



Sterilize the impression in the laboratory with medical prescription and useful data. It is necessary for registration according to current regulations.

- a) Draw up the processing sheet.
- b) Establish the type of plaster recommended (type IV plaster or alternatively a good class III plaster).

0. Preparation of the supplied base to create the base of the model

- a) Prepare the silicone boxing in two different thicknesses with a height of about 20 millimeters: one for smaller thicker models and one for larger thinner models, in order to reduce or increase the internal volume of the base. Trim the inside with a cutter (Operation only the first time for the entire duration of the boxing, if the silicone is worn out for use, repeat the operation if necessary).
- b) Place a 15 mm metal washer to create the magnetic quick coupling, with the split bases for putting into the articulator and with the flask base, both equipped with a built-in magnet.
- c) Mix the plaster under vacuum following the proportions and times indicated by the manufacturer. Traditionally pour the impression and use it as usual with an electric vibrator.
- d) Invert the casting impression when the plaster is stabilized on the base provided, taking care not to compress or deform the impression material, on the appropriate Split Cast of the AcryRobotec flask. The metal washer will be incorporated into the plaster creating the magnetic connection with the various bases of the system.

1. Model preparation

- a) Squaring the model. (Possibly dry).
- b) Create the model: minimum base **12-15 mm** high and a base in the perimeter edge **4-5 mm** wide. It is necessary to create a "stop" to the silicone, for sealing around the model, just the acrylics do not exit out.
- c) Place the models in the articulator using the universal plates for all types of articulators on the market. This allows a quick connection with the articulator.
- d) Assemble the teeth and complete the wax-up of the total prosthesis.

2. Technique

Methods of working for total prosthesis heat curing technique by injection technique.

- a) Simple and traditional method.
- b) Suitable for any type of prosthesis.
- c) Thanks to the silicone counter mold, a duplicate can be ready for a second prosthesis.

3. Realization of the silicone counter mold on the assembly of the teeth in the mobile prosthesis base in wax or resin prosthesis for vases

- a) Prepare 50 g A + B of 60 Shore microsil silicone.
- b) Mix the silicone for 25 seconds, then adapt the silicone on the wax model by covering the teeth and collars.
- c) Cover all the teeth well, keeping 2mm under the collar. Then, press the silicone evenly to avoid distortions.
- d) Introduce the model with the silicone in the pressure cooker or in the automatic polymerizer without water and with the start temperature deactivated. Pressure 2.5 - 5 bar maximum! Working time: 5 - 6 minutes.
- e) After curing put the model on the split of the flask base.
- f) Check the height of the model so that the teeth do not protrude from the cover keeping a depth of 3-4mm. If the model is very high, replace the 20mm spacers in contact with the base in the two axes, insert, and screw the other spacers supplied 25mm. Since the flask is free from the front and rear of the axes and structures of the same, with a single size of AcryRobotec® we can create any type of prosthesis size. (Important advantage unlike other competing products in the market!)

4. Second step, to create the silicone counter mold for the total model

- a) Prepare and mix about 180 g A + B of **microsil silicone 80 shore**.
- b) Adapt the silicone in the model, remove the excesses, insert the cover in the two axes of the Acryrobotec® flask, press the silicone, adapt it, tighten the clamping screws, compress again the silicone that has come out laterally and above, fill the voids from the upper cover and around to the model.
- c) The last operation is made very simple, as the flask is very open, superiorly in the horseshoe shape, laterally, frontally and posteriorly.
- d) If the silicone is not sufficient, it can be kneaded and applied subsequently in the missing spaces. It is an advantage of Cut the redundant silicone on the lid AcryRobotec compared to the similar systems competing in the market.
- e) In this way, the silicone adaptation is obtained on the second mask and also a perfect sealing.
- f) This phase must be carried out with the utmost care in order to prevent the resin from leaking out during the injection phase.
- g) Once hardened finished, unscrew the nuts, remove the flask cover from the two guide rods and remove the model from the silicone counter mold.

5. Injection holes preparation

- a) Take the silicone counter mold out of the muffle cover, with two 4-8mm drill bits, drill two holes in the silicone counter mold, in the back in correspondence of the two ends of the model, at the height of the trigons of the lower and the tubers of the superior until it comes out inside the model for the entrance channel".
- b) First, ream the large inlet hole with the 4mm tip or fit a reamer suitable for the tip of the cannula of the syringe used so that it enters with light pressure.
- c) Ream the small hole with a 3mm bit
- d) This creates the input and output channels for the injection of acrylic resin.
- e) Entrance hole with large reamer, equal to the same diameter of the tip of the syringe.
- f) Exit hole with small 3mm reamer
- g) Use a reamer that has a diameter suitable for the injection tip of the syringe 30cc. used to inject the resin (available in the pharmacy).
- h) The exit hole, always must be made with the small 3-4mm small drill bit, depends on the tip of the syringe used.
- i) With a scalpel, flare the canal already created and make a small cone (for acrylic reserve) from the outside to the inside, taking care not to flare more than the diameter of the syringe tip to inject the resin.
- j) The flares in the channels will be used to contain the resin reserve when it is injected.

