connector for Autosteril and Time Flushing controls
5.17 - Autosteril liquid tank
5.18 - Separated spray liquid tank
5.19 - Suction system control circuit (E6000415)
5.20 - Connector for power supply to the canister pump control circuit
5.21 - Connector for power supply to the suction system control circuit
5.22 - Connector for canister probes
5.23 - Canister for air suction system
5.24 - Electric pump for canister
5.25 - Power supply circuit for canister drainage pump
5.26 - Connector for canister pump
5.27 - Connector for power supply to the canister pump control circuit
5.28 - F1 (T2A Autosteril circuit fuse)
5.29 - F1 (F1A Suction system control circuit fuse)
5.30 - F1 (T2A canister pump control circuit fuse)

ASSISTANT TABLE (CODE 375T0400)

6 - Assistant's table circuit (E6000416)
6.1 - Connector for glass and cuspidor controls
6.2 - Connector for instruments controls
6.3 - Connector for large type canulas control
6.4 - Connector for small type canulas control
6.5 - Connector for saliva ejector control
6.6 - Connector for curing light control
6.7 - Assistant’s tray handpiece selection circuit
6.8 - Connector for assistant's table control panel
6.9 - Assistant’s tray control circuit
6.10 - Panoramic negatoscope power supply circuit
6.11 - Panoramic negatoscope
6.12 - Panoramic negatoscope switch and adjustment

LOGOS Junior

PART V – SCHEDULED MAINTENANCE PROGRAM SERVICING AND WARRANTY CONDITIONS

SCHEDULED MAINTENANCE AND SERVICING

INTRODUCTION

In accordance with EEC Directive 93/42, Appendix 1 Item 13.6 par. D, the periodic maintenance program contains *"complete information regarding the nature and frequency of the operations necessary to constantly ensure the efficiency and safety of this equipment"*.

The Manufacturer notes that all scheduled maintenance and/or servicing of this equipment MAY ONLY be performed by specialised personnel in possession of a regular, currently valid "Castellini Authorised Technician" license (See Part "Important Information" and Part "Essential Rules").

As provided by Directive 93/42 EEC, implemented in Italy through Law Decree n° 46 of 24 January 1997 and Law Decree n° 95 of 25 February 1998, Castellini S.p.A, guarantees that the safety, reliability and performance requisites certified by the EC mark will be maintained only if maintenance and/or servicing is performed by persons who are specially trained, authorised and updated by Castellini itself and in possession of a regular, currently valid "Castellini Authorised Technician" license.

Any maintenance and/or servicing performed by persons other than those authorised will be considered improper use in contradiction with the manufacturer's directions and will as a result compromise the essential safety requisites prescribed by Directive 93/42 EEC, thereby invalidating the EC mark placed on the device. The warranty will likewise become null and void (see item A, letter 2 of the Warranty Conditions), and the manufacturer will be exempted from all the liabilities provided under President's Decree 224/88 and/or applicable European Directives.

In light of the above considerations, if maintenance and/or servicing is entrusted to persons not in possession of a valid "Castellini Authorised Technician" license, the safety of this device WILL NOT BE GUARANTEED BY THE EC MARK and the user will be working with a product that does not comply with current regulations, according to the requisites stated by Legislative Decree 626/94 and/or applicable European Directives.

SCHEDULED PERIODIC MAINTENANCE

The Manufacturer notes that scheduled periodic maintenance MUST BE performed according to the terms and procedures indicated below, in order to preserve the validity of all the certifications pertaining to the device and the manufacturer's liability in regard to the EC mark on the product itself.

Periodic maintenance operations must be performed at the time intervals indicated in the periodic check forms provided below.
The owner of the device is always responsible for calling in the technician, who must meet the requisites described above;
The Technician who performs scheduled maintenance will ensure that the periodic check forms provided are duly and accurately compiled and, on his own responsibility, he will sign and stamp them;
The periodic check forms are in two copies; one must remain attached to this manual as proof that the periodic check has been carried out;
The owner of the device is responsible for keeping all the technical documents regarding maintenance work and the periodic check forms, which must be shown to inspectors on request.
For each scheduled maintenance operation the user will be charged hourly labour costs, a flat-rate calling cost and the cost of replacing any worn parts, according to the existing contract conditions, unless otherwise indicated on the periodic check forms themselves.
Should any faults be revealed during the scheduled maintenance checks, the technician will either service the equipment or replace any worn parts.

