

***ACETAL (Thermo injectable acetal resin for partial dentures and aesthetic clasps)***  
**TECHNICAL INSTRUCTIONS**

## **MAKING OF THE DENTURE**

### **MODEL CASTING**

It is recommended to make the models in **special plaster type III or type IV (Densita)**.

### **PARALLELIZATION OF THE MODEL**

In the same way as with chrome, it is recommended to use a pendular parallelometer to look for the most favorable insertion axle, determining the dental equator, according to which the retainers we will be designed. Then, proceed to eliminate all the inconvenient or blind spots, applying wax and passing the rod.

### **RETENTIVITY**

Once the parallelization has been completed, tidy up any wax excess that may have been left over the dental equator and the gingival pad, from the medial area until the retainer's end. This will give the dentures the necessary retentivity.

### **RELIEFS**

Perform reliefs in wax covering a band of 1 mm to 1.5 mm.

### **DUPLICATE**

Make a duplicate of the model to work on hereafter.

Duplicates can be made with:

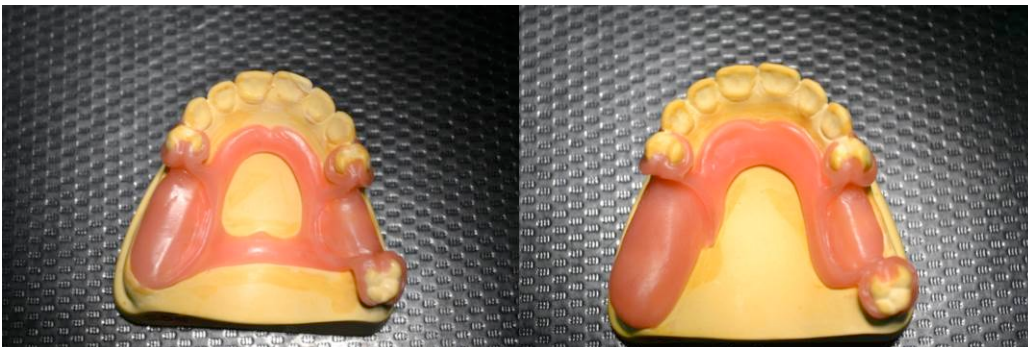
- ✓ Alginate
- ✓ Gelatin (for plaster)
- ✓ Silicone

\*Place the model into water for 5 minutes in case of using Gelatin or Alginate.

### **IMPORTANT!**

**Perform the casting with plaster type IV (Densita), which is able to withstand the pressure to be used in the injection.**

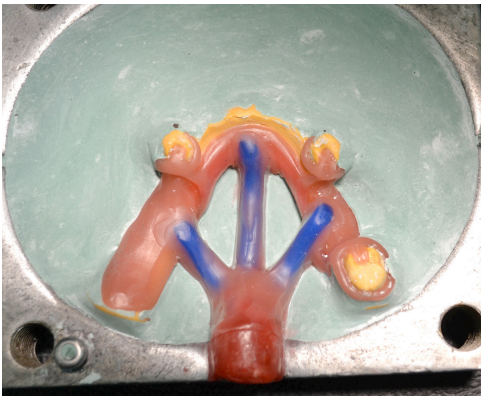
On the duplicate model is made a wax pattern with the desired shape.



### PLACING IN THE MUFFLE

- Put a thin layer of vaseline in the muffle and counter muffle.
- Scrub the retentive areas of the plaster teeth.
- Bear in mind that the counter muffle is the one with three holes for airflow.

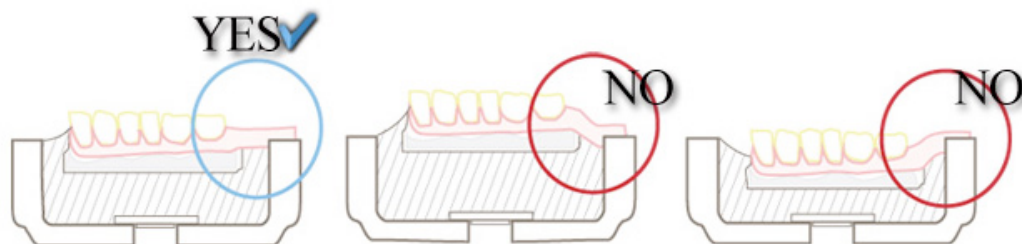
It is placed in the muffle with type IV gypsum ("densite") or gypsum type III ("stone") thus being made the base of the matrix.



38 ml of water
200 gr of special plaster type IV
Spatulating: 1' minute

\*The above-mentioned quantities are approximate. Adjust the proportions according to the plaster type used.

