



E U R O D E N T



ABSOLUTE


CE
0051

ISTRUZIONI PER L'INSTALLAZIONE
INSTALLATION INSTRUCTIONS
NOTICE D'INSTALLATION
GUÍA DE INSTALACIÓN
MONTAGEANLEITUNG

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SERVICE REQUIREMENT

The unit to be installed is CLASS I, with attached parts of TYPE B ,

with electronic bistoury or electrobistoury with attached part of TYPE BF .



The apparatus complies with the fundamental requirements of EC Directive 93/42.

Classification headings (EN60 601-1):

- 5.3 Common equipments (equipments with no waterproof casing);
- 5.5 Equipments which cannot be used in presence of an anaesthetic mixture inflammable by air or by oxygen or by nitrous oxide;
- 5.6 Equipments for continuous working with intermittent load.

VISION LED MODE lamp classification (IEC60825-1; IEC60825-1/A1; IEC60825-1/A2):

Unit with white led light of class 1M.

Do not observe directly with optical instruments (e.g. magnifying glasses, etc...)

Optical power: 350 μ W max to 470 nm without protective screen

162.5 μ W max to 470 nm with protective screen

Snowhow whitening system classification (IEC60825-1; IEC60825-1/A1; IEC60825-1/A2):

Unit with blue led light of class 2. Optical power: 82 μ W a 455 nm



Protection earth



Operating instructions

Power: 230 V / 50 Hz / 1350 VA (550 VA only unit)

Operating system: continuous, with intermitting load

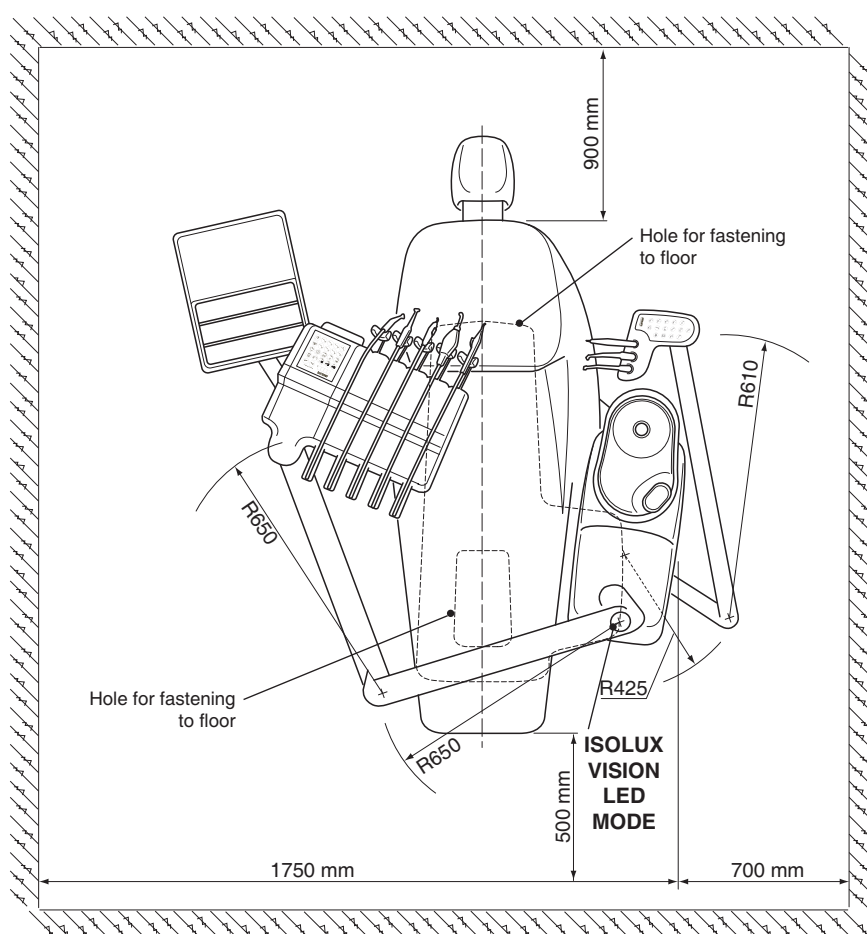
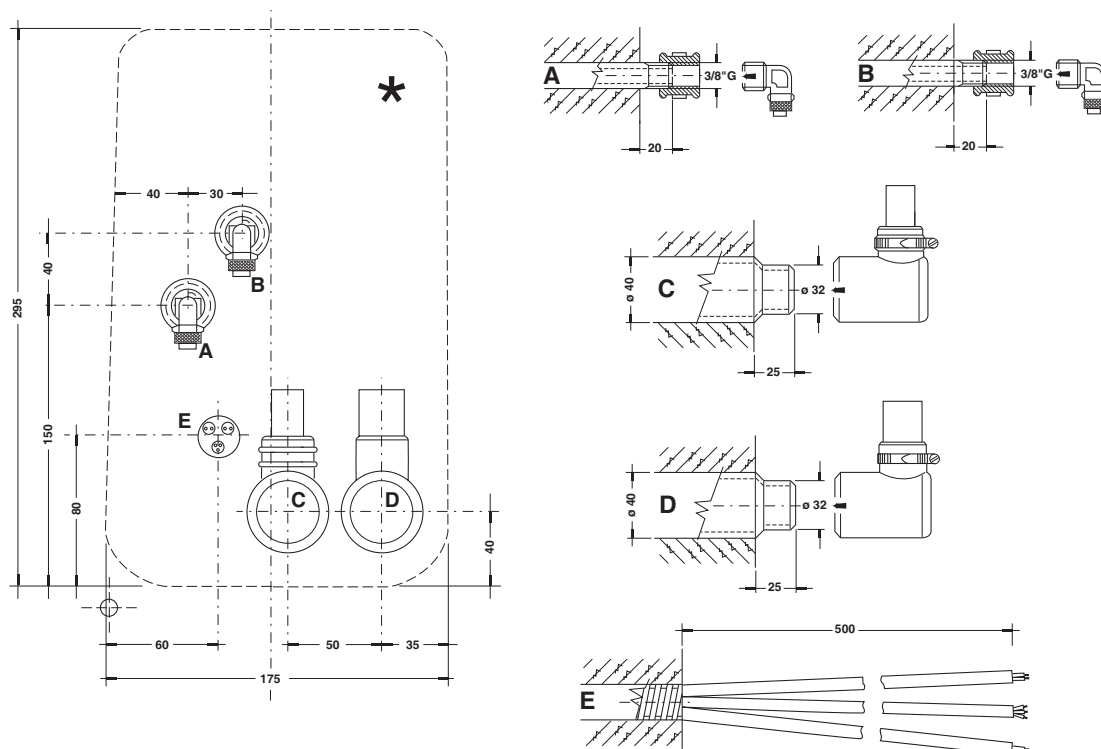
Max. lifting capacity: 135 Kg (dental unit and lamp excluded)

Total unit weight: 221 Kg

Max. weight applicable to instrument tray: 5 Kg

- The floor must be in accordance with DIN 1055 B1.3 and DIN 18560 T1 regulations.
- It is necessary to install an outer bipolar main switch to wall, in compliance with the law and with the following electric characteristics: 250 V / 10 A for disconnecting the unit from the main feed in case of intervention or inspection in it.
- The electrical system must be in accordance with IEC regulations 64.8, and made up of difference protective conductors I_{dn} O 30mA at 16A/250V. WARNING: To avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth.
- Water pressure at the unit inlet must range from 1,8 to 3,0 bar. The pipes must be capable to supply at least 5 l/minute of water flow rate.
Water characteristics must conform to DIN 1988 rules, with a hardness gradient $\leq 8^\circ$ dH (corresponding to 1,432 mmol/lit). We recommend installing a pressure reducing tap at the water hose outlet (preferably of 15 mm \varnothing).
- The air pressure provided by the compressor must range from 5,0 to 7,0 bar. Use a dry compressor, with air output of 60 lit/min. at 5 bar. We recommend installing a tap at the hose outlet (preferably of 15 mm \varnothing).
- The diameter of the emptying hose must be 40 mm, and 32 mm at its inlet; moreover the descent gradient must be at least 1 cm/mt, and the bend angle should not be less than 135°.
- The diameter of the suction pipe must be approx. 32/40 mm. We recommend following the instructions provided by the suction pump's manufacturer.
- All arrangements must be carried out according to the indications provided on the following page and consulting the full scale installation plan (code 633580010) attached to each dental unit.
- Please refer to Spare Parts catalogue (code 664803001) and apply to EURODENT for further information about what is not included in it. Eurodent will provide to supply a copy of wiring diagrams, if requested, to authorized technicians.
- **EURODENT accepts responsibility for the equipment safety and reliability if and only if:**
 - installation, assembly, extension, adjustment and repair operations have been carried out by authorized people;
 - the general and electric installation of the room complies with the above written requirements;
 - the equipment has been installed in compliance with the "INSTALLATION INSTRUCTIONS";
 - the equipment is used in compliance with the "OPERATOR'S HANDBOOK";
 - the equipment has not been modified under Eurodent authorization.

ARRANGEMENT



- A. Water 3/8"G (green hose)
- B. Air 3/8"G (white hose)
- C. Outlet Ø 32
- D. Suction Ø 32
- ⊙ Pump starting 2 x 1 sqmm
- E. ⊙ Bell 2 x 0,5 sqmm
- ⊙ Net 3 x 2,5 sqmm

MAX. CHAIR OVERALL DIMENSIONS:

ISO: 2 x 0,6 m

ISORAMA: 2 x 0,7 m

ABSOLUTE: 2 x 0,6 m

A PACKAGE OF THE ISORAMA, ISO AND ABSOLUTE CHAIRS

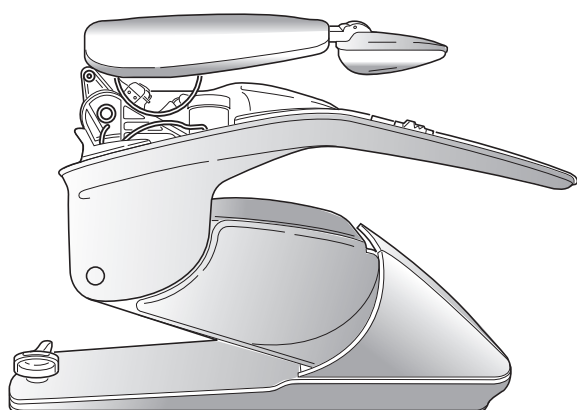
The special packing system of these chairs has been thought in order to reduce its overall dimension.

For such a reason, the body of the chair is placed into the packing case ① with the backrest bent over the seat (see figure A0), whereas upholstery, seat, backrest and headrest are contained into the packing case ②.

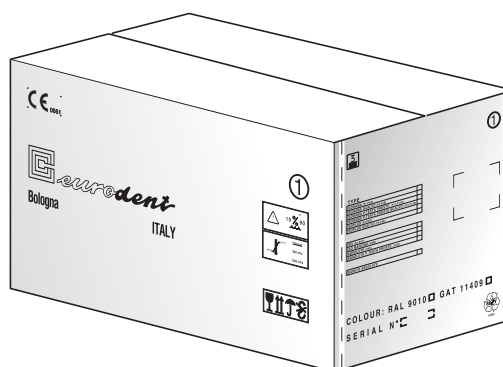
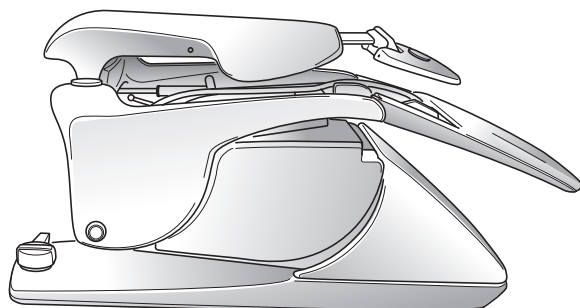
When removing the chair from the packing case, cut the box ① along the dotted line.

A0

ISORAMA



ISO/ABSOLUTE



ISORAMA

Net weight 131
Gross weight .. 146
M³ 0,6
cm. 125 x 69 x 70

ISO

Net weight 126
Gross weight .. 139
M³ 0,6
cm. 125 x 69 x 70

ABSOLUTE

Net weight 122
Gross weight 135
M³ 0,6
cm. 125 x 69 x 70



ISORAMA

Net weight 13
Gross weight .. 18
M³ 0,2
cm. 115 x 65 x 25

ISO/ABSOLUTE

Net weight 8
Gross weight.. 14
M³ 0,12
cm. 93 x 51 x 25

TRANSPORT AND INSTALLATION

Remove the chair from its packing and, before moving it, take the covering guard of the connecting box off, so as to make the seizing of the chair and transport easier. Do not lift the chair by seizing the pantograph head or the legrest. Position the chair so as to place all couplings inside the connecting box (placed at the bottom of the chair parallelogram). Make sure that you do not inadvertently squash or tear the electrical cables of the chair when slipping it on the floor. Pay special care to the cable of the foot-control.

Check the level evenness of the floor with respect to the bearing surface of the base. Fasten the chair by fitting the expansion stoppers type Fischer (supplied with the accessories) into the two housings (see figure A1).