N.B.: IN THE PERIODIC CHECK FORMS THE MANUFACTURER PRESCRIBES A COMPULSORY GENERAL OVERHAUL OF TURBODRILLS 3 YEARS AFTER THEIR INSTALLATION. FOR THIS PURPOSE THE TURBODRILLS MUST BE SENT TO THE MAIN OFFICE OF CASTELLINI S.P.A. (Via Saliceto, 22, 40013 Castel Maggiore Bologna) AND MUST UNDERGO FURTHER OVERHAULS EVERY THREE YEARS.

DESCRIPTION OF SCHEDULED MAINTENANCE OPERATIONS

All scheduled maintenance must include all the operations specified in the Check List on the back of each periodic check form.
The Check List must be completely filled out and duly stamped and signed by the technician who performs the maintenance.

SERVICING

The manufacturer accepts no liability for guaranteeing the certifications pertaining to the device, compliance with the EC mark requisites or the conformity of this device with current laws, as prescribed by Leg. Decree 626/94 and/or applicable European Directives, if servicing is not carried out in full accordance with the rules provided in this manual (See in particular Part IV, Instructions for installers, ESSENTIAL RULES).

The Manufacturer again emphasises that only persons in possession of a currently valid "Castellini Authorised Technician" license may service the equipment (See above considerations in the Introduction, of this manual).
Technical personnel, as specified above, may not connect to Castellini products any other medical devices and/or accessories that are not recommended by Castellini or are in any case outside the parameters of compatibility indicated by Castellini S.p.A. Unauthorised modifications, arbitrary tampering and maintenance work not complying with the directions provided by Castellini are likewise forbidden, as is the use of non-original spare parts and/or components.

Any failure to comply with the above prescriptions will be considered improper use in contradiction with the manufacturer's directions and will as a result compromise the essential safety requisites prescribed by Directive 93/42/EEC, thereby invalidating the EC mark placed on the device. All liabilities will fall on whoever has performed the work without authorisation.

IMPORTANT
Original Castellini spare parts and/or components are exclusively available through the Castellini S.p.A. main office and local Authorised Service Centres.

Whenever servicing is to be carried out, the user is fully entitled to ask the technician to show his license as "Authorised Castellini Technician", which must be identical to the facsimile shown below (Figure 1).

FRONT BACK

Pict. 1

PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE CASTELLINI DENTAL UNIT

The user is responsible for complying in full with the "protocol for hygiene and maintenance of the dental unit" when carrying out the maintenance operations reserved to the user him/herself and adequately trained assistants.

The "protocol for hygiene and maintenance of the dental unit" represents an integral part of the equipment use and maintenance manual.

The manufacturer recommends posting the "protocol for hygiene and maintenance of the dental unit" on the wall to allow constant and immediate consultation.

WARRANTY CONDITIONS

A) The equipment manufactured by CASTELLINI is guaranteed for a period of 365 days from the invoice date. Therefore, any parts of the equipment acknowledged to be defective will be repaired and/or replaced free of charge - except for the flat-rate calling fee - unless such defects derive from fortuitous events, natural wear or the buyer's negligence (carelessness, inexperience, shocks, falls, accidental collisions).
The user must send the warranty certificate duly compiled and signed to Castellini S.p.A. within 30 days of the invoice date, as indicated by the postmark, or the warranty itself will automatically lapse.
The parts to be repaired or replaced must be sent to our warehouses, delivery prepaid. It is not the usual policy to send parts covered by the warranty (with corresponding registration numbers) prior to receipt of the defective part, unless an explicit exception is made by CASTELLINI itself.
The warranty on turbine handpieces, all syringes (hot and cold), micromotors (electric and pneumatic), handpieces and scalers and curing lamps is valid for 180 days from the invoice date, except for turbines mod. "Hi-Power 2 Ceramic" and "Titanium Gold 2" "Titanium Gold 2 Miniature" for which the warranty period is 365 days from the date of invoice.
The manufacturer's civil and penal liabilities will cease and the warranty will be automatically invalidated in all of the following cases:
1) failure to comply with the essential environmental requisites indicated by Castellini in the "information" section of the use and maintenance manual supplied with the equipment;
2) assembly, addition of equipment, adjustment, re-setting, and repair, are not carried out by "AUTHORIZED CASTELLINI" TECHNICAL PERSONNEL, WITH A REGULARLY ISSUED, CURRENTLY VALID LICENCE;
3) any medical devices not supplied by Castellini itself, or any such devices which do not meet with Castellini S.p.A. standards of compatibility, are connected to "Castellini" products;
4) non-authorised modifications, arbitrary tampering, improper maintenance and use of non-original spare parts and/or components;
5) failure to use the equipment in conformity with the instructions for use (provided in the use and maintenance manual) and improper use of the product;
6) whenever the electricity, water and pneumatic supply systems, water drainage system and the surgical suction system, where present, do not meet the requisites stated in the use and maintenance model (see paragraph on "setting up the environment" and the equipment installation layout diagram, scale 1:1) or do not comply with the laws in the user's country;
7) failure to comply with the scheduled maintenance requirements or any of the prescriptions provided in the use and maintenance manual.
Furthermore, it should be noted that at the moment a new product is sold, the manufacturer will be liable for the EC mark on the product itself only provided that the dealer strictly observes the equipment specifications defined by Castellini and does not ascribe to the devices functions and/or parameters of compatibility with other devices contrary to the manufacturer's indications; otherwise all liability will fall on the dealer, who will be assimilated to the manufacturer (art. 1.2 f Directive 93/42/EEC).
The warranty does not in any case extend to the casings, glass parts, ceramic parts, enamelled parts, light bulbs, lighted indicators, switches, upholstery, electric cables, cords in general, spare parts and detached parts in general.

