
A R T I C U L A T O R

Surgical-MT



Instruction manual

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▶ 1 - INTRODUCTION



Before using the Surgical articulator MT, please read the information contained in this instruction manual.

Surgical articulator MT is the exclusive manufacturing of Bio-Art, has dimensions and special settings which makes it able to make various plans and studies related to the Oral and Maxillofacial surgery. It is used to simulate in the laboratory the maxillary and mandibular relations of patient in a static and dynamic form.

Surgical articulator MT can be used in conjunction with Face-Bow Elite model (sold separately) for mounting the plaster model of the patient's upper bow in the articulator, through registration performed by the bow.

Use of this Articulator and its Face-bow are recommended for oral and maxillofacial surgical plans, consisting of a simple technique, quickly and easily, ensuring both the patient and the professional a very satisfactory result.

Surgical Articulator MT and Face-bow Elite model (sold separately) are products intended for use by qualified professionals. The use of devices by non-trained professionals can bring physical harm to the patient because of incorrect surgical planning.



Attention! This manual does not contain detailed information of procedures for surgical planning using the Surgical articulator MT, and these techniques and procedures must be acquired in area specialization courses.

▶ 2 - TECHNICAL SPECIFICATIONS

Dimensions (w/o package):.....	Surgical Articulator MT (W138xD155xH170mm*) Adjustable platform (Ø 58 x 15mm)
Weight (w/o package):.....	Surgical Articulator MT (0.730Kg) Adjustable Platform (0.110Kg)
Case Dimensions:.....	(W210xD330xH195mm)
Case Weight:.....	(0.430Kg)

* For mounting articulator with Special Incisal Pin MT, height "H" is 235mm.

▶ 3 - PACKAGE CONTENT

- | | |
|--|--|
| - 01 Surgical Articulator MT. | - 01 Standard Incisal Pin. |
| - 01 Adjustable Platform. | - 01 Support Pin of Upper Frame. |
| - 01 User Manual. | - 01 Clamp screw of Standard incisal table. |
| - 02 Rail Mounting Plates. | - 01 Clamp screw of mounting plate on upper frame. |
| - 01 Standard Incisal Table (polycarbonate). | - 01 Clamp screw of mounting plate on lower frame. |
| - 01 Special Incisal Pin MT. | - 01 Yellow rubber band. |

► 4 - INSTALLATION INSTRUCTION ◀

The Surgical Articulator MT leaves the factory fitted with a Standard incisal pin, one incisal table in polycarbonate, one adjustable platform coupled to the lower frame and two rail mounting plates, one set on the upper frame and another already attached to the Adjustable Platform.

Standard Incisal Pin can be replaced by Special Incisal Pin MT of greater length (included in the package) for jobs that require a distance between the lower and upper frames. Note: Surgical Articulator MT enables the adjustment of frames opening.

The other procedures related to installation and assembly of the articulator models and its handling are exclusive of technique used by professional.



Attention! Problems or technical failures from the misuse or improper installation of the equipment are the sole responsibility of the professional.

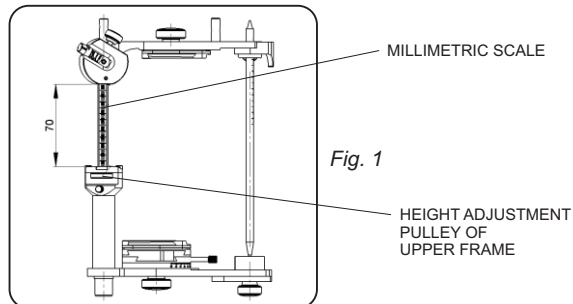
► 5 - USE INSTRUCTIONS ◀

5.1 – Surgical Articulator MT

Surgical Articulator MT is of Non-Arcon type. This feature allows synchronized movements, ensuring integration between the upper and lower frames of the articulator.