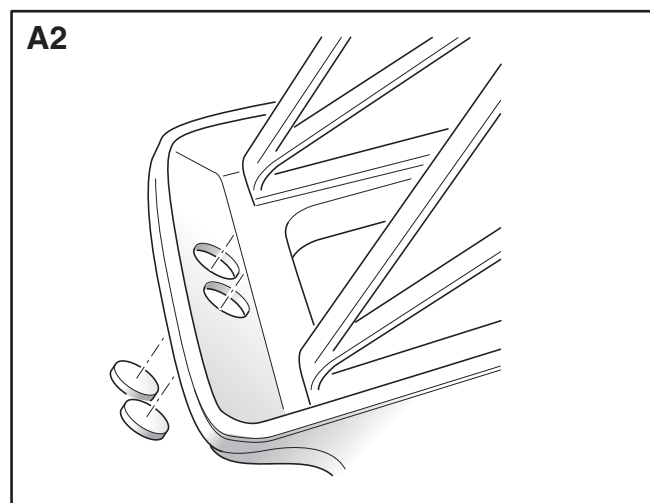
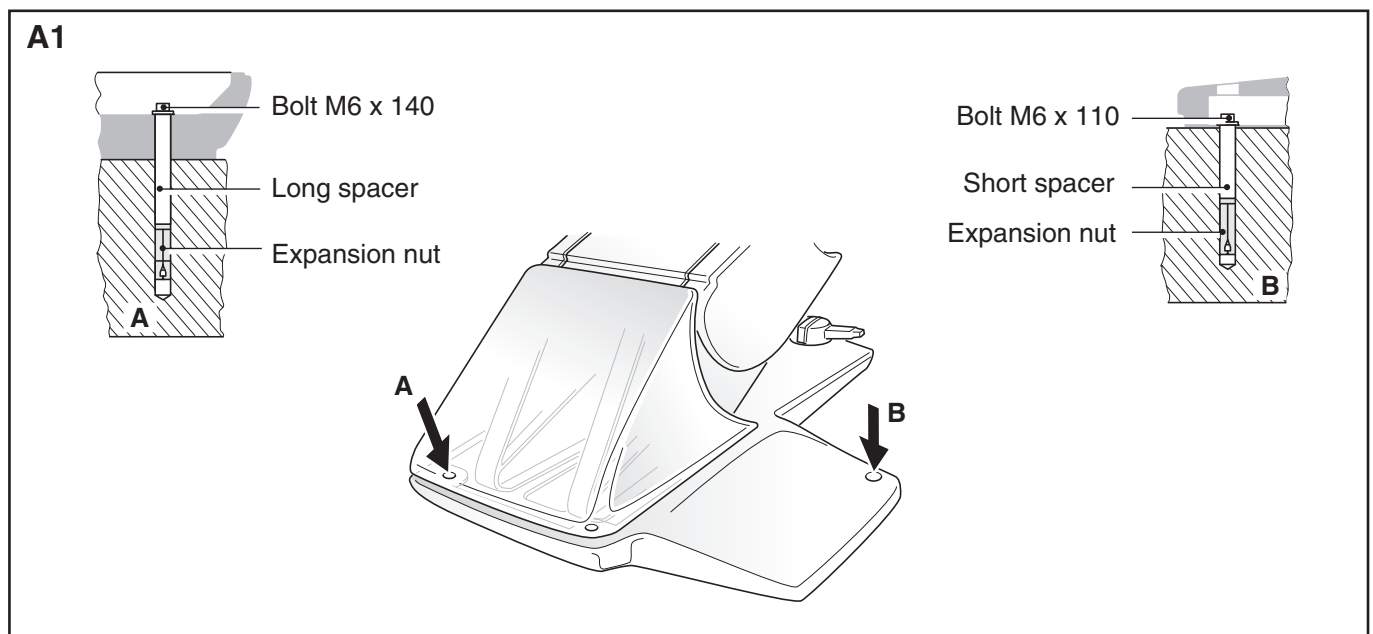
M6 expansion bolts and proper spanner are supplied with the chair.

The hole in the floor must be at least 115-mm deep.

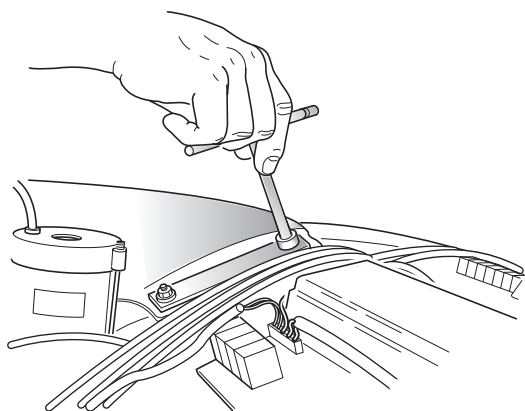
As regards installation, we advise connecting **temporarily** the chair to the main supply in order to have it lifted simply by operating the foot-control.

BE CAREFUL! Connect the backrest to the motor and to the Trendelenburg device before making it perform any movement.

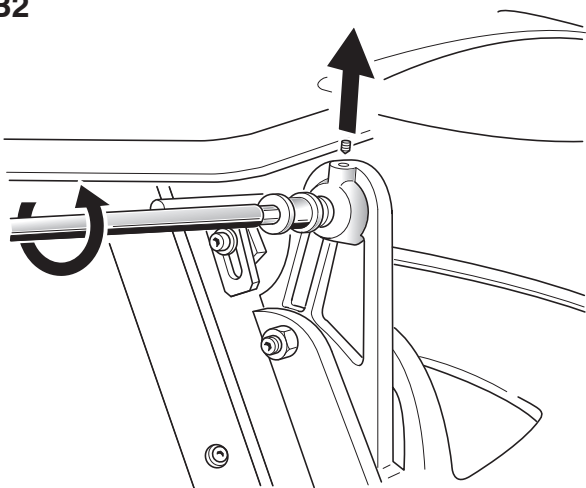
When the chair reaches the height right for operating comfortably, cut out voltage.



IMPORTANT: if assembly does **NOT** allow connection inside the chair base box, you can use the front base frame as outlet window, by removing the baffle plugs with a cutter.

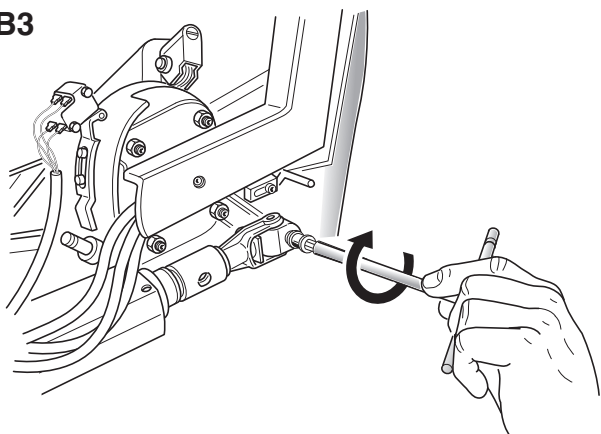
B INSTALLING THE ISORAMA CHAIR**B1****PREPARATION**

Position properly the chair and remove the armrest by unscrewing the two M6 nuts with a 10-mm spanner. Cut the 2 plastic clamps which hold the worm screw of the backrest motor and the tie rod for the Trendelenburg movement.

B2**RELEASING THE BACKREST**

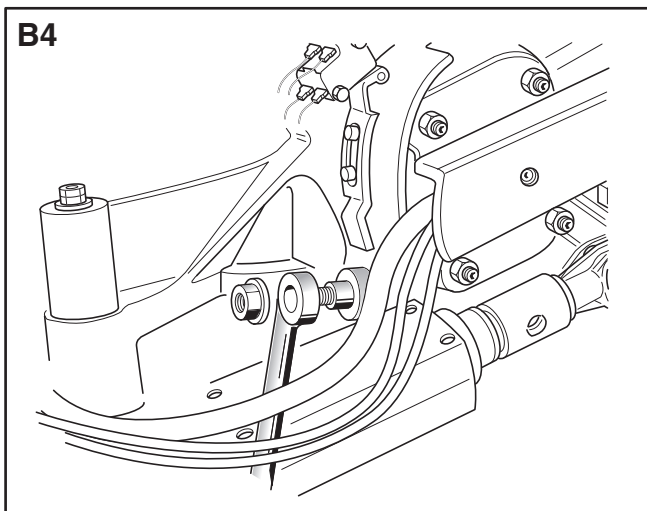
By means of a 6-mm Allen wrench unloose the M4 dowel and remove the backrest pin from its housing using a 6-mm Allen wrench.

Note: Pay attention to the shim washer.

B3**FASTENING THE BACKREST**

Lift the backrest so as to make the hitch point match with the motor rod eye and insert the backrest pin into its housing.

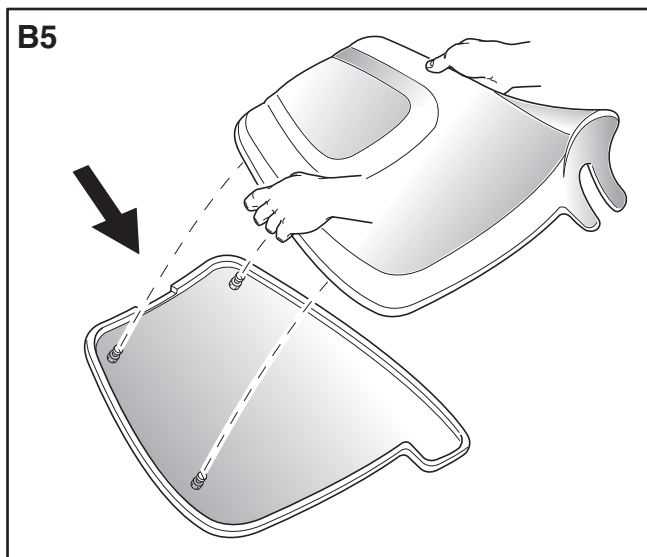
Tighten the pin firmly by means of an Allen wrench, then unloose the pin about 30° (less than one fourth turn of the wrench) in order to make it run freely and with minimum play. Finally, fasten it by tightening the M4 dowel. Remove the polystyrene cube which protects the headrest.

B4

OPERATING TEST

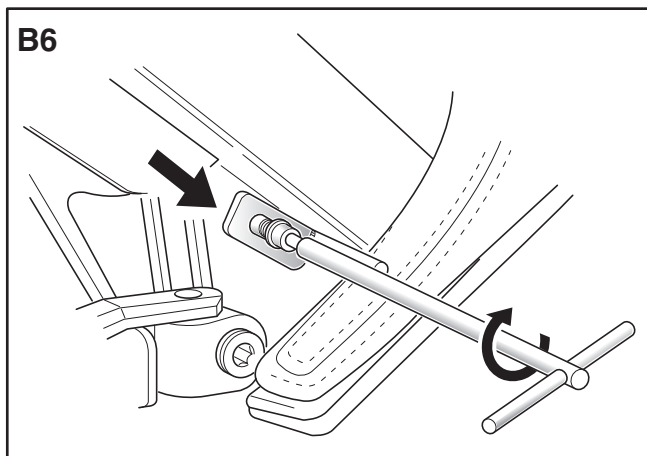
Now, proceed to fit the tie rod operating the Trendelenburg movement.

By using a 13-mm spanner remove the nut, then insert the tie rod eye and lock the rod again by the proper nut. Supply voltage to the chair and perform some trial movements in order to ascertain that the stop microswitches work properly. Finally, mount upholstery.

B5

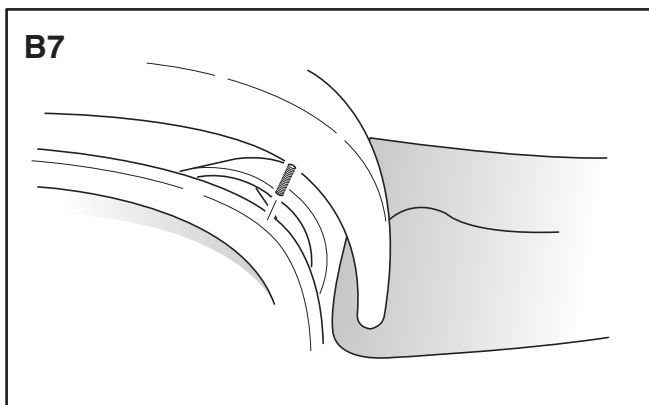
BACKREST PAD

Position upholstery higher than backrest. Then, slide it downwards, in order to secure it properly and firmly to the three fastening screws, as shown in figure.

B6

Fasten upholstery by the T-clamp, and press it against the two upholstery tags, as shown in figure.

Relocate the armrest.

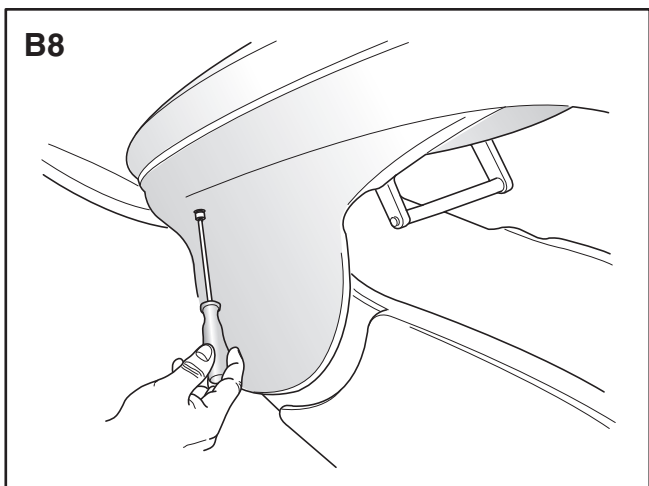


SEAT PAD

If not previously fitted, locate the dowels in their seats (the long one goes in the external rear hole), and fasten them by means of the proper lock nut.

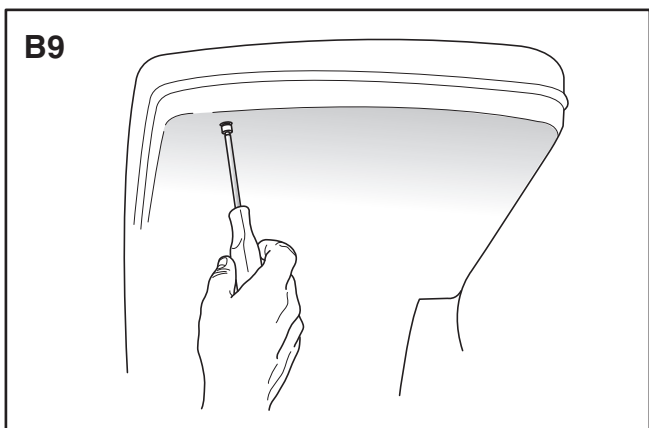
Fit the two front dowels as well.

Then, as shown in the figure, position upholstery taking care of inserting the dowels into the proper holes.

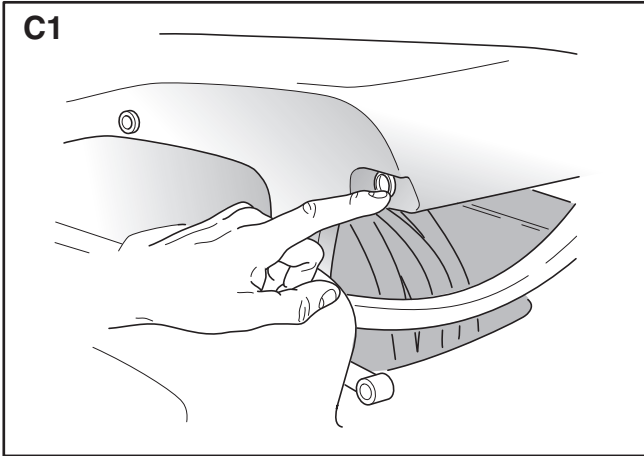


Now, secure the pad by tightening the long cylindrical nuts of the dowels.