B) All equipment bearing other brand names will be covered by the warranty provided by the manufacturer of the equipment itself. Dealers will not undertake any direct liabilities or obligations in regard to the warranty.

SPARE PARTS
Castellini S.p.A. guarantees that spare parts will continue to be available for 10 years after production of the product sold has been discontinued.

CASTELLINI S.p.A.

PERIODIC CHECK

form n° 1 – *1 year*

This form, duly compiled, stamped and signed by an Authorized Castellini Technician, must remain permanently affixed to manual as proof that the periodic check has been performed and must be shown on request to the Supervisory Authorities

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date _____

Stamp and signature of Authorized Castellini Technician _____

License expiry date _____

Mod. Cast. U.T.008-E/1 (inglese)

CASTELLINI S.p.A.

PERIODIC CHECK

form n° 1 – *1 year*

This form must be taken by the Authorized Castellini Technician

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date _____

Stamp and signature of Authorized Castellini Technician _____

License expiry date _____

Mod. Cast. U.T.008-E/1 (inglese)

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

CASTELLINI® S.p.A.

PERIODIC CHECK

form n° 2 – 2 years

This form, duly compiled, stamped and signed by an Authorized Castellini Technician, must remain permanently affixed to manual as proof that the periodic check has been performed and must be shown on request to the Supervisory Authorities

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.T.008-E/2 (inglese)

CASTELLINI® S.p.A.

PERIODIC CHECK

form n° 2 – 2 years

This form must be taken by the Authorized Castellini Technician

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.T.008-E/2 (inglese)

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

CASTELLINI® S.p.A.

PERIODIC CHECK

form n° 3 – *3 years*

This form, duly compiled, stamped and signed by an Authorized Castellini Technician, must remain permanently affixed to manual as proof that the periodic check has been performed and must be shown on request to the Supervisory Authorities

The Manufacturer notes that Turbodrills must undergo compulsory general overhaul; for this purpose they must be sent to the main office of
Castellini S.p.A. via Saliceto, 22
40013 Castel Maggiore Bologna

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.T.008-E/3 (inglese)

CASTELLINI® S.p.A.

PERIODIC CHECK

form n° 3 – *3 years*

This form must be taken by the Authorized Castellini Technician

The Manufacturer notes that Turbodrills must undergo compulsory general overhaul; for this purpose they must be sent to the main office of
Castellini S.p.A. via Saliceto, 22
40013 Castel Maggiore Bologna

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.T.008-E/3 (inglese)

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

CASTELLINI S.p.A.

PERIODIC CHECK

form n° 4 – *4 years*

This form, duly compiled, stamped and signed by an Authorized Castellini Technician, must remain permanently affixed to manual as proof that the periodic check has been performed and must be shown on request to the Supervisory Authorities

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date _____

Stamp and signature of Authorized Castellini Technician _____

License expiry date _____

Mod. Cast. U.T.008-E/4 (inglese)

CASTELLINI S.p.A.

PERIODIC CHECK

form n° 4 – *4 years*

This form must be taken by the Authorized Castellini Technician

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date _____

Stamp and signature of Authorized Castellini Technician _____

License expiry date _____

Mod. Cast. U.T.008-E/4 (inglese)

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

CASTELLINI® S.p.A.

