

1. PRE-INSTALLATION

ENDOS AC/ACP does not require any particular operations during the pre-set up phase; just follow the instructions given in paragraph 1.1 .

When ENDOS AC/ACP connections must be made into the wall it is better to make these before installing the intraoral X-ray equipment, considering the overall dimensions and the requested height from the floor as reported in paragraph **Error! Reference source not found..** The supplier can give the necessary assistance and technical advice concerning pre-set up; construction work and the pre-set up phase are at the customer's expenses.

1.1 Mounting methods



NOTE:

This chapter is valid for Wall version. The user does not need to assess the consistency of the wall for Stand version.

The installer is responsible for assessing the consistency of the wall. The extraction load on each screw is 58kg for the wall version standard assembly (3 mounting screws) and 110kg for the wall version "single stud" assembly (2 screws in line).

For each type of wall use the appropriate mounting method complying with the following specifications which guarantee a safety factor 4:

- Wooden uprights: self-threading screws 8x70 A 4.8 (provided with the installation kit)
- Full or concrete bricks: screw anchors (provided with the installation kit) in cast iron M8 or chemical screws WURTH (optional)
- Hollow bricks: chemical screws (optional).

A counter-plate must be used with walls with a lower resistance (see paragraph **Error! Reference source not found.**).



WARNING:

The Manufacturer is not responsible for any installations that do not comply with the specifications stated above.

2. INSTALLATION

2.1 Wall installation

ENDOS AC/ACP intraoral X-ray equipment is shipped pre-assembled in sub-assys.

Mechanical assembly work consists solely in assembling these units. All the mechanical components are therefore adjusted before delivery; not only is there no need to carry out any adjustment on these parts but it would also cause the equipment to malfunction; any adjustment must be carried out by authorised personnel only.

2.1.1 Timer set up (standard configuration)

1. To be sure that the equipment is in the correct position we recommend you put the provided template **(3)** (code 39619100) in the requested position, in this way identifying the requested wall-mounting position. Considering the overall dimensions of the

equipment, put the top part of the template at 1450 mm from the floor.



WARNING:

The plate must be placed so that the entry hole of the supply cables corresponds with the point from which these cables exit the wall.

The installer will assess the consistency of the wall taking into consideration the screw extraction load specified in paragraph 1.1.

2. Mark the mounting points and make the respective holes with a diameter corresponding to the chosen screws.
3. Remove the plastic timer cover (1) loosening the two sealing screws (2) placed on the lower part and lifting the cover from the bottom to the top to let the upper clamps out. Be careful of the board connection cables.
4. Fix the timer to the wall using the relevant screws (4).

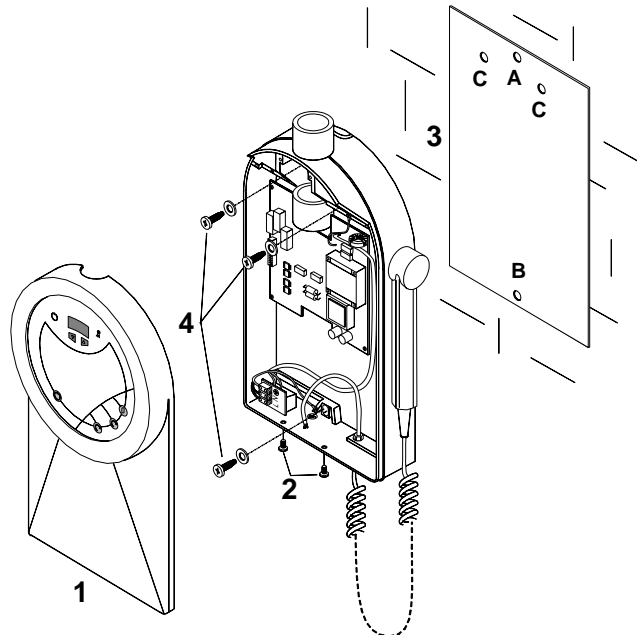
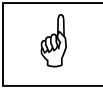


Figure 2-1

Later start assembling the extension arm following the instructions as follows.

1. Insert the extension arm into the arm support block which is an integral part of the wall support plate.



NOTE:

You must keep the arm orthogonal to the plate to be able to insert the shaft into the bush placed inside the support.