To carry out this operation, use the long spanner supplied.



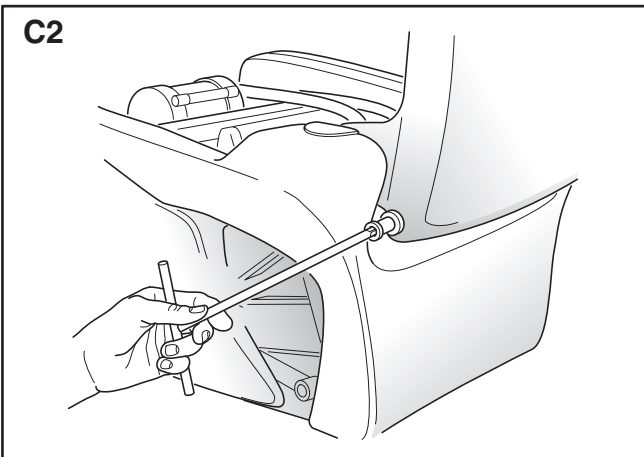
In order to fix the front side, use M4 x 40 screws.

C INSTALLING THE ISO AND ABSOLUTE CHAIRS**C1****BACKREST**

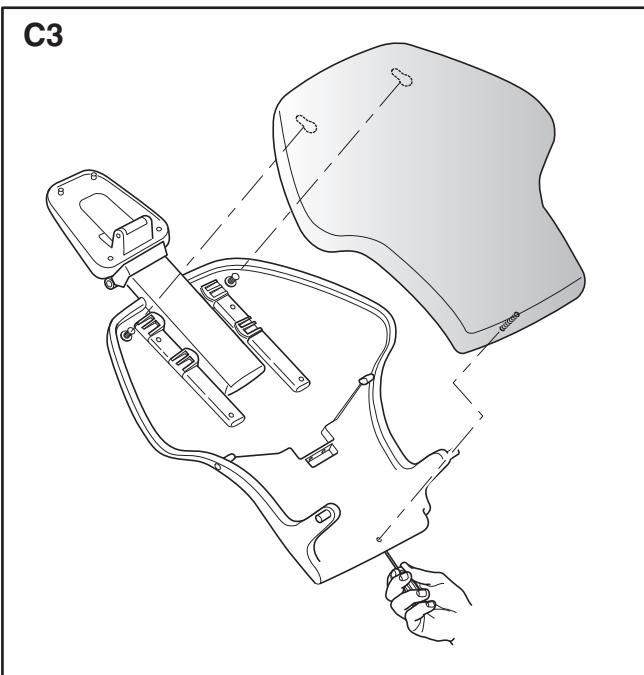
Remove the chair from the packing by cutting along the dash-line, and lift the backrest until the hitch point matches the push rod.

Carefully insert the shim in its housing, and after fitting the screw in its housing, tighten it with the suitable wrench.

Now the chair can operate and some test movements should be performed to ensure that stop microswitches operate properly.

C2

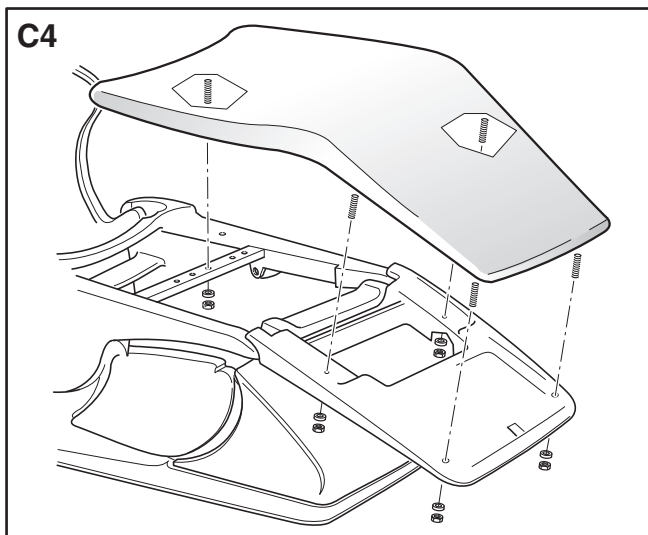
Then proceed by mounting upholstery.

C3**BACKREST UPHOLSTERY**

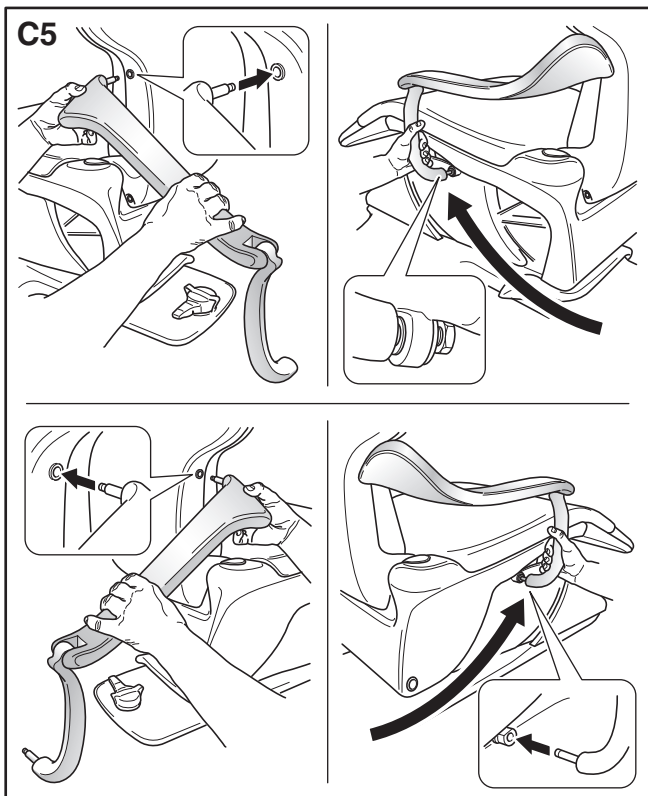
Position upholstery slightly over the backrest and make it slip down so that it fits in the two fastening screws.

When upholstery is properly positioned, fit the screw into the suitable hole on the back side and tighten the M4 dowel by using the 2 mm Allen wrench.

If the pad does not match properly with the backrest, adjust the two flathead screws as described for the headrest pad.

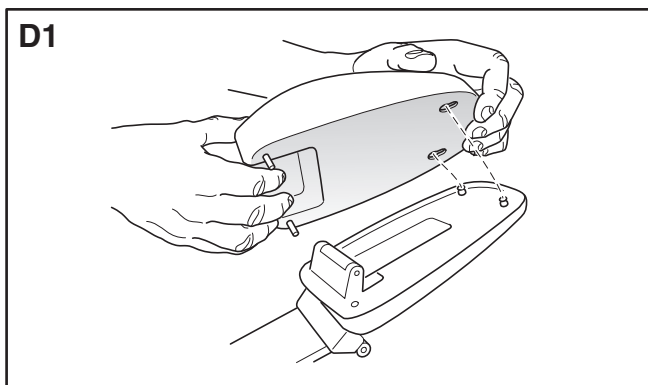
C4**SEAT UPHOLSTERY**

Position the pad on the seat and secure it with the five M4 screws by tightening the lock nuts, so as to make the parts join perfectly.

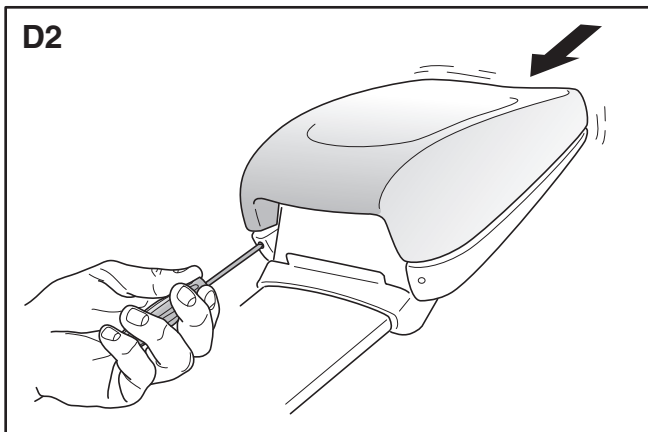
C5**ARMRESTS ASSEMBLY (ONLY ISO CHAIR)**

Assemble the left armrest, first of all introducing the upper pin and then, after having placed the lower coupling, tighten the screw.

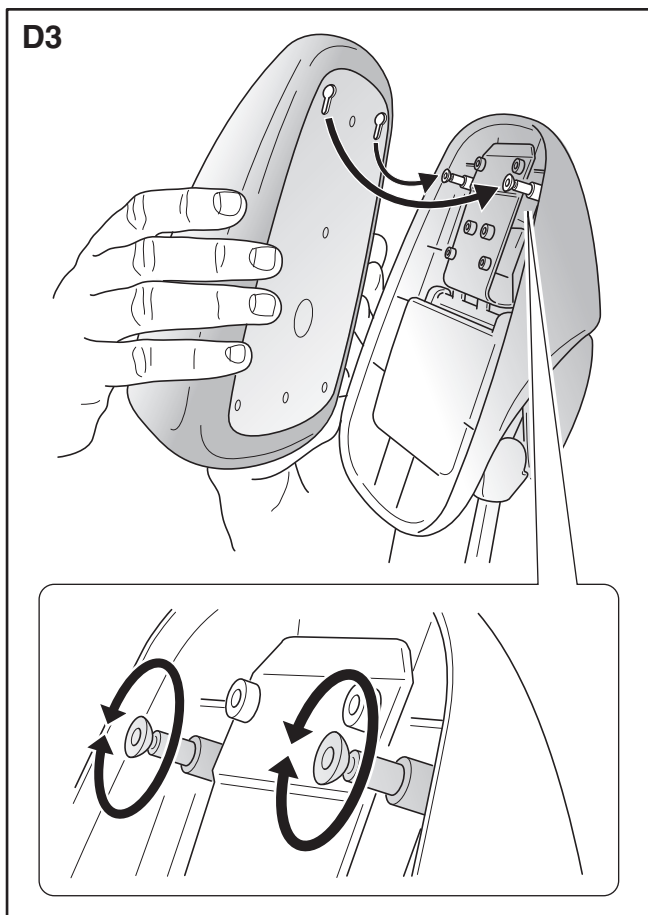
Assemble the right armrest, first of all introducing the upper pin and then the lower one.

D**HEADREST****D1**

Position the headrest. Once the two screw heads are placed in their seats, push down and insert the two pegs (dowels in the respective holes). Tighten the side fastening dowels by pressing onto both parts and using a 2 mm Allen key.

D2

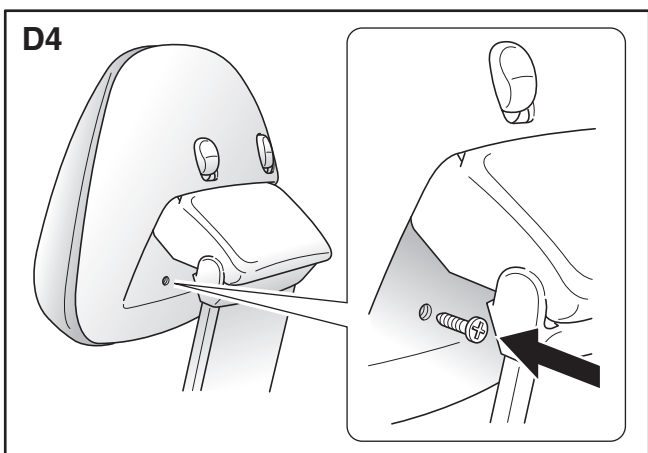
Proper matching of pad and backrest can be obtained by loosening the nuts that block the two flathead screws, adjusting the latter ones in depth so as to accommodate properly the headrest pad, and then tightening again the nuts.

D3

PROSTHETIC HEADREST

Position the headrest. Once the two screw heads are placed in their seats, push up.

Proper matching of pad and headrest-back can be obtained by loosening the nuts that block the two flathead screws, adjusting the latter ones in depth so as to accommodate properly the headrest pad, and then tightening again the nuts.

D4

Then lock the headrest by the proper screw fitted onto the headrest-back using a short screwdriver.

E INSTALLING THE DENTAL UNIT

E0

BASE

Net weight 68
Gross weight .. 90

M³ 0,6 m³
cm. 125 x 69 x 70

INSTRUMENT TABLE

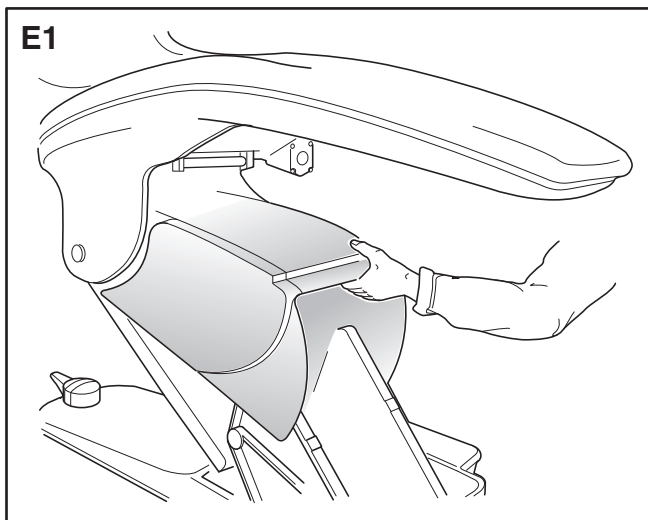
Net weight 22
Gross weight .. 33

M³ 0,428 m³
cm. 88 x 76 x 64

The dental unit is supplied into two packing cases: the first one labelled "BASE" contains the body, the assistant arm and the accessories; the second one labelled "INSTRUMENT TABLE" contains the operator retraction arm, the modules and the tray holder.

Provide air and water hose couplings with taps. It is absolutely necessary to clean out air and water pipes before connecting the dental unit to them.