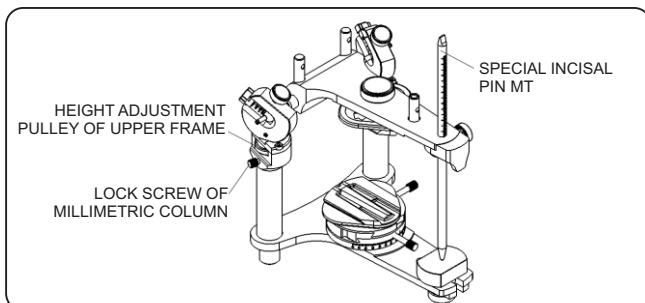
This model of Non-Arcon type articulator received some special technical features to be especially used in surgical studies and planning, as described below:

- The height of the upper frame in relation to the lower one can be increased and adjusted sliding up to 70mm with bilateral millimeter control. Thus the distance between the lower and upper frames for this articulator model can be varied. (Figure 01).



- The Adjustable Platform (Figure 4) used in Surgical Articulator MT is part of the project for the development of the surgical technique. On this platform the models will be mounted through the rail mounting plate, which is fixed therein by means of screw included.

To increase or adjust the distance between the upper and lower frames, use the existing pulleys in the upper ends of the columns, rotating them with your fingers on both sides, jointly, to the desired height. To enable full control of the height variation, the side rods have a millimeter scale. For locking the rods in the set height, the screw must be used located just below the pulley, and it should be softly pressed. (Figure 2).



The surgical articulator MT has "fixed" tilts to 30° in Condylar Guides and 15° in Bennett angles. The main dimensions applied to Surgical Articulator MT are shown in Figure 03.

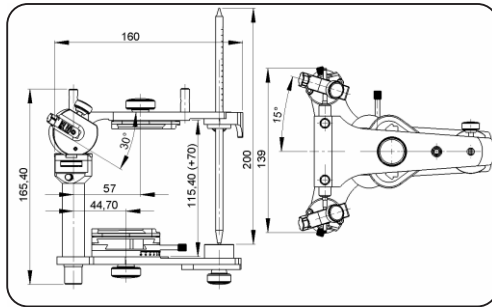


Fig. 3

5.2 – Adjustable platform

Designed to be installed on the base of the upper or lower branch, the adjustable mounting platform is another technological evolution presented by Bio-art. This device allows the professional to get 360° rotations and sliding in a 25mm radius of the plate center in all directions, with accurate precision and control.

On the basis of the adjustable platform is coupled the rail mounting plate that easily allows mounting and removal of the models, without destroying the plaster used in the registration transfer.

The adjustable platform can be installed on the upper or lower frame (depending on usage and technique) through the mounting plate locking knob (included). Slightly releasing the screw is possible for us to obtain rotary motion of 360° of the whole Adjustable Platform set.

The adjustable platform (Figure 4) is composed of a base for rotary motion through 360°, and three sliding tables (figure 5) which allow movement in a 25mm radius of the plate center in all directions with accurate controls and screws for locking of parts.

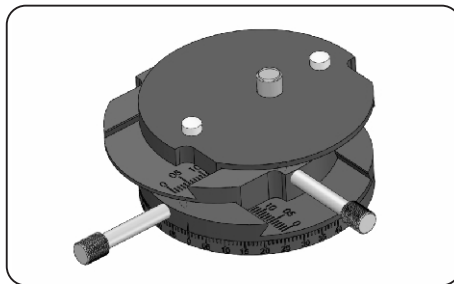


Fig. 4

Over the Table 03 of the Adjustable Platform it must be fixed the rail mounting plate. For its fixation, remove Table 03 from set and secure the Rail Mounting Plate through clamp screw of plate (included) with the aid of a not included screwdriver (Figure 05).