2. Check that the arm is level using a bubble level; if it is not level it is better to release the mounting screws on the wall plate and make the necessary adjustments.
3. The horizontal check must be performed in the three orthogonal positions (arm parallel to the wall on the right, on the left and perpendicular to the wall itself).
4. At the end of the above operations, assemble the extension arm frictioning mechanism block (1); this frictioning mechanism is supplied separately.
5. Assemble the arm rotation stop screw (2) in the hole provided on the shaft; this screw is supplied with the frictioning mechanism.



NOTE:

The purpose of the frictioning mechanism and the rotation stop pin is to prevent the extension arm from becoming detached.

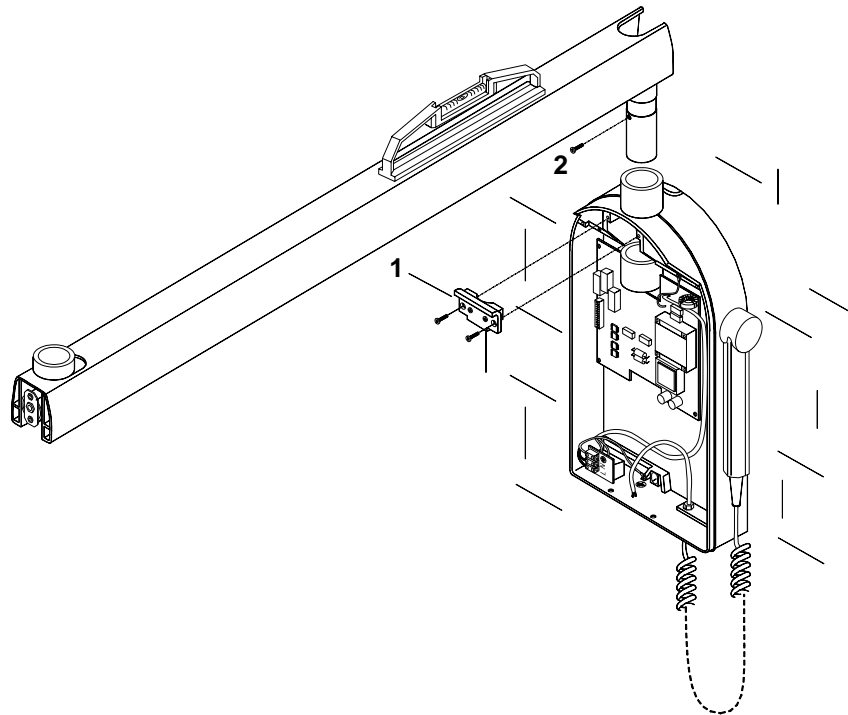


Figure 2-2

2.1.2 X-ray button

The X-ray button and the relevant support are in the box with an installation kit that gives two options:

- mounting on the timer side; remove the small plug placed on the right hand wall of the timer box and screw the relevant support
- mounting on the wall; use the screw provided with the support to fix the support itself to the wall in the requested position.

2.2 Assembling the scissors arm

2.2.1 Assembling the scissors arm (DP arm)

1. Check that the frictioning mechanism (**1**) assembled on the extension arm at the end where the DP arm is mounted has been loosened, so that the arm can be inserted correctly without damaging the frictioning mechanism.
2. Insert the scissors arm pin into the extension arm; keep the scissors arm tightened during this operation. The cable and the braiding coming from the DP arm must be pulled out from the extension arm.



NOTE:

You must keep the DP arm orthogonal to the extension arm in order to be able to insert the pin into the bush placed inside the extension arm.

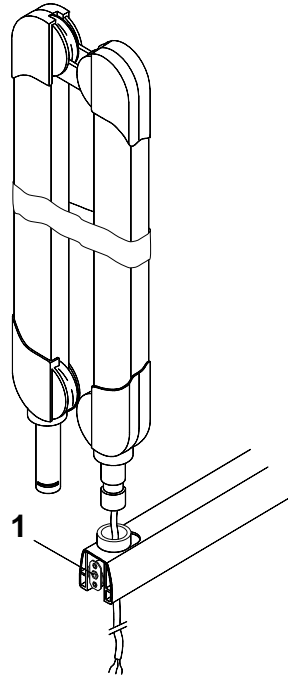


Figure 2-3

3. Insert the cable coming from DP arm inside the extension, following the diagram in the following picture.
4. Run the cable inside the extension arm until they come completely out at the opposite end; insert the cable itself inside the rotation pin as shown in the following picture.