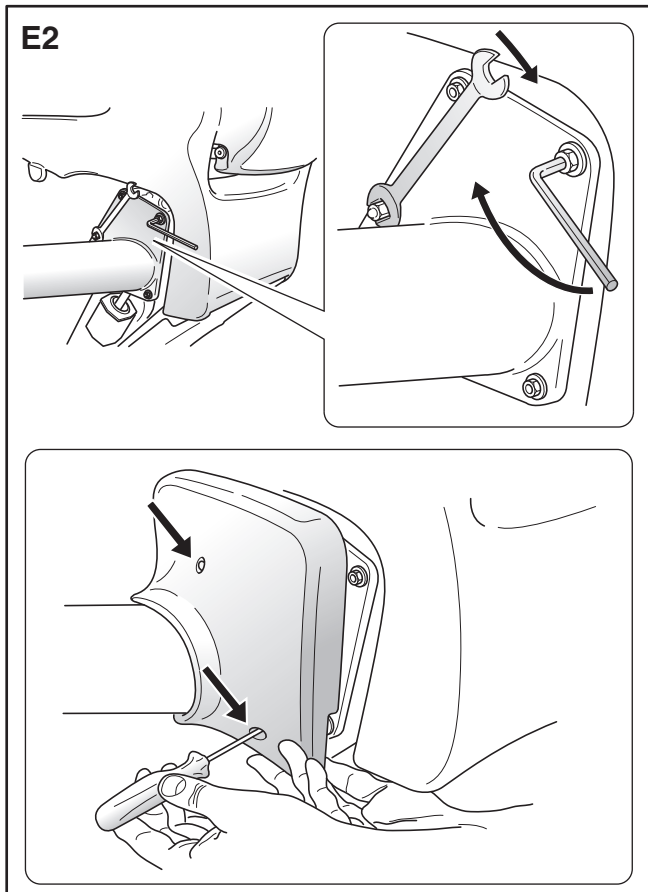
E1



In addition to the guard of the connecting box, we recommend that you remove even the lid of the chair parallelogram, in order to operate easily when introducing hoses and cables into the dental unit. Remove such mentioned lid by unscrewing the two long brass nuts which are placed under it and which fasten it to the upper rods of the parallelogram.

The chair shall be fastened to floor by inserting expansion bolts into the two holes made on the front side of the base footboard.

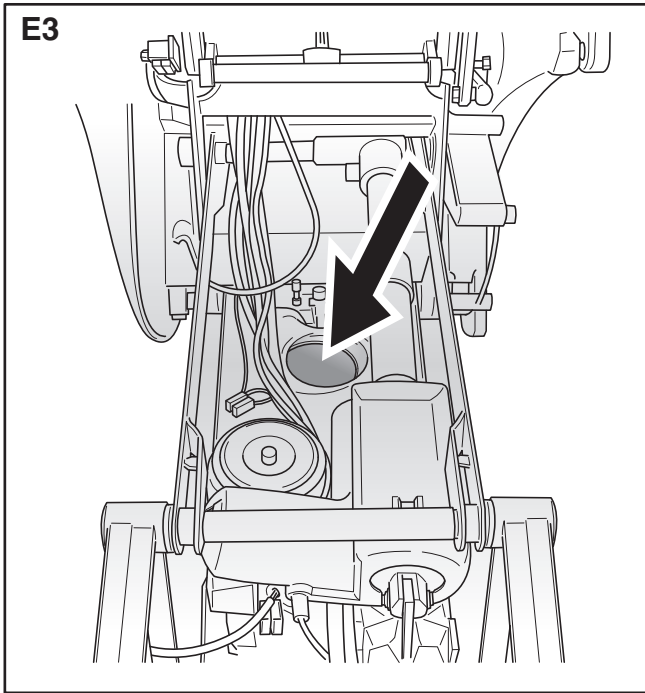
E2



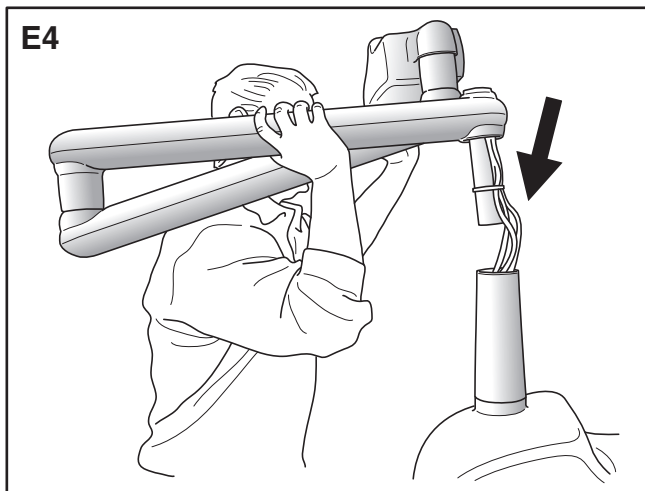
Now, mount the body of the dental unit on the chair support by means of the stud bolts and the socket head screws supplied (placed inside the "ACCESSORY" box, into the packing case labelled "BASE").

To make such operation easier, fit the additional stud bolt supplied, with the other stud bolt into the lower left hole. Level the body properly (horizontally and vertically) before tightening the screws and the middle nut; remove the Allen-head stud bolt and replace it with the third screw supplied.

Mount the protection guard by means of the two supplied screws.



Into the shaped hole on the parallelogram arm of the chair first insert the suction hose, then the electric cables wrapped with tape to the Rilsan hoses (green and white), finally insert the drain hose. Lead all hoses and cables up to the connecting box.



Now, install the instrument table arm of the dental unit (however first make the guard, cable and hoses run through the body), and insert it into the proper pin.

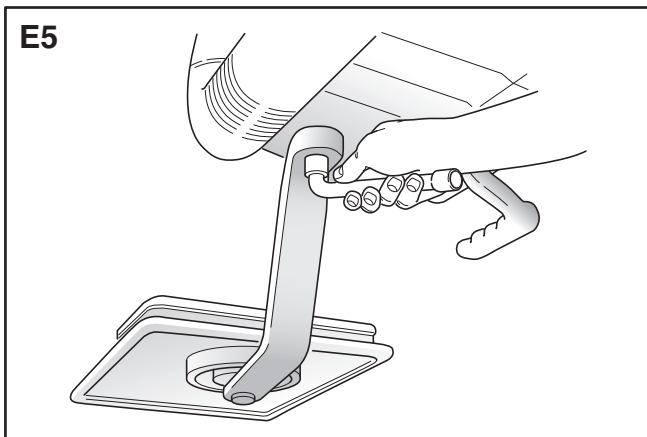
Plug the arm cord into X10 (on right top side), on the low-tension p.c.b.

With ABSOLUTE WAYFINDER, connect LVDS cable into the connector on the left side of display PCB, behind low tension PCB.

Then, connect the white hose to the quick fitting, which provides modules with air in the right valve, and the green one to the water distribution unit (for tumbler, assistant syringe and modules), placed on the chair side. If the Calbenium mixing unit is installed, connect the green hose to the solenoid valve on the unit.

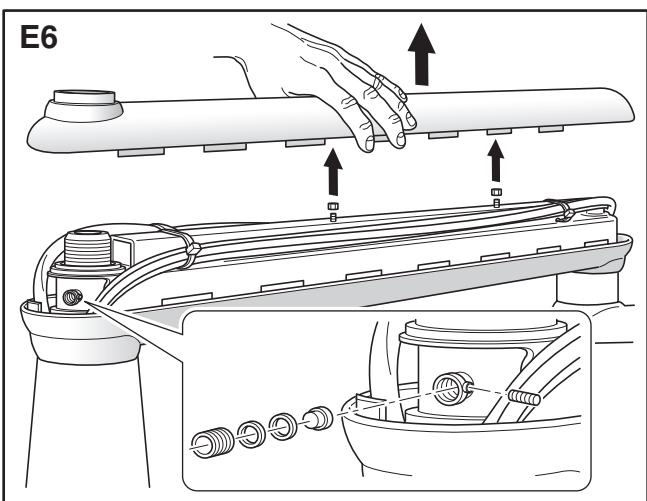
If the spray feeding unit is installed, connect the green hose to the unit control switchboard.

E5



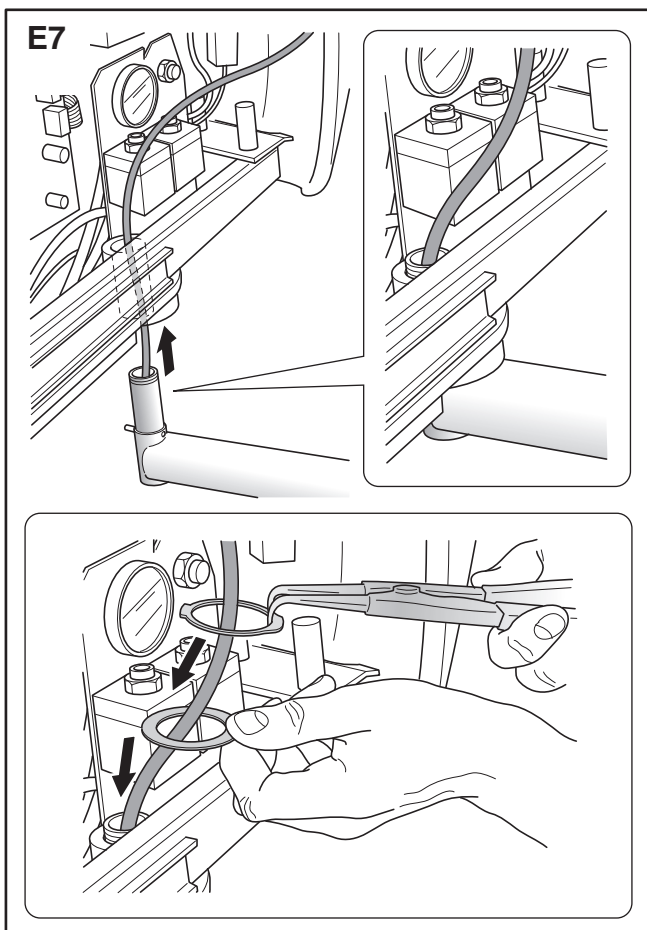
Fasten the tray holder under the module-holder table (to make it easier, use a 17 box or socket spanner).

E6



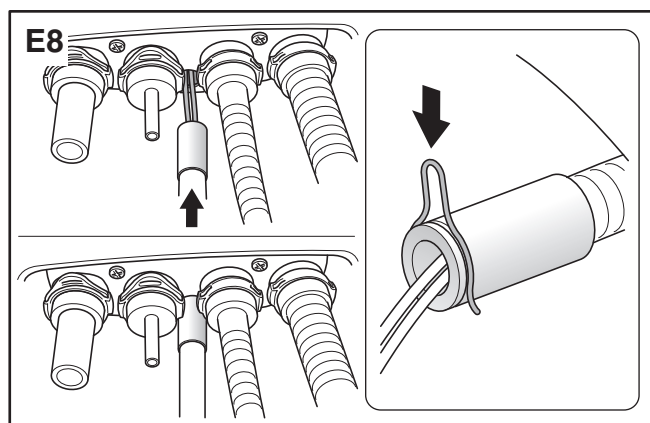
Lift the upper guard of the fixed arm, then unscrew the two nuts that block the lower guard to go down, then introduce the clutch into the hole. After having adjusted it, fix it with the dowel and assemble the guard again.

E7



Now, insert the cable and the pin of the assistant arm into the proper housing (at the bottom of the body, on the chair side), and lock the pin with the snap ring and its lock space washer. In case of METASYS suction, the amalgam separator bowl should be removed temporarily. Pass the cable in the body until it is coupled into the connector X13 of the body p.c.b.

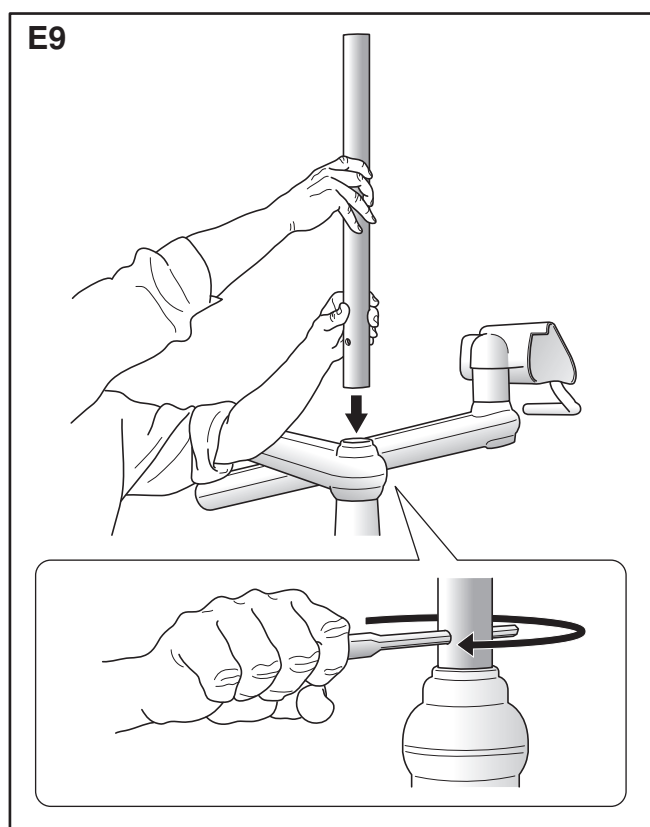
NOTE: ensure that the cable does not hang under the body!



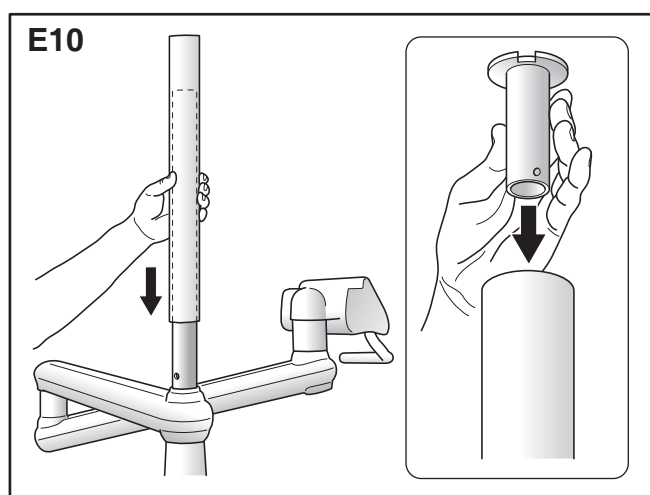
If the dental unit is equipped with assistant syringe (in accessories box), follow the steps below: Insert the syringe hose into its housing on the tubings carrier, and make it run upwards through the hole between the tubing couplings. Then, lock the end bush with the clip supplied.