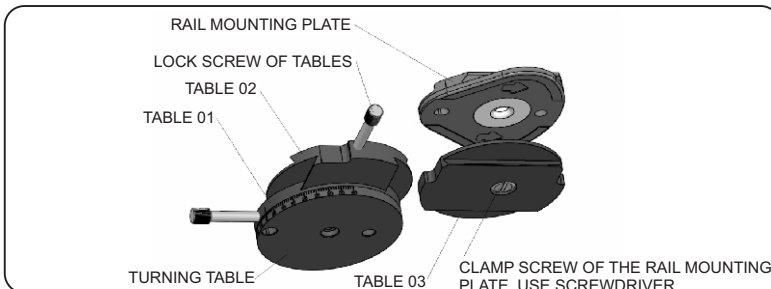


Fig. 5

5.3 - Rail Mounting Plate

The Bio-Art's Rail Mounting Plate has been specially developed to enable the removal of the plaster model without the need

to break it; this happens to most conventional mounting plates.

For proper operation, you should take some care

on mounting and removal of the model, as following:

- a) During assembly, set plaster filling the entire inner space formed between the retentive wall (A) and the base of the rail design, ensuring better retention of the model;
- b) The model finishing on the mounting plate's side edge should be free of plaster along its entire length, to ensure its detachment and sliding during the removal;
- c) Before removing the model, one should remove the plaster contained in retentive channel (B) of the plate using pointed tool (ex.: Lecron). This locking hole serves to prevent the model to spontaneously exit the mounting plate during the work using the articulator;
- d) After removal of all the plaster contained in the locking hole, one should firmly hold the model and apply a small hit to the plate edge, obeying the direction indicated by the arrows on the underside of the plate. This operation will cause the plate to stand out of the plaster and be free so that it can easily slide out of the model.



Attention! Once removed the model of the rail mounting plate, we do not guarantee its replacement with the same precision of the initial position, which depends entirely on the technical quality of work as well as the quality of materials used in the process (in particular the plaster).



5.4 – Registration, assembly of models and surgical plans

For surgical planning, registration of dimensions and physical characteristics of the patient as well as the assembly of the models in the articulator and its settings, are directly related to the technique used by the physician or dentist. This registration can be obtained through the Face-Bow Elite (sold separately), if its use is possible in the patient's condition.



Attention! The Face-bow Elite is a product supplied separately and for its correct use, it shall refer to the instruction manual that comes with the product.

▶ 6 - SAFETY PRECAUTIONS ◀

This manual contains only the basic and simplified information regarding the use of the device, which does not replace the due course and training. The surgical articulator MT is a product intended for use only by specially trained professionals in the area.



- Face-bow Elite (sold separately) and the Adjustable Platform are designed to be used exclusively with Bio-Art Articulator models. The use of these products with other articulator brands is not recommended without prior consultation.

- Surgical Articulator MT is not interchangeable, i.e., the models mounted on an articulator should not be transferred (assembled) to any other articulator. Therefore, Bio-Art is not responsible for problems encountered in practice of this procedure.

Before using the Surgical Articulator MT, the professional should check if the equipment and the accessories included in the package are not damaged.

Detecting any abnormality, one should seek Bio-Art's Technical Assistance or an authorized representative.

Avoid over tighten the screws and handles.

The incisal table is made of polymer material (polycarbonate), so check the incompatibility of the table material with products used in assemblies, such as: resins, solvents and other.

► 7 - MAINTENANCE AND CLEANING ◀

To clean the Surgical Articulator MT, use only soft sponge and warm water. Never use solvents, metal spatulas, or sharp objects.

Keep moving parts of the articulator always clean and free from dust or plaster accumulations in order to ensure free movement and accuracy.



Every repairs or adjustment in the articulators must be performed by qualified personnel.

► 8 - SPECIAL STORAGE CONDITIONS ◀

The Surgical Articulator MT is a precision instrument and must be handled, transported and stored carefully.

In order to assure accuracy during transport, Bio-Art provides the product to the market accommodated in a plastic case designed exclusively for it to be safely transported.

Even accommodated in its respective case, so that the product retains its quality and precision, avoid falls, mechanical and physical shocks.

