

HEAT-TREATMENT/ANNEALING

When a metal construction is heated, it is exposed to molecular structural changes.

The original elasticity of the movable parts must be restored after soldering, etc.

This procedure is called "**heat-treatment**".

Many individual parts are heat-treated to allow for deformations by bending, without causing fractures. This procedure is called "**annealing**".

HEAT-TREATMENT

- Make a clear distinction between those soldered parts that can and cannot be activated (the latter do not have to be heat-treated).

Therefore, only non-removable spring pins in **PALLAX** and **ORAX**, and females for direct casting with precious alloys can be heat-treated.

1. Heat-treatment is done after finishing the cast metal frame and prior to **opaque firing** or polishing the **plastic parts**.
2. Preheat a furnace and place the construction to be heat-treated inside:
 - **450 °C** for **PALLAX** during 60 minutes,
 - **400 °C** for **ORAX** during 60 minutes.
3. Allow the construction to bench cool and thoroughly polish it.

ANNEALING

- Those parts that are repeatedly **bent** during processing must be annealed to avoid brittleness. Only those parts that were bent once and then soldered, do not have to be annealed.
- The adaptation (bending) of bar segments requires great elasticity of the bar. By bending the bar, it becomes harder at the position of the deformation and therefore more brittle. To avoid fractures and cracks, the bar must always be **annealed** prior to deformation.
- When soldering a bar, it is spontaneously annealed by the dental technician. This occurs after deformation.

The concept of the metal bar and PRECI-CLIP allows annealing **before** the deformation of the bar profile.

1. Heat up the bar at **750 °C** for **ORAX** and possibly in an environment with a low oxygen content:
 - in a furnace (facilitates the exact determination of the temperature);
 - or preferably in a flame (quick heating to cerise colour).
2. Immediately cool off in water.
3. Repeat this procedure in case of multiple or considerable deformations.
4. Remove the oxide from the soldering joint prior to soldering.

Side effects, warnings and precautions

- The attachments are intended for single use.
- The products are non-sterile.
- There is a risk of poor fit when patient conditions change.
- Bacterial adhesion can be avoided by applying hygiene measures.
- Inappropriate use or bad manufacturing can lead to premature wear of the attachments.
- The functionality of the attachments will be adversely affected by traumas such as grinding and bruxism.
- For the purpose of traceability we advise you to record the lot number of the applied products in the patient file.
- Do not heat items containing titanium.
- Do not use items containing nickel in case of nickel allergy.
- The accessories RE H 79 and H 35 must be used outside the mouth.