Cut the (green) water hose of the operator's table, fit the T-coupling between the two pieces and connect to the syringe water hose. The air hose has to be connected to the coupling with plug in the hydropneumatic unit.

If the Calbenium mixing or spray feeding unit is installed, cut the pressurization air hose, interpose the T-coupling between the two pieces and connect to the syringe air hose.



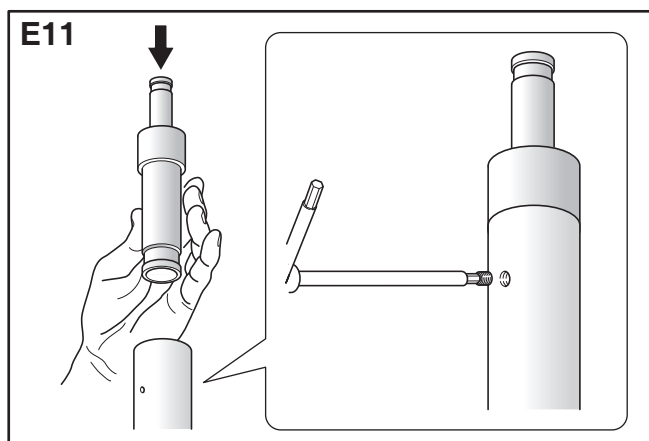
Insert the lamp-stand into its housing and screw it until end-of-stroke, by tightening it with the wrench fitted in the corresponding hole.



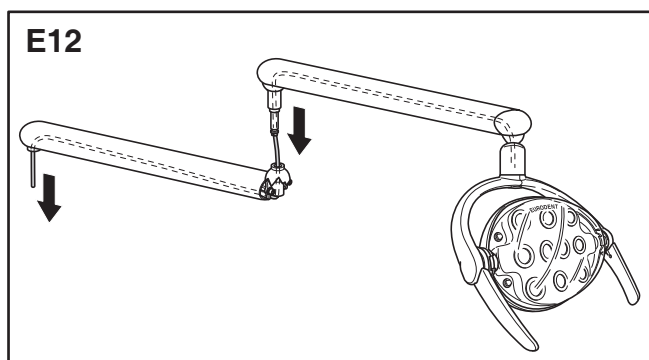
With ISOLUX lamp:

Then introduce the external guard on the stand with the pertaining bush. Assemble the lamp arm on the stand passing the lamp cable into it first.

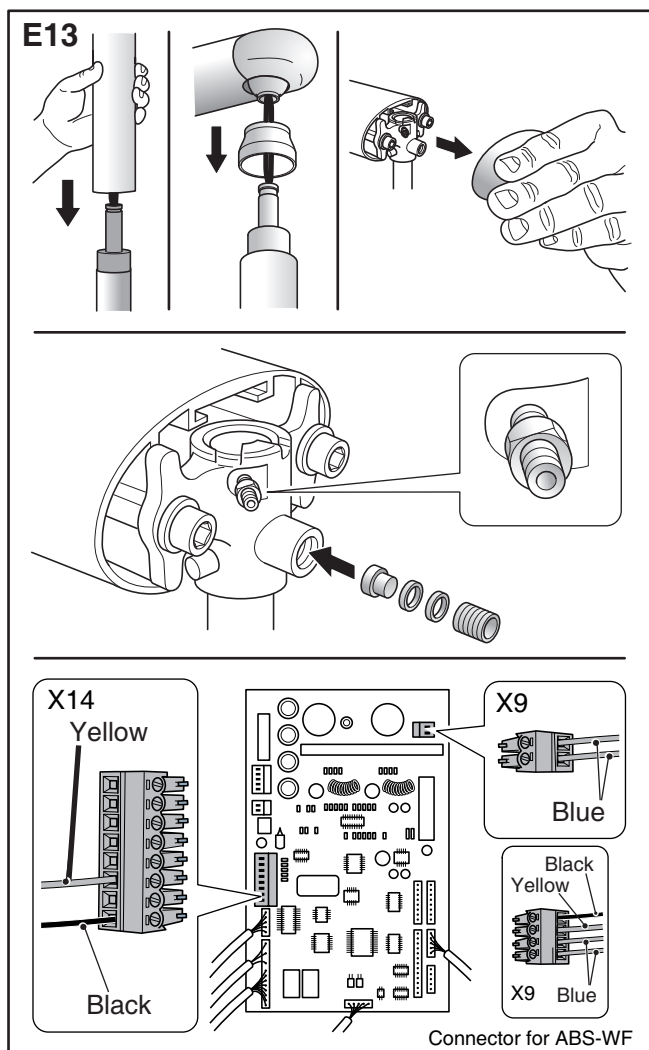
The cable should be introduced in the connector X9 of the body p.c.b. with its connector which is in the suction box.



With VISION LED MODE lamp:
introduce the metal pin and block it with the dowel.



Assemble the two lamp arms together letting the cable pass inside the pin seats.

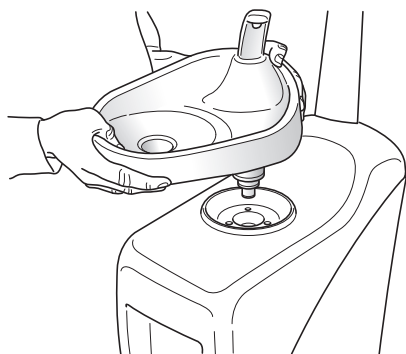


Then introduce the cover and the lamp arm paying attention to insert the cable first.

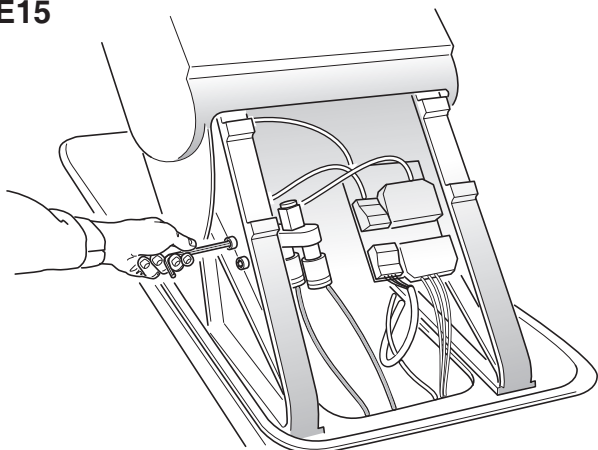
Introduce the clutches into their holes, screw the safety bolts, block them with the nut and assemble the carts.

The cable with the blue wires must be introduced into the connector X9 of the main p.c.b. The other cable must be introduced into the connector X5.

With ABSOLUTE WAYFINDER, four wires-cable from the lamp must be introduced into the connector X9.

E14

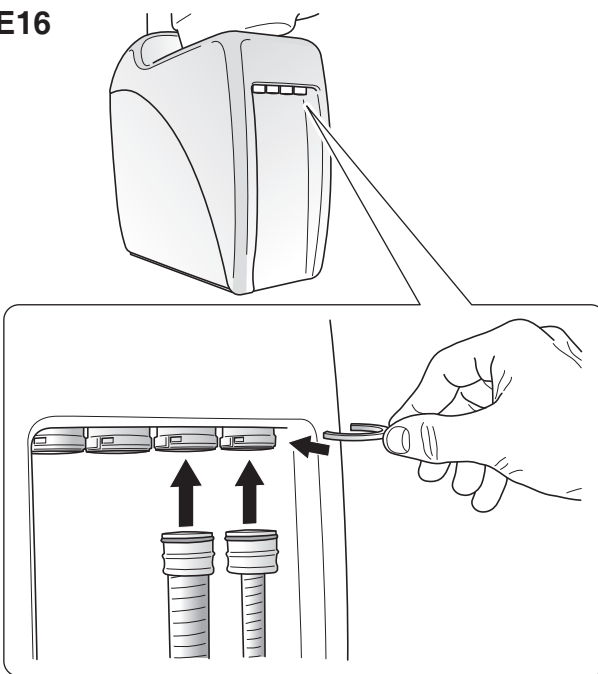
Place the bowl into its housing.

E15

Connecting box: fix the main valve for air and water at the left side, by the two screws supplied.

Pay attention to the flow direction through the valves (shown by an arrow on the plastic body) when locking the air and water hoses. The safety electrical connectors set must be fastened at the box right side, by the screws and nuts provided.

After assembling these components, refit the plastic guards.

E16

At the end introduce the two suction pipes in their seats (the small tubing should be introduced in the more external seat rightwards) and block them with the proper clips.

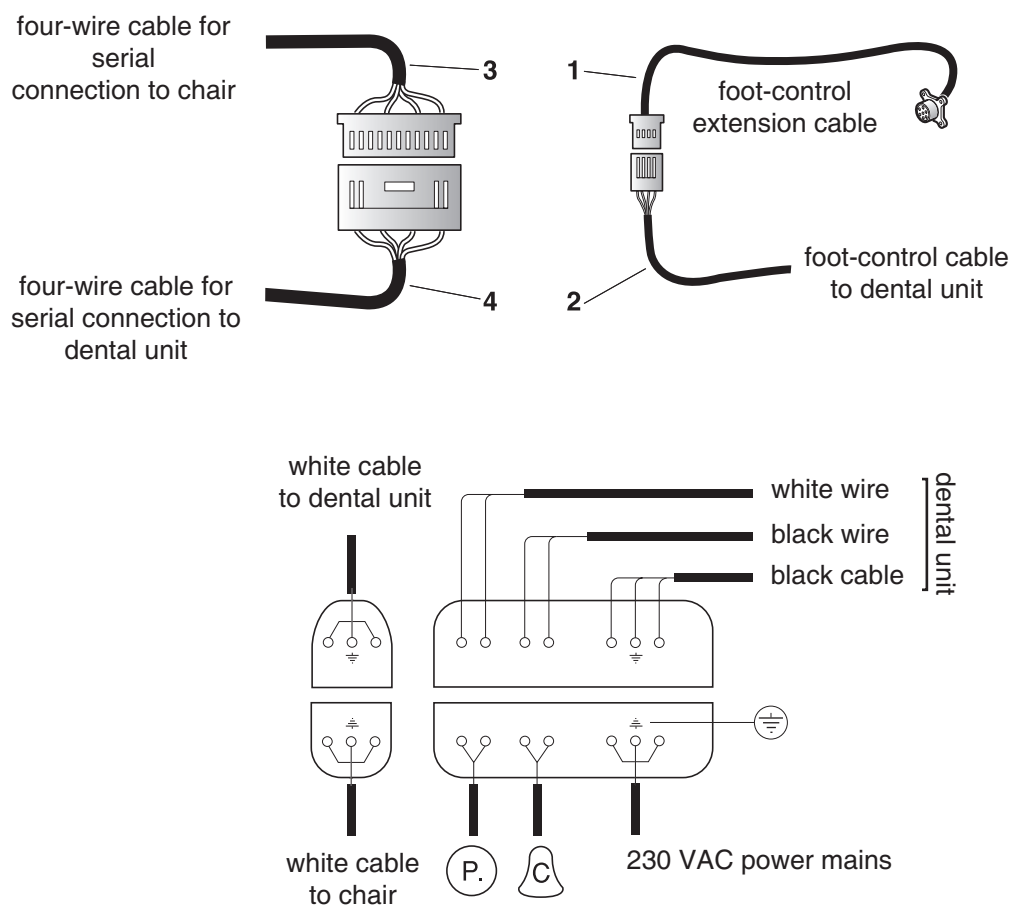
F**ELECTRICAL AND ELECTROPNEUMATICAL CONNECTIONS**

The box receives several cables, i.e. the grey cable which connects the foot-control cable to the box, the black four-wire cable for serial connection with the dental unit, and the white three-wire cable (brown, blue, and yellow/green) for chair mains supply.

The following ones are coming from the dental unit:

one three-wire white cable (blue, brown, yellow-green), another black one with two white and two black wires, a grey cable for dental unit connection to foot-control extension, a four-wire black cable for serial connection to the chair, and one more black cable ending by two faston connections.

The safety connectors (a black and a white one) have ten terminals.

F1

Plug both fast-on wires to the main solenoid valve for air and water (24 V).

Connect the foot-control extension cable (1) to the foot-control cable (2).

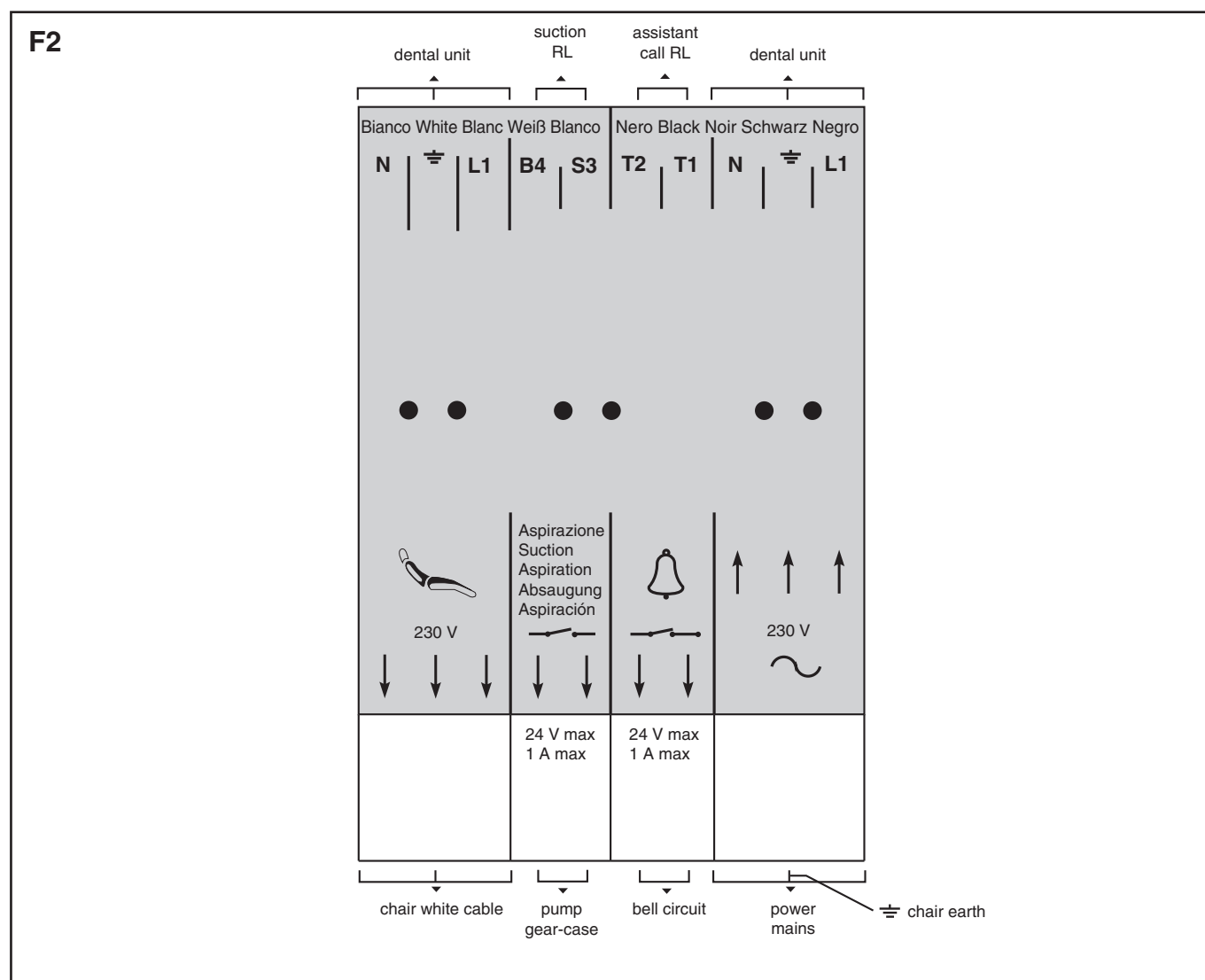
Connect the black four-wire cable (3) for chair serial connection to the black four-wire cable (4) from the dental unit.