When not in use for a long period, keep it clean, moisture free, accommodated in its respective case in a place dry and away from heat and direct sunlight.

► 9 - PROBLEMS AND SOLUTIONS ◀

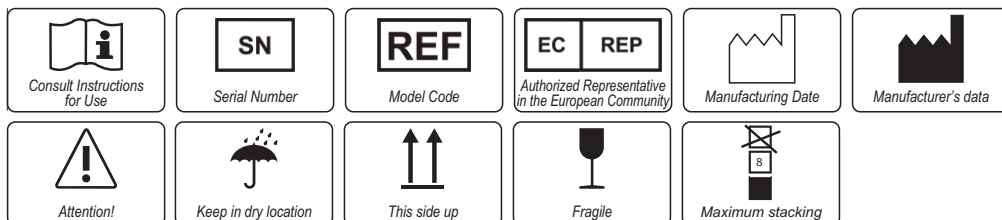
9.1 – Surgical Articulator MT

Problem	Possible Cause	Solution
Upper frame slack and misfit.	The upper frame of the articulator has distance and variable height.	If necessary lock the rods, use the screw below the pulley squeezing gently.
Difficulty moving the guides through the expanding spindle.	Accumulation of residue in the moving parts of guides and or in the spindle pulley.	Check, clean and lubricate lightly with thin oil.
Irregular fixing of mounting plates.	Accumulation of residue in the frames.	Check and clean the frame face to support the plates.
	Accumulation of residue in the plate holes.	Check and clean the holes on the guide pins.
Difficulty handling the clamp screws.	Exaggerated tightening.	Do not over tighten the clamp screws.
Standard incisal table in polycarbonate damaged.	Use of aggressive solvents or resins.	Check the aggressiveness towards the resin polycarbonate and solvents used in the table.

9.2 – Adjustable platform

Problem	Possible Cause	Solution
Difficulty in movement.	Lock screws tighten.	Fully release the lock screws for movements.
Irregular movements	Accumulation of residue in the grooves between the tables.	Clean carefully all the fittings of the tables.
Rail mounting plate with low clamping force on Adjustable Platform.	Accumulation of residues between the clamping contact faces.	Clean the contact faces between the plate correctly
	Clamp screw loose	Tighten properly and without exaggeration the clamp screw with screwdriver.
Mounting difficulties in the articulator.	Deficient screw mounting.	Check the screw with attention.
	Residue in the screw	Clean correctly the screws.
Difficulty handling the clamp screws.	Exaggerated tightening.	Do not over tighten the clamp screws.
Clearance between plates.	There is a normal clearance between the plates for movement. This clearance is eliminated through the lock screws.	Tighten without exaggeration the lock screws of tables and or the locking knob and lock the rotary movement.

► 10 - SYMBOLS



► 11 - WARRANTY AND TECHNICAL ASSISTANCE

BIO-ART Equipamentos Odontológicos Ltda. provides 01 year of warranty for this product from the purchase date. This warranty covers any factory defect, being provided by repair of the equipment that is conditional upon the following requirements:

- That the product has been used properly in accordance with the instructions in the instruction manual;
- The complaint is accompanied by the purchase invoice and registered within the warranty period, followed by a report with the defect description and serial number of the product;
- The product is used, transported and stored carefully;
- The transport cost (round trip) to be paid by the customer;

Warranty limitations:

- Natural wear of parts;
- Misuse, dropping or claims;
- Inadequate transportation;
- Repair by unauthorized persons;
- Use in disagreement with the characteristics and purposes of the product;
- Wear by exposure to adverse conditions (humidity, cold and intense heat);
- Damage due to lack of cleaning or maintenance with unsuitable products;

In case of questions, consult the manufacturer:

BIO-ART EQUIPAMENTOS ODONTOLÓGICOS LTDA.

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► 12 - AUTHORIZED REPRESENTATIVE IN EUROPE

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