PERIODIC CHECK

form n° 5 – *5 years*

This form, duly compiled, stamped and signed by an Authorized Castellini Technician, must remain permanently affixed to manual as proof that the periodic check has been performed and must be shown on request to the Supervisory Authorities

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.T.008-E/5 (inglese)

CASTELLINI® S.p.A.

PERIODIC CHECK

form n° 5 – *5 years*

This form must be taken by the Authorized Castellini Technician

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.T.008-E/5 (inglese)

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

CASTELLINI® S.p.A.

PERIODIC CHECK

form n° 6 – *6 years*

This form, duly compiled, stamped and signed by an Authorized Castellini Technician, must remain permanently affixed to manual as proof that the periodic check has been performed and must be shown on request to the Supervisory Authorities

The Manufacturer notes that Turbodrills must undergo compulsory general overhaul; for this purpose they must be sent to the main office of
Castellini S.p.A. via Saliceto, 22
40013 Castel Maggiore Bologna

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.T.008-E/6 (inglese)

CASTELLINI® S.p.A.

PERIODIC CHECK

form n° 6 – *6 years*

This form must be taken by the Authorized Castellini Technician

The Manufacturer notes that Turbodrills must undergo compulsory general overhaul; for this purpose they must be sent to the main office of
Castellini S.p.A. via Saliceto, 22
40013 Castel Maggiore Bologna

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.T.008-E/6 (inglese)

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

CASTELLINI® S.p.A.

PERIODIC CHECK

form n° 7 – *7 years*

This form, duly compiled, stamped and signed by an Authorized Castellini Technician, must remain permanently affixed to manual as proof that the periodic check has been performed and must be shown on request to the Supervisory Authorities

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.T.008-E/7 (inglese)

CASTELLINI® S.p.A.

PERIODIC CHECK

form n°. 7 – *7 years*

This form must be taken by the Authorized Castellini Technician

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.T.008-E/7 (inglese)

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50μ - 25μ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50μ - 25μ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

CASTELLINI S.p.A.

PERIODIC CHECK

form n° 8 – *8 years*

This form, duly compiled, stamped and signed by an Authorized Castellini Technician, must remain permanently affixed to manual as proof that the periodic check has been performed and must be shown on request to the Supervisory Authorities

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date _____

Stamp and signature of Authorized Castellini Technician _____

License expiry date _____

Mod. Cast. U.T.008-E/8 (inglese)

CASTELLINI S.p.A.

PERIODIC CHECK

form n° 8 – *8 years*

This form must be taken by the Authorized Castellini Technician

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date _____

Stamp and signature of Authorized Castellini Technician _____

License expiry date _____

Mod. Cast. U.T.008-E/8 (inglese)

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

CASTELLINI S.p.A.

PERIODIC CHECK

form n° 9 – *9 years*

This form, duly compiled, stamped and signed by an Authorized Castellini Technician, must remain permanently affixed to manual as proof that the periodic check has been performed and must be shown on request to the Supervisory Authorities

The Manufacturer notes that Turbodrills must undergo compulsory general overhaul; for this purpose they must be sent to the main office of
Castellini S.p.A. via Saliceto, 22
40013 Castel Maggiore Bologna

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.T.008-E/9 (inglese)

CASTELLINI S.p.A.

PERIODIC CHECK

form n° 9 – *9 years*

This form must be taken by the Authorized Castellini Technician

The Manufacturer notes that Turbodrills must undergo compulsory general overhaul; for this purpose they must be sent to the main office of
Castellini S.p.A. via Saliceto, 22
40013 Castel Maggiore Bologna

DENTAL UNIT

mod. _____ *serial n°* _____

CHAIR

mod. _____ *serial n°* _____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.T.008-E/9 (inglese)

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

CASTELLINI® S.p.A.

PERIODIC CHECK

form n° 10 – *10 years*

This form, duly compiled, stamped and signed by an Authorized Castellini Technician, must remain permanently affixed to manual as proof that the periodic check has been performed and must be shown on request to the Supervisory Authorities

DENTAL UNIT

*mod.*_____ *serial n°*_____

CHAIR

*mod.*_____ *serial n°*_____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.I.008-E/10 (inglese)

CASTELLINI® S.p.A.