The white wires of the black cables (to switch the suction pump control circuit) must be connected to the first two brown contacts, whereas to the other two must be connected the black wires of the black cable (to switch the circuit of nurse bell or any other service).

In the same way, the three wires of the white thick cable shall be connected to the terminals of the white connector (blue to N terminal, brown to L terminal and yellow/green to earth terminal). To the terminals mentioned the wires of the white cable for feeding the chair shall be connected according to their colours and L, N and earth signs.

Leave the black cable from the chair foot-control connected to the black cable for chair movements control.

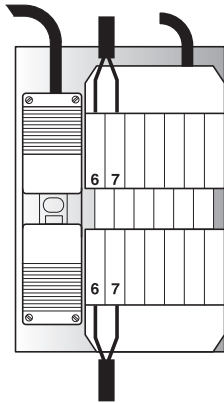
Finally, the wires of the black feeding cable coming from the dental unit shall be connected to the three terminals of the black connector (blue to N, brown to L and yellow/green to earth). To the terminals mentioned shall be connected the wires of the cable coming from power mains (230 VAC). Take care to protect all of the hanging connections by the plastic shield supplied among the accessories.



Replace the parallelogram lid and fasten it by means of the two brass nuts/tie rods, then close the connecting box by using the proper guard.

G CONNECTING THE SUCTION PUMP

G1



When picking up any of the two suction tubings, the dental unit provides a contact between the two white wires (i.e. a switch which conducts when a tubing is up and cuts off when tubings are at rest).

Therefore, the pump must be provided with control switchboard.


In case of pumps as Dürr or Cattani equipped with control switchboard, which require a simple switch between two preset contacts (generally 1 and 3), connect such contacts to the two brown ones **6** and **7** in front of the white wires, as the figure shows.

H ABSOLUTE ARRANGEMENT



DISINFECTION SYSTEM (H.I)

If the automatic or semiautomatic disinfection system are fitted afterwards, the electronic system should be set for recognizing the unit.


Proceed as follows:

- switch on the dental unit keeping the clock key  pressed;

P	0	0	0
---	---	---	---

 appears on the screen;
- press the keys  and  in sequence; the display shows

C	0	0	0
---	---	---	---


.
- if the automatic disinfection system is assembled, the parameter increment key  should be pressed until

C	0	0	1
---	---	---	---

 appears;

if the semiautomatic disinfection system is assembled,

C	0	0	2
---	---	---	---




 should be set. Press enter key  to store the setting.

LAMP

The dental unit shall be set according to the type of lamp installed, ISOLUX with photo cell or without photo cell or VISION LED MODE.

In order to carry out such programming, act as indicated in the above-mentioned paragraph until the screen shows

C	0	0	0
---	---	---	---

Press the  key in order to select the proper parameter for the lamp type installed. Using the  and  keys increase or decrease the value to set the lamp type:

C	1	0	0
---	---	---	---

 setting for ISOLUX lamp without photo cell;

C	1	0	1
---	---	---	---

 setting for ISOLUX lamp with photo cell;

C	1	0	2
---	---	---	---

 setting for VISION LED MODE lamp;

C	1	0	3
---	---	---	---


 setting for VISION LED MODE with chair's end-operation position (when the automatic position 1 is activated, the lamp switches itself off);

press the enter  key to store this setting.

ARRANGEMENT OF ASSISTANT'S KEYBOARD

For setting the electronic system according to the type of assistant's keyboard you should act as indicated in H paragraph and select the parameter

C	2	0	0
---	---	---	---

 with the clock key .

If the assistant's keyboard is with 2 keys, set

C	2	0	0
---	---	---	---

.

If the assistant's keyboard is with 9 or 19 keys you have to set

C	2	0	1
---	---	---	---

.


For storing the desired setting press the enter key .

ARRANGEMENT IN CASE OF TUBINGS CLEANING

If the optional tubings cleaning kit is assembled, set the parameter in order to make the electronic device recognize the installation of the kit.

Then act as indicated in the H paragraph and select the parameter

C	3	0	0
---	---	---	---

 with the clock key .

If there is no tubings cleaning kit,


C	3	0	0
---	---	---	---

 should be set.

If the tubings cleaning kit is present,

C	3	0	1
---	---	---	---

 is set.


To store the chosen setting press the enter key .

UV LAMP PRESENCE SETTING

If the optional UV lamp kit is assembled, set the parameter in order to make the electronic device recognize the installation of the kit.

Then act as indicated in the H paragraph and select the parameter

C	4	0	0
---	---	---	---

 with the clock key .

If there is no UV lamp kit,


C	4	0	0
---	---	---	---

 should be set.

If the UV lamp kit is present,

C	4	0	1
---	---	---	---

 is set.


To store the chosen setting press the enter key .

INDUCTION MICROMOTOR MODULE WITH PHYSIODISPENSER

If the induction micromotor module with physiodispenser is assembled, set the parameter in order to make the electronic device recognize the installation of the module.

Then act as indicated in the H paragraph and select the parameter

C	5	0	0
---	---	---	---

 with the clock key .

If there is no induction micromotor module with physiodispenser,


C	5	0	0
---	---	---	---

 should be set.

If the module is present,

C	5	0	1
---	---	---	---

 is set.

To store the chosen setting press the enter key .

I

ABSOLUTE WAYFINDER ARRANGEMENT

DISPLAY: PROPERTIES SCREEN



This display menu concerns the appliance's technical aspects and is used to access the following functions:

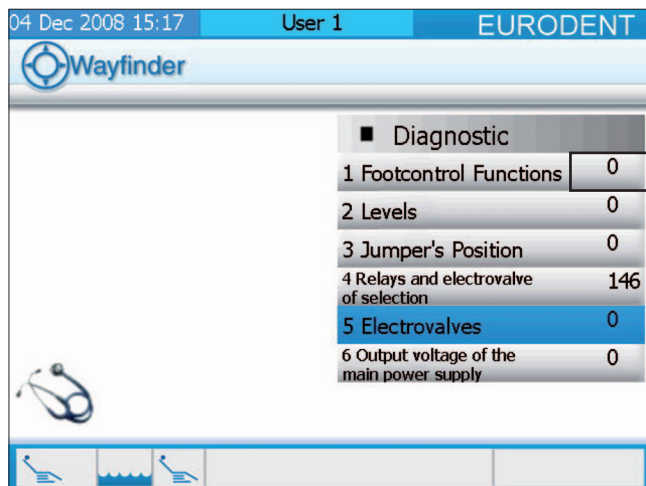
- Diagnostic;
- Software version;
- Set Properties Parameter;
- Service Mode;
- Service Code (maintenance).



DIAGNOSTIC

After you have entered the "Diagnostic" menu, the first outlet will be highlighted starting from the top.

To display the correct gate value, the gate must be selected using the keys  and .

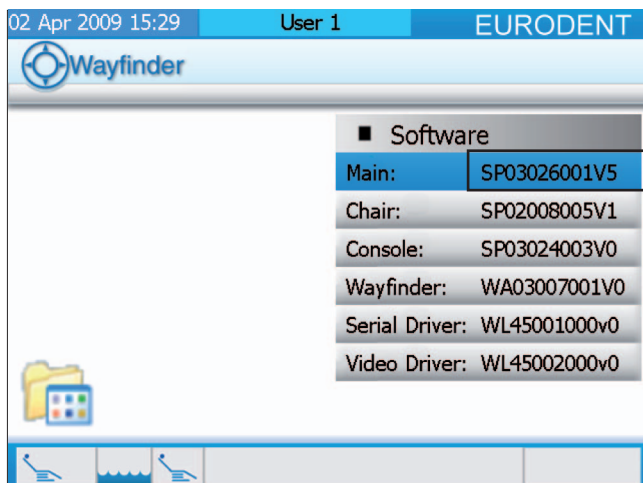


Outlet status



SOFTWARE (software version)

This submenu is used to check which software version is installed on the following pc boards: main, chair, console, display (wayfinder, serial driver, video driver, DLL and graphics).



Main p.c. board software version

SET PROPERTIES PARAMETERS

This submenu is used to set the configuration parameters for the unit:

- Disinfection System;
- Light;
- Assistant Arm;
- Suction Tube Rinse;
- UV Decontamination Light;
- Sensitivity Level Detectors;
- Communication Channel Pedal .

Refer to the "Service Mode" section for details on altering the parameters.




The parameters can be altered for up to 2 hours.

DISINFECTION SYSTEM

For retro-fitted, automatic or semi-automatic disinfection systems, the setting of the electronics must be changed so the system will be seen. This is done as follows:


- enter the "Disinfection System" box and

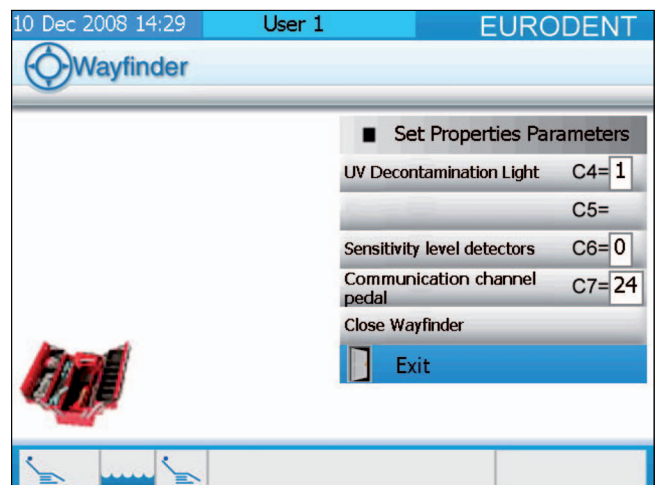
press  (the outline of the box will change colour);

- Use the  and  keys to change the setting

as appropriate:

C0=0: unit with no disinfection system;
C0=1: unit with automatic disinfection system;
C0=2: unit with semi-automatic disinfection system.





- press  to store the setting.



LIGHT





The settings for the dental unit take the type of light fitted into consideration; ISOLUX with photocell or without photocell, or VISION LED MODE.

The setting is altered as follows:

- enter the "Light" box and press  (the outline of the box will change colour);
- using the  and  keys to change the setting as appropriate:
C1=0: ISOLUX setting without photocell;
C1=1: ISOLUX setting with photocell;
C1=2: setting for the VISION LED MODE light;
C1=3: setting for the VISION LED MODE light with the chair in the end operating position (when the chair programme 1 is operated, the light switches off);
- press  to store the setting.

ASSISTANT ARM





To set the electronic system according to the type of assistant's keyboard, follow the instructions below:

- select the "Assistant's keyboard" icon and press  (the outline of the box will change color).
- by the keys  and  change the setting value according to these options:
C2=0 for assistant's keyboard with 2 keys;
C2=1 for assistant's keyboard with 9 or 19 keys;
- press  to store the setting.

SUCTION TUBE RINSE

If the optional tubings cleaning kit is assembled, set the parameter so that the electronic device recognize it.





To set the electronic device follow the instructions below:

- select the "Suction Tube Rinse" icon and press  (the outline of the box will change color).
- by the keys  and  change the setting value according to these options:
C3=0 there is not tubings cleaning kit;
C3=1 the tubings cleaning kit is present.
- press  to store the setting.

UV DECONTAMINATION LIGHT

If the optional UV lamp kit is assembled, set the parameter so that the electronic device recognize it.

To set the electronic device follow the instructions below:





- select the "UV Decontamination Light" icon and press  (the outline of the box will change color).
- by the keys  and  change the setting value according to these options:
C4=0: there is not UV lamp kit;
C4=1: the UV lamp kit is present.
- press  to store the setting.

SENSITIVITY LEVEL DETECTORS

You may need to alter the calibration of the level probes to suit the purity of the water.





If the level probe does not work correctly and fails to signal water is present (despite the probe being wet), adjust the parameter by increasing it.

To set the electronic device follow the instructions below:

- select the "Sensitivity Level Detectors" icon and press  (the outline of the box will change color).
- by the keys  and  change the setting value according to these options (the setting range is 00 to 10):
C6=0: Mineral (default value)
.....
C6=5: Demineralised
.....
C6=10: Osmosis
- press  to store the setting.

COMMUNICATION CHANNEL FOR THE BLUE FOOT AND ISOTRON FOOT CONTROLS

Select the transmission channel number as follows:

- enter the "Communication channel pedal" box and press  (the outline of the box will change colour);
- use the  and  keys to change the setting as appropriate: (the setting range is 0 to 63):
 - C7=0: Isotron foot-control (transmission via cable)
 - C7=1-31: Activate single channel
 - 7=32-63: Activate dual channel
- press  to store the setting.


Parameter C5 is not used.