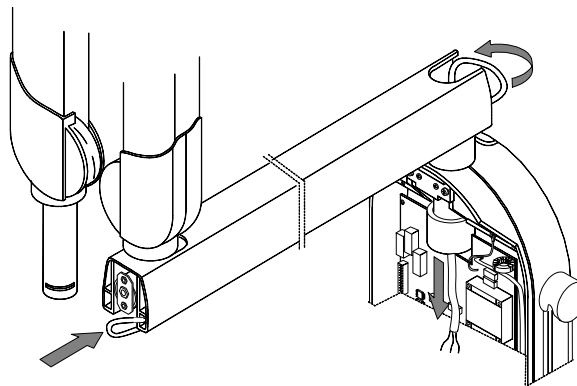
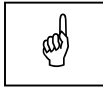


Figure 2-4

5. Check that the DP arm is perfectly inserted; check that the rotation of the scissors arm inside the extension arm is the one ergonomically requested by the operator, otherwise work on the frictioning mechanism (1) until you get the requested run.



NOTE:

This frictioning mechanism also serves to prevent the scissors arm from becoming detached and for this reason it must never be loosened completely.

6. Assemble the tubehead (see paragraph 2.3).
7. Remove the scissors arm safety clamp and check the ergonomics of its movement again, otherwise adjust the frictioning mechanism again (**1**) and/or the tension of the arm balance springs (see paragraph **Error! Reference source not found.**).
8. Assemble the front covers of the extension arm, packaged separately with the small parts.

2.2.2 Assembling the stand arms set

Assemble the scissors arm (there is no extension arm in this configuration), being careful to insert the spacer (**1**) (p/n61613056) into the rotation pin.



NOTE:

Keep the arm perfectly orthogonal to the pole when inserting the extension arm rotation pin.
Do not release the arms of the scissors arm from their sealing packing.

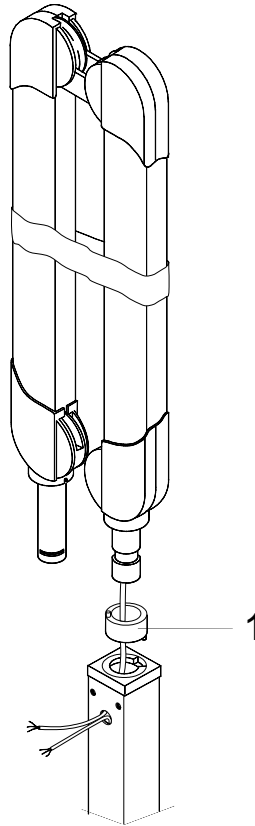


Figure 2-5

2.3 Tubehead assembly

1. Insert the protection cover (1) into the D.P. arm until you can see the insertion slot of the safety elastic ring (2). Hold it up and insert the ring itself partially.
2. Insert the rotation pin of the tubehead onto the sliding contact for about half of its length and put the elastic ring (2) into the two transversal cuts.



NOTE:

The elastic ring must be inserted on the same side as the safety screw to prevent the cover from moving excessively.

3. Insert the rotation pin completely into the sliding contact, fixing it with the safety ring (2). Insert the grounding clip (3), making sure that the pins enter the holes and fix it by the supplied screw

(4). Lower the protection cover (1); only now is it possible to release the scissors arms.

4. Put the safety screw (5), which clamps the protection cover.

**NOTE:**

The function of the cover is to prevent the safety ring from going out of position.