PERIODIC CHECK

form n° 10 – *10 years*

This form must be taken by the Authorized Castellini Technician

DENTAL UNIT

*mod.*_____ *serial n°*_____

CHAIR

*mod.*_____ *serial n°*_____

Date

_____

Stamp and signature of Authorized Castellini Technician

_____

License expiry date _____

Mod. Cast. U.I.008-E/10 (inglese)

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

SANITATION AND CLEANING
- ❑ Cleaning of lamp reflector and glass
- ❑ Surface cleaning of dental unit and chair (product STER 1 PLUS)
- ❑ Cleaning of surgical suction system (product STER 3 PLUS)
- ❑ Activation of Time Flushing System/Autosteril System (if present)

REPLACEMENT OF PARTS
- ❑ Replacement of water filter filtering element (50µ - 25µ)
- ❑ Replacement of general air filter filtering element
- ❑ Replacement of suction filter
- ❑ Replacement of HPA filter cartridge (if present)
- ❑ Replacement of MWB filter cartridge (if present)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of turbine (product S1)
- ❑ Check/lubrication or replacement of O-ring of quick coupling of micromotor (product S1)

LUBRICATION
- ❑ Lubrication turbine (product Daily Oil)
- ❑ Lubrication of micromotor handpiece

CHECKS ON SAFETY
PROTECTION DEVICES
- ❑ Check on chair descent safety stop
- ❑ Check on chair backrest safety stop
- ❑ Check on functioning of main switch
- ❑ Check on water/spray safety valve (if present)
- ❑ Check on connections and protective sheating of power cable
- ❑ Check on air/water supply connections
- ❑ Check on anchorage of chasing/protections of chair and dental unit

MECHANICAL DEVICES
- ❑ Check on balance of dental unit articulated arm
- ❑ Check on balance of lamp articulated arm
- ❑ Check on rotation/articulated racket of dental unit and lamp arms
- ❑ Check on shifting/articulation of headrest

FUNCTIONAL/DIAGNOSTIC CHECKS
- ❑ Check on dental unit functions
- ❑ Check on Chair functions/Programming system
- ❑ Check on instrument functions
- ❑ Check on turbine supply pressure
- ❑ Check on syringe supply pressure (air/water)
- ❑ Check on Time Flushing/Autosteril system (if present)
- ❑ Check on supply system
- ❑ Check on system of separate supply/physiological solution
- ❑ Check on micromotor setting
- ❑ Check on optic fibers setting (if present)
- ❑ Check on curing lamp power settings (if present)
- ❑ Check on cup/cuspidor timing
- ❑ Execution of PC diagnostic test (if present)
- ❑ Execution of Polylight test (if present)
- ❑ Check on amalgam separator device (if present)
- ❑ Check on suction system

RENEWED INSTRUCTIONS TO THE USER AND ALL ASSISTANT PERSONNEL IN REGARD TO THE PROTOCOL FOR HYGIENE AND MAINTENANCE OF THE DENTAL UNIT

Date_____

Stamp and segnature of Authorised Castellini Technician

_____

License expiry date_____

LOGOS Junior

APPENDIX I - CERTIFICATIONS

CASTELLINI

IMQ S.p.A.
I-20138 Milano - via Quintiliano, 43
tel. 0250731(r.a.) - fax 0250991500
E-mail: info@imq.it - www.imq.it

Rea Milano 1595884
Registro Imprese MI 211895/1999
C.F./P.I.:12898410159
Capitale sociale L.7.600.000.000

CA10.00056
SN.B001PK

PID:
10100001
CID:
C.1993.3736

Certificato di approvazione

Approval certificate

IMQ, ente di certificazione accreditato, autorizza la ditta

IMQ, accredited certification body, grants to

CASTELLINI SPA
VIA SALICETO 22
40013 CASTELMAGGIORE BO

all'uso del marchio

the licence to use the mark

IMQ

Il presente certificato è soggetto alle condizioni previste nel "Regolamento IMQ - Certificazione prodotto" ed è relativo ai prodotti descritti nell'Allegato al presente certificato.

per i seguenti prodotti

Complessi odontoiatrici
(Serie LOGOS JUNIOR)

for the following products

Dental treatment units
(Series LOGOS JUNIOR)

This certificate is subjected to the conditions foreseen by "IMQ Rules - Product Certification" and is relevant to the products listed in the annex to this certificate.

Emesso il | Issued on:
2001-10-16
Data di aggiornamento | Updated on

Sostituisce | Replaces

IMQ S.p.A.