CLOSE WAYFINDER

This control is used to close the Wayfinder programme and access the operating system.


SERVICE MODE (TECHNICAL ASSISTANCE MODE)

"Service mode" must be enabled before the configuration of the unit can be altered.

This is done by entering the "Service Mode" box and pressing  plus the chair programme keys 1-2-3-4.

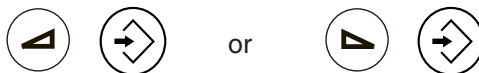
You will now be able to access to the "Set properties parameters" menu and enter the appropriate box.
This mode remains active for 2 hours. The change of menu colour indicates you have accessed and are currently in Service Mode.

SERVICE CODE (MAINTENANCE)

After completing any maintenance, enter the Service Code box, press  and enter the relative code to turn off the maintenance signal and restart the counter.

J SETTING OF HANDLE SENSITIVITY

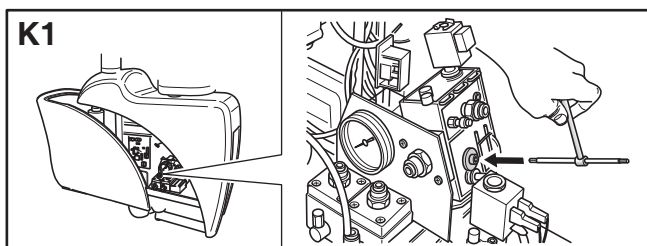
Grasp the handle gently and then simultaneously hold down the keys



until you hear a beep confirming the setting has been stored.

Note: the handle sensitivity depends on the pressure put on it and on how many fingers are used during the programming stage (the higher the pressure, the lower the sensitivity).

K ADJUSTMENT OF WATER FLOW TO THE BOWL



The flow adjustment is obtained by regulating the Allen screw shown in the picture.

L ARRANGEMENT OF BLUE FOOT CONTROL

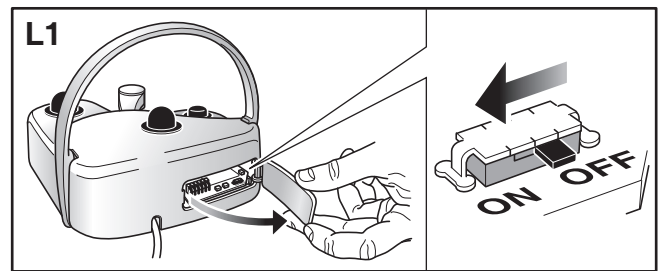
The BLUE FOOT control is shipped with the battery off. For starting it, open the door on the back of the foot control and put the switch onto ON.

Connect the foot-control to the unit with the proper cable and then switch the unit on. After a few seconds switch the unit off and disconnect the cable.

The cable should be always disconnected from the chair. If not, there will be no radio transmission.

If more BLUE FOOT controls are present in the consulting room or the transmission channel is disturbed, a different number of channel should be chosen.

It is possible to transmit on one or two channels simultaneously. In the latter way, the radio transmission is less subject to interferences, but the battery runs down more quickly. It is advisable initially to set the transmission only on one channel.



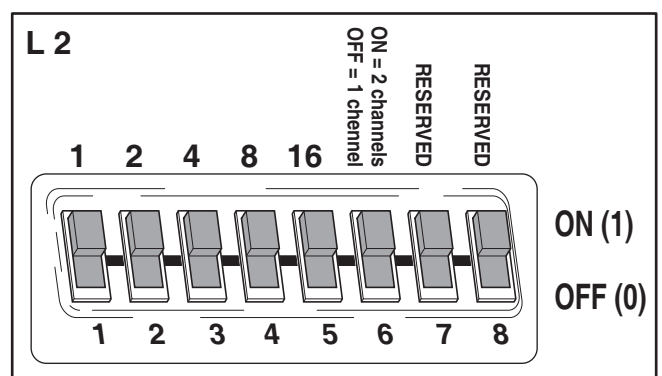
ABSOLUTE WAYFINDER

To change the channel follow this procedure:

- 1) switch the unit off;
- 2) connect the foot-control to the unit with the cable;
- 3) switch the unit on;
- 4) set parameter C7 (see Chap. "Communication Channel for the Blue Foot and Isotron controls");
- 5) set a value (from 1 to 31 for a single channel, from 32 to 63 for two channels);
- 6) switch the unit off and then switch it on again;
- 7) start a control from the foot control and chek its working;
- 8) switch the unit off, disconnect the cable of the foot control and then switch it on again;
- 9) verifying correct functioning, checking gate 21 "Blue Foot radio communication" in diagnostic mode:
first digit indicates 1 or 2 channels transmission, second digit, if there is a letter (A ... F), indicates good reception.
If there is a number, as is low as the reception is worse (1 ... 9);
- 10) if the value is from 1 to 9 repeat the operation from point 1 changing the channel code (C7 value).

ABSOLUTE

The number of the channel is selected by the means of a binary code activated by the Dipswitches from 1 to 5 included, while if the Dipswitch 6 is ON (1) the communication is activated on two channels.



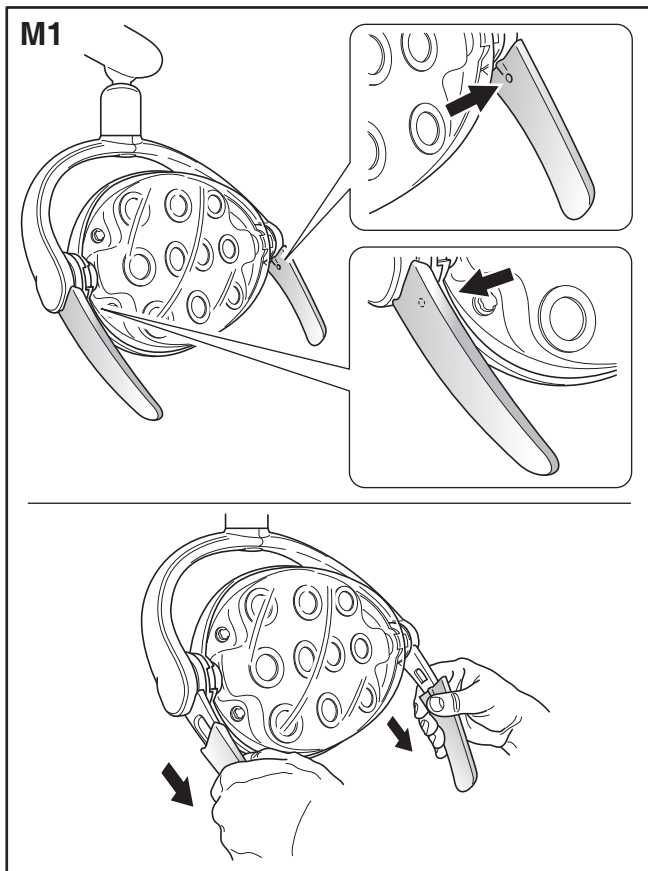
To change the channel follow this procedure:

- 1) Switch the unit off.
- 2) Connect the foot-control to the unit with the cable.
- 3) Select by the Dipswitch 6 whether to start the communication on two channels.
- 4) Select the combination number with the Dipswitches from 1 to 5 (see channels map) on the reception card.
- 5) Switch the unit on. The green Led on the radio receiver PCB must be lighted up while the red Led must flash for about a half second for indicating the transmission of the channel setting control.
- 6) Switch the unit off and disconnect the cable of the foot control, then switch it on again.
- 7) Start a control from the foot control and check its working by verifying the Led indications on the reception card as shown in the Led signalling table.
- 8) If the green Led is not lighted up or the red one flashes, repeat the operations from point 1 changing the channel code.

CHANNELS MAP														
SINGLE CHANNEL							DOUBLE CHANNEL							
Switch						Channel	Switch						Channel	
6	5	4	3	2	1		6	5	4	3	2	1	A	B
0	0	0	0	0	0	012	1	0	0	0	0	0	013	029
0	0	0	0	0	1	016	1	0	0	0	0	1	017	033
0	0	0	0	1	0	020	1	0	0	0	1	0	021	037
0	0	0	0	1	1	024	1	0	0	0	1	1	025	041
0	0	0	1	0	0	028	1	0	0	1	0	0	045	061
0	0	0	1	0	1	032	1	0	0	1	0	1	049	065
0	0	0	1	1	0	036	1	0	0	1	1	0	053	069
0	0	0	1	1	1	040	1	0	0	1	1	1	057	073
0	0	1	0	0	0	044	1	0	1	0	0	0	015	031
0	0	1	0	0	1	048	1	0	1	0	0	1	019	035
0	0	1	0	1	0	052	1	0	1	0	1	0	023	039
0	0	1	0	1	1	056	1	0	1	0	1	1	027	043
0	0	1	1	0	0	060	1	0	1	1	0	0	047	063
0	0	1	1	0	1	064	1	0	1	1	0	1	051	067
0	0	1	1	1	0	068	1	0	1	1	1	0	055	071
0	0	1	1	1	1	072	1	0	1	1	1	1	059	075
0	1	0	0	0	0	014	1	1	0	0	0	0	046	012
0	1	0	0	0	1	018	1	1	0	0	0	1	050	016
0	1	0	0	1	0	022	1	1	0	0	1	0	054	020
0	1	0	0	1	1	026	1	1	0	0	1	1	058	024
0	1	0	1	0	0	030	1	1	0	1	0	0	062	028
0	1	0	1	0	1	034	1	1	0	1	0	1	066	032
0	1	0	1	1	0	038	1	1	0	1	1	0	070	036
0	1	0	1	1	1	042	1	1	0	1	1	1	074	040
0	1	1	0	0	0	046	1	1	1	0	0	0	014	044
0	1	1	0	0	1	050	1	1	1	0	0	1	018	048
0	1	1	0	1	0	054	1	1	1	0	1	0	022	052
0	1	1	0	1	1	058	1	1	1	0	1	1	026	056
0	1	1	1	0	0	062	1	1	1	1	0	0	030	060
0	1	1	1	0	1	066	1	1	1	1	0	1	034	064
0	1	1	1	1	0	070	1	1	1	1	1	0	038	068
0	1	1	1	1	1	074	1	1	1	1	1	1	042	072

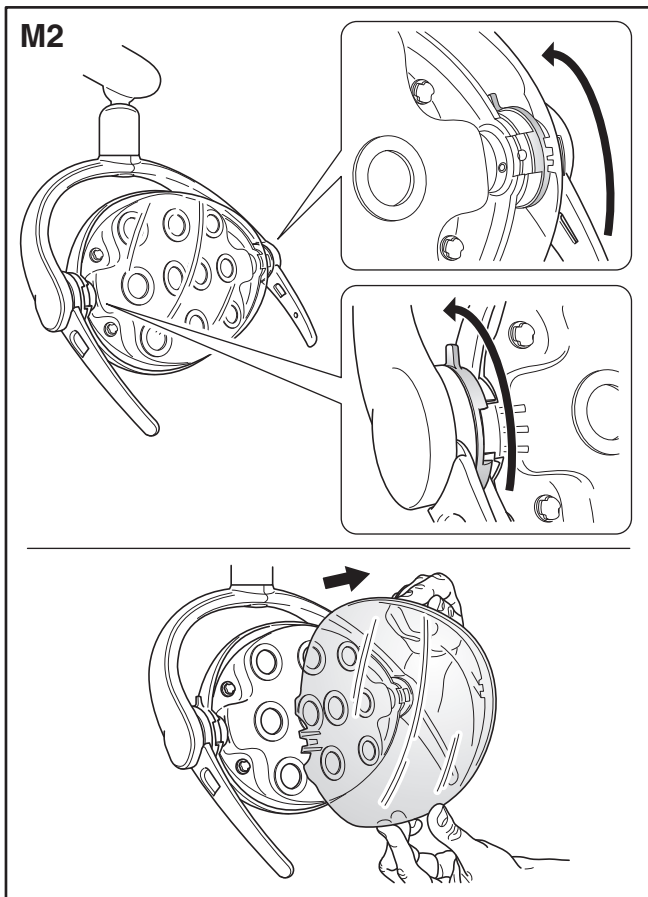
LED SIGNALLING TABLE		
	GREEN LED	RED LED
Foot control connected by cable	Fixed always on	It flashes only at switching on, indicating the transmission of the channel setting control.
Wireless foot control	Off = No reception 1 Flash = Reception in progress on one channel 2 Flashes = Reception in progress on two channels	Off = No error or no communication. It flashes in case of wrong communication. Note: although there are errors in communication, the foot control could work the same.

If the foot-control p.c.b. is replaced, its lever should be calibrated:
 switch off the unit, connect the foot control cable and then switch the unit on while keeping pressed the left key (rinsing position) and the lever simultaneously. Release both keys and shift the lever rightwards until the end, moving it slowly. Finally switch the unit off and then on.

M MAINTENANCE OF VISION LED MODE LAMP**M1**

Before any operation, be sure to have switched off the unit to prevent the light into the eyes.

To remove the protective screen first take away the two handles acting on the lock.

M2

Rotate the two ring nuts making the two openings coincide with the flaps of the protective screen. To assemble the screen, follow the same procedure in the opposite order.

0 WAYFINDER CONNECTION TO COMPUTER

The Wayfinder can be connected to a PC or a PC network by means of a LAN connection.

Use an Ethernet crossover cable for connection to a single PC.

Use a straight-through Ethernet cable for connection to a PC network.



The PC

- must be EN 60601-1 standard; check the total current dispersion on the patient if it is located in the same area as the patient, or
- must be located outside the patient area and metal connectors should not be used for the Wayfinder and PC connection, or
- must be located outside the patient area and a separator should be used between the Wayfinder and the PC.

CONNECTION WITH A SINGLE PC

Use a crossover Ethernet cable to connect the Wayfinder p.c. board and the PC.

The configuration of the PC must include a "username" and an access "password".

If the PC is connected to an Internet modem via a LAN connection and no other LAN ports are vacant, connect to the modem via the USB port or using an Ethernet/USB hub.

Use the connectors provided to connect a keyboard and mouse to the Wayfinder p.c. board.



System requirements

The remote computer must run on one of the operating system below:

- Windows XP Professional;
- Windows Vista Business.