### INJECTION TUBES



**Perform tubes in wax. The tubes must follow a straight path on the material intake plane during the injection. For this reason, the model must be placed on that same plane; it must neither be buried nor be much higher than the muffle plane.**

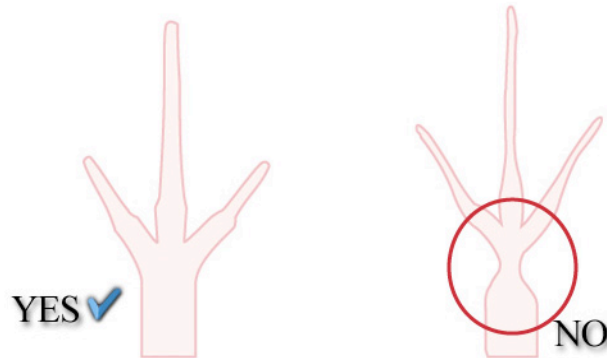
### Entrance sprue: 10 mm.

(The same diameter as the muffle hole).

This is a wax pad that should only take up the entrance space of the muffle.

### Main sprues: 6 mm.

They start at the very entrance of the muffle in such a way that the material is distributed among the main sprues as soon as it gets into the muffle. These sprues must rest on the muffle plaster, they are not aerial.



Progressive transition from the entrance sprue to the main three ones.

### COUNTER MUFFLE

- Put plaster separator.
- Present counter muffle and screw.
- Remember that the crews must be placed on the counter muffle side.

66 ml of water
255 gr of special plaster type IV
Spatuling: 1' minute

\* The above-mentioned quantities are approximate. Adjust the proportions according to the plaster type used.

### MUFFLE CLEANSING

- Loosen the screws two turns before cleansing.
- Immersion time: from 6 to 8 minutes.

### TUBES CORRECTION – TEETH PERFORATIONS' CLEANSING

- Once the muffle has been cleansed, we must rectify and correct all the tubes, eliminating any thin layer or excess that may have remained. This will prevent a plaster fragment from breaking in the injection and being kept in the denture.

### SEPARATOR FOR ACRYLIC

- Let the muffle cool down before applying the separator, so as to allow the plaster humidity to vent.
- 2 or 3 layers must be applied, according to the kind of separator used. It is important to let it dry out completely between one layer and the next one.
- Do not overuse the separator in any sector of the muffle, so as to avoid lumps.
- Let it dry out completely before injecting as humidity can affect the properties of the material.

**PREPARATION OF THE MUFFLE FOR THE INJECTION**

- Put the screws on the counter muffle side (where the holes for air flow are), and tighten them together with the one diagonally opposed.
- Control that there is no plaster or wax residue in the orifice of the injection.

**INJECTION**

<b>ACETAL Parameters</b>	
Temperature	245°C +/- 5°C = 473°F +/- 9°F
Lamination time (injection cycle)	15' Minutes
Injection upkeep time	30"-60" Seconds
Air pressure	5-7 Kg/cm2 = 5 - 7 Bar = 72 - 101 PSI

*Note: Injection parameters indicated for Deflex injection machine. For other injectors, consult the manufacturer or supplier of the equipment.*

After injected, the cast is released from the muffle, rescuing the injected piece.

**RETOUCHING and POLISHING**

**TUBES CUTTING**

<b>Item:</b>	<b>Toothed steel disc</b>
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**THICK RETOUCHING**

<b>Item:</b>	<b>Tungsten Carbide Drill (with red ring crossed multi-blade)</b>
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**Optional item:** Conventional stones.

**ELIMINATE EXCESSES**

<b>Item:</b>	<b>Steel brush (of thin and soft threads)</b>
Use	Low speed

**FINE RETOUCHING**

<b>Option A</b>	<b>Abrasive rubber</b>
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<b>Option B</b>	<b>Water sandpaper N° 240 and N° 600</b>
Use	Cut in stripes of 15 cm of length by 2 cm of width, place them in a sandpaper mandrel, and roll them up. Use at low speed.

**BRIGHTNESS**

<b>Item:</b>	<b>High Brightness Paste</b>
Use	Use a cloth or fabric wheel. The denture must be clean and dry (without any pumice residues). Polish with intermittent horizontal sweeping movements so as not to overheat the material.

## **Types of work achievable:**

### **1) Framework in ACETAL**



After the frame is injected into the **ACETAL**, the teeth are assembled according to the conventional acrylic technique, or the base of the prosthesis can also be completed according to the technique for injectable materials.



*Removable partial denture with Deflex **ACETAL***

### **2) ACETALIC RETAINERS OVER PARTIALS DENTURES MADE OF ACRYLIC OR CHROMIUM-COBALT**



*Aesthetic retainers made with **ACETAL***

The **ACETAL** retainers are then integrated into the base of the prosthesis according to the conventional acrylic technique, or according to the technique for injectable materials.



*Comparison between Acetal retainers and metal retainers.*



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