CASTELLINI

IMQ S.p.A.
I-20138 Milano - via Quintiliano, 43
tel. 0250731(r.a.) - fax 0250991500
E-mail: info@imq.it - www.imq.it

Rea Milano 1595884
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CA10.00056
SN.B001PK

Allegato - Certificato di approvazione
Annex - Approval certificate

Emesso il / Issued on 2001-10-16
Data di aggiornamento / Updated on
Sostituisce / Replace

Prodotto | Product

Complessi odontoiatrici
Dental treatment units

Concessionario | Licence Holder

CASTELLINI SPA
VIA SALICETO 22
40013 CASTELMAGGIORE BO

Marchio | Mark

IMQ

Costruito a | Manufactured at

95004317 CLCAS2.C10LCCAS2.C 40013 CASTELMAGGIORE BO Italy

Copia del presente certificato deve essere conservata presso i luoghi di produzione sopra elencati.

Copy of this certificate must be available at the manufacturing places listed above

Norme

CEI 62-5:1991 + A1+A12:1994 + A2:1997 + A13:1997
(EN 60601-1:1990 + A1:1993 + A12:1993 + A2:1995 + A13:1996)
UNI EN ISO 6875:1998
UNI EN ISO 7494:1998
CEI 62-11:1993 (EN 60601-2-2:1993)

Standards

CEI 62-5:1991 + A1+A12:1994 + A2:1997 + A13:1997
(EN 60601-1:1990 + A1:1993 + A12:1993 + A2:1995 + A13:1996)
UNI EN ISO 6875:1998
UNI EN ISO 7494:1998
CEI 62-11:1993 (EN 60601-2-2:1993)

Rapporti | Test Reports

10AB00075

Caratteristiche tecniche | Technical characteristics

Serie / Series	**LOGOS JUNIOR**
Tensione nominale / Rated voltage	**220/240 V**
Frequenza nominale / Rated frequency	**50 Hz**
Potenza nominale / Rated power	**1,45 kVA**
Tipo di protezione contro i contatti diretti e indiretti / Protection against electric shock	**Classe I / class I**
Grado di protezione contro i contatti diretti e indiretti / Degree of protection against electric shock	**elettrobisturi: BF ; altri manipoli: B / electrosurgicals equipment: BF ; others handles: B**
Modalita` di impiego / Operating conditions	**vedere Allegato Ulteriori Descrizioni / see Annex further descriptions**
Grado di protezione contro l'umidita` / Degree of protection against ingress of liquids	**comune / ordinary**
Tipo di installazione / Connection to supply mains	**permanente / maintained**
Altre caratteristiche / Other characteristics	**vedere Allegato Ulteriori Descrizioni / see Annex further descriptions**

Articoli (con dettagli) | Articles (with details)

AR.B00BWM

Marca / Trade mark **CASTELLINI**
Modello / Model **LOGOS JUNIOR**

AR.B00BWN

Marca / Trade mark **CASTELLINI**
Modello / Model **LOGOS JUNIOR C.P.**

IMQ S.p.A.
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E-mail: info@imq.it - www.imq.it

Rea Milano 1595884
Registro Imprese MI 211895/1999
C.F./P.I.:12898410159
Capitale sociale L.7.600.000.000

Ulteriori informazioni | Additional Information

La versione LOGOS JUNIOR C.P. ricalca la versione LOGOS JUNIOR, differenziandosi da essa solamente per l'utilizzo del sistema di supporto degli strumenti a "cavi pendenti".

Composizione

Il complesso odontoiatrico LOGOS JUNIOR e` composto dalle seguenti parti :

- Poltrona	mod. THESI 2	
- Poltrona	mod. THESI 2S	(alternativa)
- Lampada	mod. LUNA	
- Gruppo idrico	senza denominazione	
- Aspiratore	mod. UNI-JET	

- Tavoletta strumenti compredente le seguenti parti applicate fino ad un massimo di 6:

- Elettrobisturi	mod. MINITOM 2	
- Ablatore	mod. PIEZO STERIL 2	
- Siringa	mod. MULTISTERIL 2 TITANIUM	
- Micromotore elettrico	mod. IMPLANTOR STERIL	
- Micromotore elettrico	mod. IMPLANTOR L STERIL	(alternativa)
- Micromotore elettrico	mod. IMPLANTOR LF STERIL	(alternativa)
- Turbina	mod. HIGPOWER CERAMIC	
- Turbina	mod. TITANIUM GOLD	(alternativa)
- Lampada polimerizzatrice	mod. POLYLIGHT STERIL 2	