PC SETTINGS

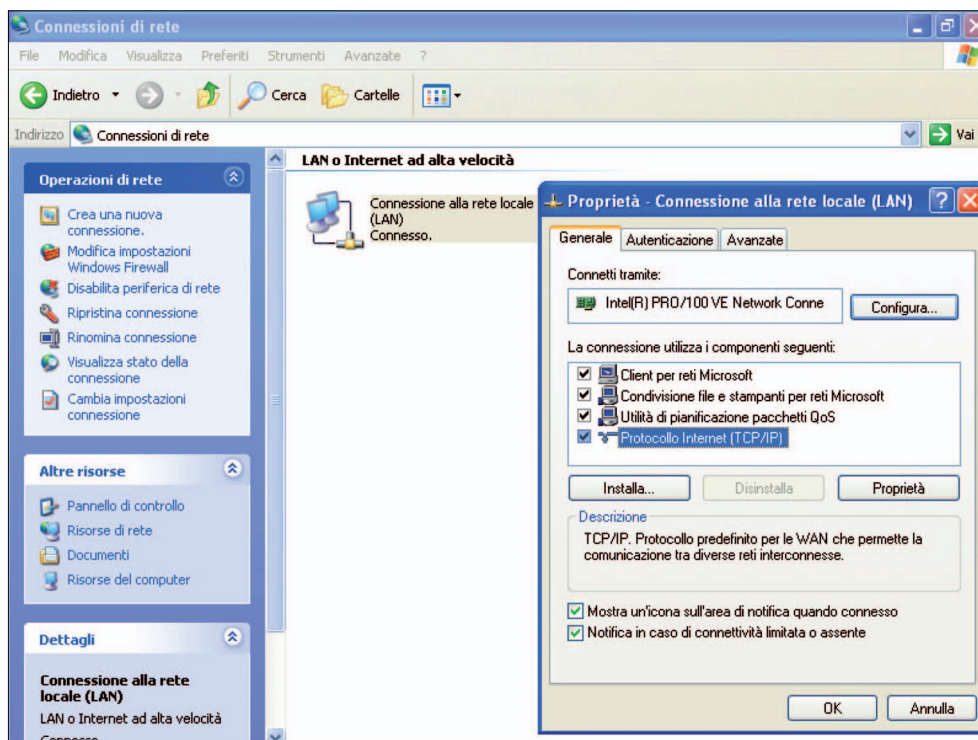
Enter the IP address (Windows XP):

- open the properties box for the connection:

Control Panel -> Connections -> LAN Connection;

- right click and select properties.

Check the network selected in the "Connect via" box is the LAN connection to be used.

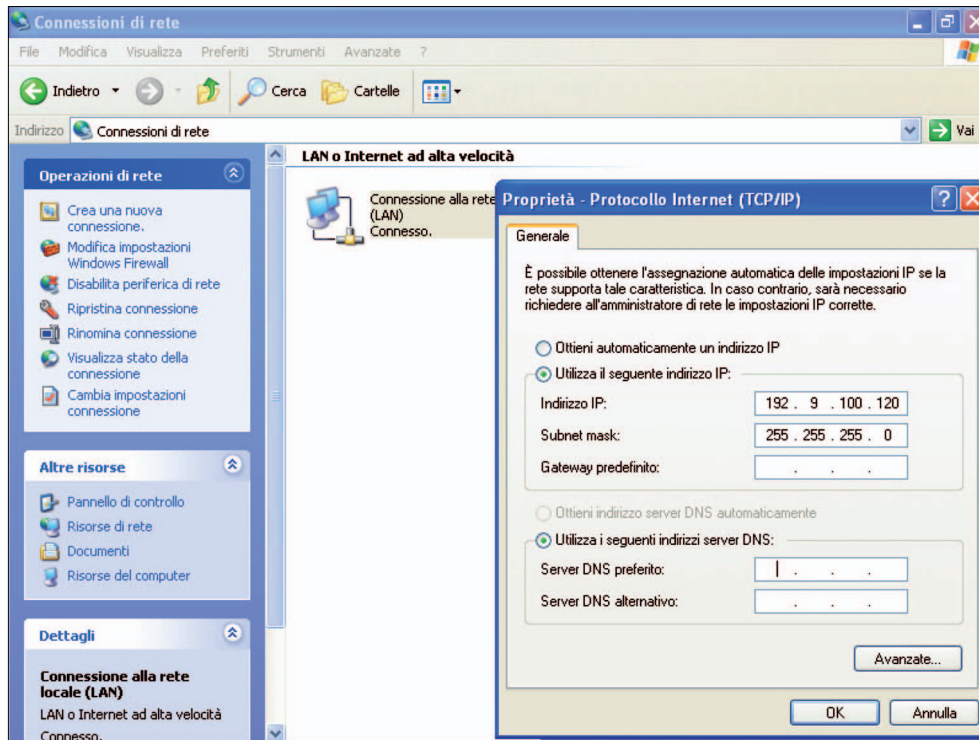


Now select "Internet Protocol (TCP / IP)" and click properties.

A window appears (Windows XP):

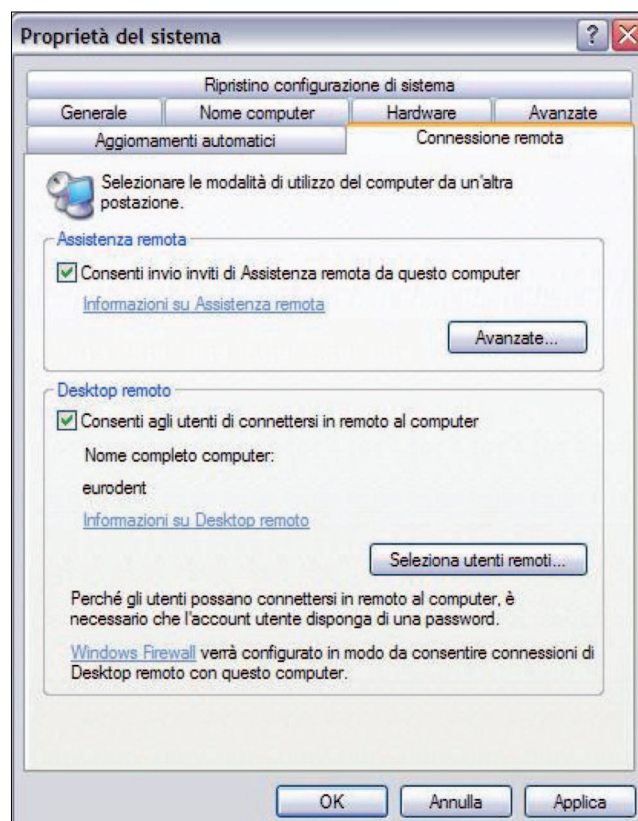
- select "Use the following IP address:";
- enter 192.9.100.120 in the "IP address:" box;
- enter 255.255.255.0 in the "Subnet Mask" box.

After entering the various addresses, press "ok" to save the settings.



Remote desktop now has to be enabled (Windows XP):

- Start -> Control Panel -> System -> Remote Connection;
- Click "allow users to connect remotely to this computer" in the "Remote Desktop" box.



WAYFINDER SETTINGS

The Wayfinder settings are usually done at the factory.

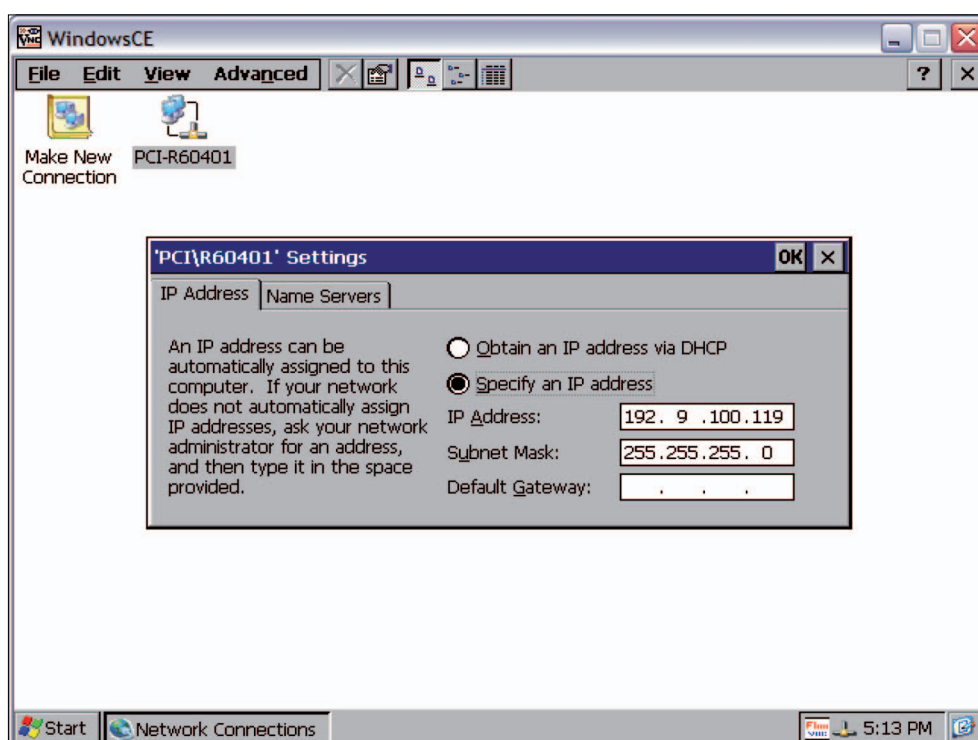
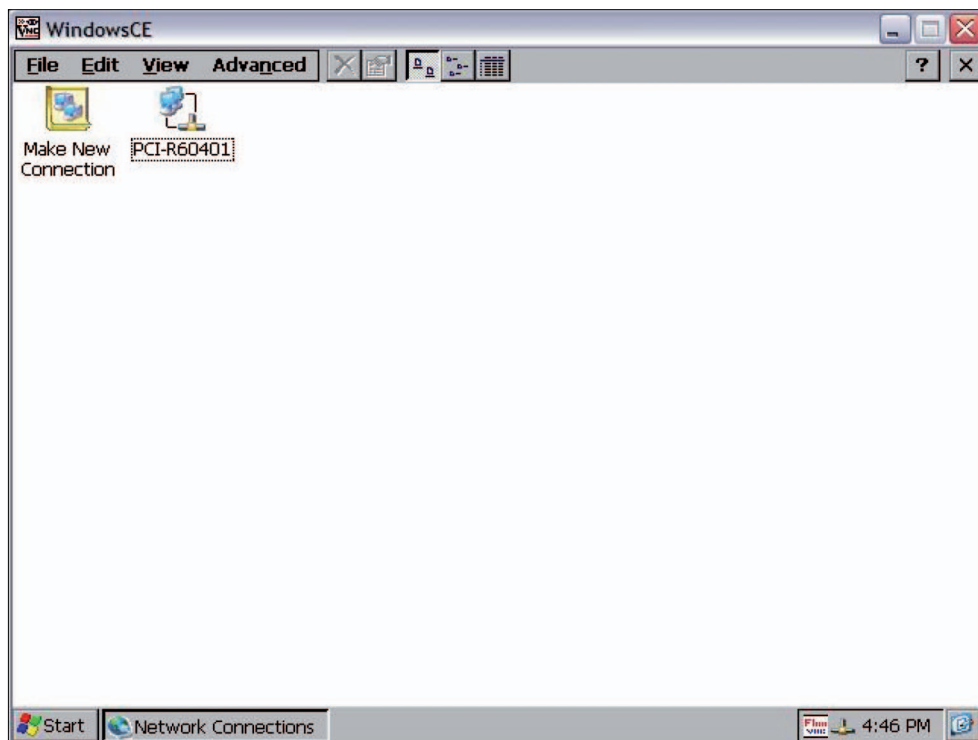
Should you need to change its configuration, enter "Control Panel":

Start -> Setting -> Control Panel.

Open "Network and dial up connection" in "Control Panel".

Open the icon for the network port you need to configure and

- click "Specify an IP address";
- enter 192.9.100.119 in the "IP address:" box;
- enter 255.255.255.0 in the "Subnet Mask" box.



CONNECTION TO A PC NETWORK

Connection is only possible for networks with a static IP.

For networks with a dynamic address assigned by the server, connect directly to a computer and configure it as described above.

Connect the Wayfinder p.c. board to the network switch via the straight-through Ethernet cable.

The configuration of the PC to be used for the connection must have a "username" and an access "password".

In this case, the network PC configuration has already been done and you must verify the IP address and subnet mask of the PC that you want to connect remotely to the Wayfinder.

The Wayfinder configuration must have the same network subnet and assign the next IP address after the highest one on the network: if the PC with the highest IP is XXX.Y.ZZZ.HHH, the Wayfinder must have XXX.Y.ZZZ. (HHH+1).

CONFIGURATION OF THE SHARED FOLDER WITH THE CAMERA IMAGES

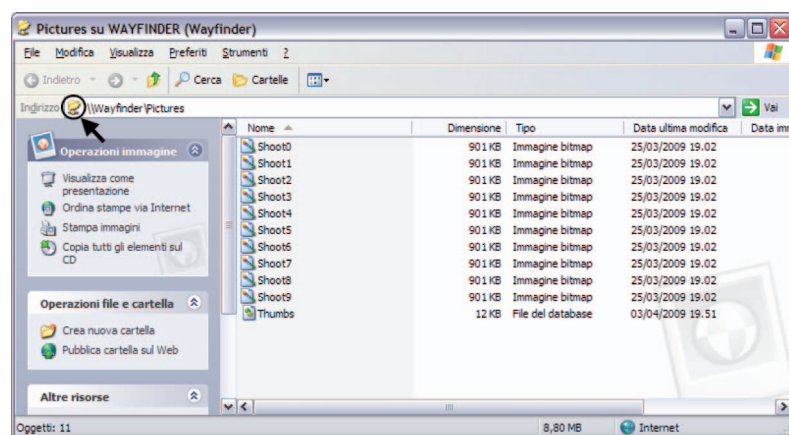
To create the connection with the shared folder it is necessary to have previously connected the Wayfinder with the PC (see chapter "Wayfinder Connection to a computer")

Afterwards go to Resources of the computer of the PC and key in the line address the following path:

\\Wayfinder\Pictures

After pressing Enter one must wait some seconds for the connection with the shared folder, where the camera images are saved.

To create on the desktop of the PC a direct connection with the shared folder, place the mouse pointer on the folder icon (see picture herebelow) and drag the image on the PC desktop keeping pressed the left key of the mouse .



In this way one creates on the PC desktop the icon "Connection with Pictures on Wayfinder".



E U R O D E N T

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