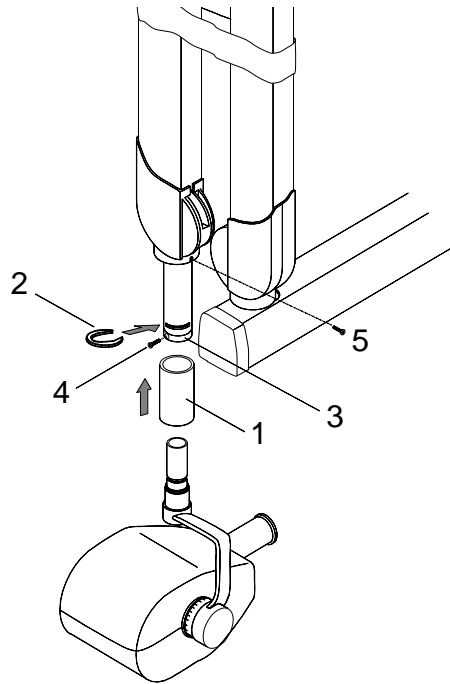


Figure 2-6

2.4 Electrical connection

1. Make the connection between the general switch and the terminal board of the timer using a bipolar cable plus a 2.5 mm² minimum section ground finishing off the cable towards the timer with the provided prod terminals. Fix the cable to the terminal board following the positions as shown (L = line - brown cable, N = neutral - blue cable, Ground = yellow/green cable). The conductors must be clamped to the timer base using the provided clip.

2. Connect the cable of the tubehead to the power board wiring the cables to the provided terminals and **following the positions as in the table:**

Signal	Tubehead position	Power board position	Cable colour
Line	L2	X3	Brown
Neutral	N2	X4	Blue
Ground	Ground	Ground	Yellow/Green

X3 e X4 cables must be fastened together near the corresponding faston; moreover, it is necessary to prevent the same cables from passing between the two boards and as a consequence the surplus part of the cables must be secured to the top of the timer with a suitable loop.

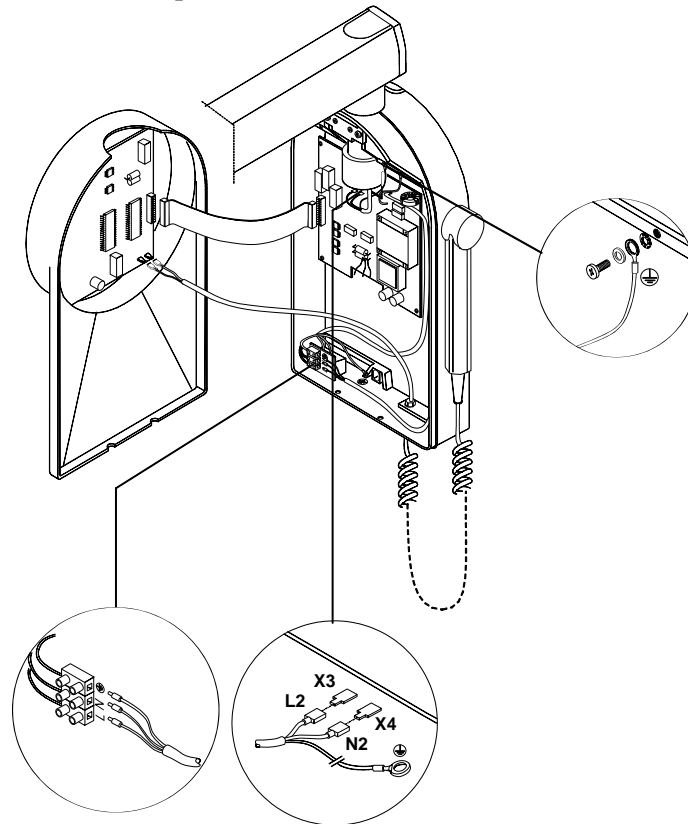


Figure 2-7



WARNING:

For all versions, the tubehead must be connected to the supply board exactly as shown so that the equipment can deliver the nominal values. Connection errors give an abnormal absorption of current producing a slump in the tubehead performance and, in some cases, cause the line fuses to trip.

2.5 Electric pre-setting

The supply source must be able to supply the following characteristic values:

- Single-phase supply + ground 120V \pm 10%
- Frequency 60 Hz
- Absorbed current 7.8 Arms at 132V
- Line voltage regulation 3% max at 132V.

A circuit breaker with overcurrent protection must be connected to the intraoral X-ray equipment with the following features:

- Rated current 10 A
- Residual current sensitivity 30 mA.

The apparatus must be connected to a line supplied with an adequate ground in compliance with IEC regulations.

The maximum distance between the electric board and the entry supply terminal board must be less than 20mt and the connecting cable must be 16 AWG (1.5mm²).

Dent-X Corp.
250 Clearbrook Rd.
Elmsford, NY 10523
P – (914) 592-6100
F- (914) 592-6148
www.Dent-X.com