- Tavoletta assistente comprendente le seguenti parti applicate fino ad un massimo di 4:

- Cannule di aspirazione (n. 2)	da aspiratore UNI-JET
- Lampada polimerizzatrice	mod. POLYLIGHT STERIL 2
- Siringa	mod. MULTISTERIL 2 TITANIUM

Modalita` d'impiego delle singole parti (lavoro/pausa)

- Elettrobisturi	15 s / 30 s
- Ablatori e turbine	20 min / 10 min
- Siringa	10 s / 5 min
- Lampada polimerizzatrice	60 s / 60 s
- Micromotori	5 min / 20 min
- Cannule aspirazione (motore UNI-JET)	10 min / 20 min
- Poltrona	1 min / 14 min

The LOGOS JUNIOR C.P. version differs from the LOGOS JUNIOR version for the use of the instruments' supporting system with pending cables.

Equipment composition

The dental treatment units of "LOGOS JUNIOR series" are composed by the following parts:

- Dental patient chair	type THESI 2	
- Dental patient chair	type THESI 2S	(alternative)
- Lamp	type LUNA	
- Hydric group	without name	
- Aspirator	type UNI-JET	

- Instrument's table where can find place the following applied parts (max 6 simultaneously):

- Electrosurgical equipment	type MINITOM 2	
- Scaler	type PIEZO STERIL 2	
- Syringe	type MULTISTERIL 2 TITANIUM	
- Electric micromotor	type IMPLANTOR STERIL	
- Electric micromotor	type IMPLANTOR L STERIL	(alternative)
- Electric micromotor	type IMPLANTOR LF STERIL	(alternative)
- Turbine	type HIGPOWER CERAMIC	(alternative)
- Turbine	type TITANIUM GOLD	(alternative)
- Cure lamp	type POLYLIGHT STERIL 2	

- Assistant's table where can find place the following applied parts (max 4 simultaneously):

- 2 suction tubes	from the aspirator UNI-JET
- Cure lamp	type POLYLIGHT STERIL 2
- Syringe	type MULTISTERIL 2 TITANIUM

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C.F./P.I.:12898410159
Capitale sociale L.7.600.000.000

Operating conditions of the single parts (on/off)

- Electrosurgical equipment	15 S / 30 S
- Scalers and turbine	20 min / 10 min
- Syringe	10 s / 5 min
- Cure Lamp	60 s / 60 s
- Micromotors	5 min / 20 min
- Suction tubes (motor UNI-JET)	10 min / 20 min
- Dental patient chair	1 min / 14 min

Componenti | Component List

Vedere apposito elenco /See relevant annex

Emesso il | Issued on **2001-10-16** *Data di aggiornamento | Updated on* *Sostituisce | Replaces*

Diritti di concessione | Annual Fees

SN.B001PK	**EMB.100100.DA19**	*Diritti modelli IMQ - 1001 - Apparecchi elettromedicali in generale | IMQ models - 1001 - Electromedical equipment in general*	1

IMQ S.p.A.

CASTELLINI

EC CE

Certificate

Full Quality Assurance

No. **CE 01083**

Issued to:

Castellini S.p.A.

Sede Centrale
Via Saliceto, 22
40013 Castel Maggiore
Bologna
Italy

In respect of:

For the design, development, manufacture and installation of dental equipment, x-ray generators and their supports and stands, electrosurgical units, and dental handpieces

On the basis of our examination under the requirements of Council Directive 93/42/EEC, Annex II, Section 3.2.

For and on behalf of the British Standards Institution, a Notified Body for the above Directive (Notified Body Number 0086):

Anne Boyd, Divisional Director, Product Services Operations

Conditions of Approval
Validity of this certificate is conditional on the quality system being maintained to the requirements of the Directive.
This approval excludes all products designed and/or manufactured by a third party on behalf of the company named on this certificate unless specifically agreed with BSI.

This approval excludes Class 3 medical devices.

First Issued: **11 December 1995** Date: **26 January 2004**

Expiration Date: **10 December 2005**

BSI Product Services
Maylands Avenue, Hemel Hempstead, Hertfordshire HP2 4SQ United Kingdom
Tel: +44 (0)1442 230442 Website: www.bsi-global.com
BSI Group Headquarters: 389 Chiswick High Road, London W4 4AL Tel: +44 (0)208 996 9000

BSI Product Services

CASTELLINI

CERTIFICATE OF REGISTRATION

Quality Management System

This is to certify that:

Castellini S.p.A
Sede Centrale
Via Saliceto 22
40013 Castel Maggiore
Bologna
Italy

Hold Certificate No: **FM 51210**

and operate a Quality Management System which complies with the requirements of **BS EN ISO 9001:2000** *for the following scope:*

The design, manufacture, installation, maintenance and service of "own brand" dental equipment, X-ray units, electrosurgical units and dental handpieces. Provision of training and qualification for internal and external service engineers to install, maintain and service company products.