6. Cleaning and degreasing the plaster model

- a) Wash and degrease the model and the hooks, in case of skeletal prosthesis with steam or boiling water.
- b) Immerse the model in water for 10 minutes at a temperature of approximately 45 ° C to hydrate.
This step prevents that the plaster from absorbing monomer liquid of the resin when injected.
- c) Help yourself with a basket that possibly preserves the position of the teeth, alternatively use the traditional method.
- d) Steam or degrease with boiling water as usual.
- e) Dry with a gentle jet of compressed air from the suitable handpiece.

7. Preparation of the AcryRobotec® flask for resin injection

- a) Create the mechanical retentions, by making a low relief around the heel of the teeth with a diamond bur or simply removing the glazing of the resin teeth up to the collar.
- b) Make in the teeth a concavity in the lower base with a resin cutter.
- c) Reinsert the teeth into the silicone counter mold, respecting the position of the specific tooth-by-tooth housings.
- d) Apply a layer of **microAcry Bond**. (Resin / Teeth Primer)
- e) Remove the model from the water, with a brush pass a layer of **microSQL Plus** (Alginic insulator)
- f) Soak again and drain immediately (This creates a more shiny layer of the surface)
- g) Air dry the plaster model.
- h) Insert the insulated model into the silicone counter mold after the above processes.
- i) Insert the silicone counter mold and model in the cover, making it fit together perfectly.
- j) Make sure that the suitable spacers are inserted in the 2 rods.
- k) Insert the muffle cover with silicone counter mold and model into the two guide rods and slide it along the steel axes until the split of the plaster model matches the split of the magnetized base of the muffle.
- l) Close with the cylindrical fixing screws of the flask.

8. Mixing the acrylic for the injection microDON H-Tec or microDON Nano Plus

Mix the Powder (polymer) and Liquid (monomer) in the doses indicated for **microDON H-Tec or microDON Nano Plus** with a high charge of micro-pearls. (Heat curing resins)

- For a medium-sized Total Upper or Lower prosthesis, mix about **20 g** of powder and **8 g** of liquid.
- Put the required amount of liquid in the mixing cup, add the corresponding amount of powder. When dosing individually add the amount of powder needed to absorb the liquid.
- Firstly, pour the powder gradually into the liquid and mix for **15 seconds**. Leave to rest for 1 minutes.
- Pour the resin into the 30cc syringe after greasing the rubber plunger with vaseline, first being careful to close the exit cannula hole with your finger.
- Insert the plunger into the syringe (after greasing the rubber part with vaseline, turn the syringe upside down.
- Push the plunger to eliminate the air bubbles. Pour the first drops of resin onto a paper towel
- Apply pressure to the plunger to release the resin from the tip of the syringe. The resin will be ready when it takes on a filamentous consistency, classic of hot resins.
- Attention! The maturation and injection processing times vary according to the ambient temperature!**

9. Injection procedure of the resin with hot polymerization

- Hold the flask with your hand at about 45 ° with the inlet hole at the bottom and the outlet hole at the top to avoid incorporating air bubbles during the injection.
- Insert the syringe cannula into the inlet hole and apply slow and constant pressure to the plunger until the resin comes out of the hole at the top, taking about 1 minute to understand correctly the pressure patch to apply.
- When the resin is injected, straighten the muffle, and suspend the injection until it comes out of the upper hole.
- After the injection, wait for the resin to stabilize for a few seconds and fill the cone of the inlet holes with a small reserve, which gradually empties slightly, keep it full until the resin no longer drops into the two cones.
- The syringe must be extracted slowly to avoid sucking the resin while keeping the plunger under pressure.
- Also fill the exit hole with resin.
- Warning! Do not continue pressing when the resin has already come out of the upper hole.
- Important Let the resin **mature for 12-15** minutes before inserting the flask into the polymerizer.

10 Polymerization

- Important!** The muffle must be inserted with water at room temperature.
- Warning!** The resin must mature as indicated above for **12-15 minutes** before inserting into the polymerizer
- The excess resin in the syringe **must be tear-off**, that is how it is used to do the traditional technique
- Follow the curing times recommended in the instructions for **microDON Nano Plus** and **microDON H-Tec**.
- Warning!** The pressure must be set with a range from **2bar** to **2.5** bar maximum.
- After polymerization, allow to dissolve in water until the ambient temperature is reached.
- Remove the two resin casting cones from the silicone counter mold. (At the jars of the casting cones, cut the silicone in the back of the silicone counter mold up to the edge creating two grooves with adequate thickness to remove the pouring channels).
- If you plan to make duplicates of the prosthesis in the future, safeguard the silicone counter mold by cutting the silicone. Remove it as intact as possible.
- Remove the model from the silicone counter mold.
- Proceed to repositioning in the articulator and finish with suitable cutters, polish according to the indications.
- Before the delivery of the prosthesis, soak in water for 24 hours for the release of the residual monomers as usual.

Material

					Silicone I mold microsil a+b 60 Sh
					Silicone II mold microsil a+b 80 Sh
Flask AcryRobotec	Casting Base Articulator Base	microDon H-Tec o Nano Plus Heat curing	Separating Fluid microSOL Plus	Primer Tooth / Acrylics	Addition silicone for the silicone counter mold