For and on behalf of BSI:

Certification Manager, Systems Assessment

Originally registered: **9 Jul 1999** *Latest issue:* **30 Dec 2003** *Page:* 1 of 1

UKAS QUALITY MANAGEMENT
003

MGMT. SYS.
RvA C 030

CASTELLINI

CERTIFICATE OF REGISTRATION

Quality Management System

Castellini S.p.A

Sede Centrale
Via Saliceto 22
40013 Castel Maggiore
Bologna
Italy

Operate a Quality Management System which complies with the requirements of

BS EN ISO 9001:2000

for the activities detailed in the scope of registration.

Certificate No: **FM 51210**

Signed on behalf of BSI

Originally registered: **9 Jul 1999**

UKAS QUALITY MANAGEMENT
003

MGMT. SYS.
RvA C 030

This is not a legal document and cannot be used as such. This certificate does not expire.
To check its validity telephone +44 (0)20 8996 9001 or visit www.bsi-global.com/ClientDirectory
Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2000 requirements may be obtained by consulting the organization. The British Standards Institution is incorporated by Royal Charter.
Group Headquarters: 389 Chiswick High Road, London W4 4AL, UK.

BSI Management Systems

MC4402/ISSUE1/SA/0102/UK/DP

CASTELLINI

CERTIFICATE OF REGISTRATION

Quality Management System

Castellini S.p.A
Sede Centrale
Via Saliceto 22
Castel Maggiore
Bologna
Italy
40013

Operate a Quality Management System,

which complies with the requirements of

ISO 13485: 2003

for the activities detailed in the scope of

registration.

FM 83570

Gary L Pearson
President

Originally Registered: **27 Jul 2004**

Expiry Date: **26 Jul 2007**

Standards Council of Canada Accredited Registrar
Conseil canadien des normes Registraire accrédité
TM

CMDCAS Recognized Registrar

BSI Management Systems

This is a Presentation Certificate only. This is not a legal document, and cannot be used as such. Only the legal certificate should be used for confirming certificate validity and scope of registration. For further information please contact the certificate holder or BSI, Inc. on 703 437 9000 or www.bsiamericas.com.

Group Headquarters: 389 Chiswick High Road, London W4 4AL, UK.

Americas Headquarters: BSI, Inc. 12110 Sunset Hills Road, Suite 200, Reston, VA 20190, USA.

A509 (USA) Issue 2

CASTELLINI

CERTIFICATE OF REGISTRATION

Quality Management System

This is to certify that:

Castellini S.p.A
Sede Centrale
Via Saliceto 22
Castel Maggiore
Bologna
Italy
40013

Hold Certificate No: **FM 83570**
and operate a Quality Management System, which complies with the requirements of ISO 13485: 2003 for the following scope:

The design, manufacture and installation of dental equipment, x-ray units, electrosurgical units and dental handpieces.

For and on behalf of BSI, Inc.:

Gary L Pearson
President

Originally Registered: **27 Jul 2004** *Latest Issue:* **27 Jul 2004** *Expiry Date:* **26 Jul 2007** *Page:* 1 of 1

Standards Council of Canada Accredited Registrar
Conseil canadien des normes Registraire accrédité
TM

CMDCAS Recognized Registrar

BSI Management Systems

CASTELLINI

CERTIFICATE OF REGISTRATION

Quality Management System

This is to certify that:

Castellini S.p.A.

Sede Centrale
Via Saliceto, 22
40013 Castel Maggiore
Bologna
Italy

Hold Certificate No: **MD 76089**

and operate a Quality Management System which complies with the requirements of **ISO 13485:2003** *for the following scope:*

The design, manufacture, installation, maintenance and service of "own brand"dental equipment, x-ray units, electrosurgical units and dental handpieces. Provision of training and qualification for internal and external service engineers to install, maintain and service company products to maintain compliance of products

For and on behalf of BSI:

Anne Boyd, Divisional Director, Product Services Operations

First Issued: **23 January 2004** Date: **23 January 2004**

Expiration Date: **22 January 2007**