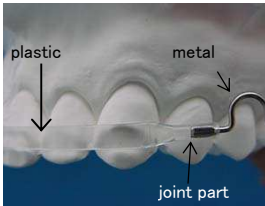


How to fabricate Q.C.M. Retainer

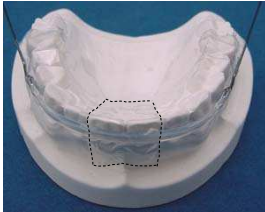
Plastic section will break if it touches resin monomer.

* It is recommended to fabricate the Q.C.M. Retainer with clasps.



1) Selecting the size

- Select the proper size so that the flat plastic section covers the buccal curvature of the canines.
- * The product code number refers to the length (in mm) of the flat plastic section and is measured from canine to canine.



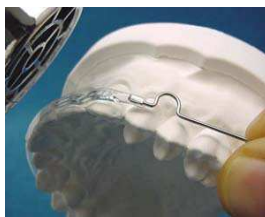
2) Temporarily fix the plastic labial bow to the cast

- Match the midline mark on the plastic with the dental midline of the cast.
- Fix the wire temporarily to the cast with cellophane tape.
Never use tape that is too sticky such as duct tape or the plastic section might be discolored by the solvent which is used on such tapes.



3) Applying heat to fit the plastic labial bow

- Heat the plastic labial bow with a hair dryer.
- The organic polymer will be soft enough to form to the cast with thumb pressure or a soft-tipped blunt tool.
- * See the "Choice and Application of Heating Device", if the results are unsatisfactory.



4) Adjusting the angle of the loop

- To avoid the loop pressing into the gums, heat the plastic labial bow and then twist the metallic wire a little by hand while pulling it slightly.
- * Never grip the plastic section or joint section with pliers etc. when bending the metallic section of the wire.



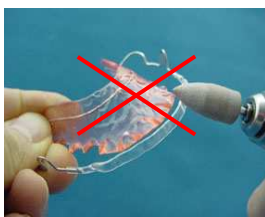
5) Complete the acrylic plate

- It is recommended to form clasps, as there will be no chance of the plastic section making contact with the resin monomer. If forming clasps is impossible, incline the palatal side of the cast towards you and then form the acrylic plate carefully by a "brush-on" technique.
- * Plastic section will break if it touches resin monomer.



6) Soldering

- In order to prevent the metallic wire from conducting heat to the plastic and the acrylic plate, take care to cover the area where the clasps enter the plate and the part around the loop fully with high thermal conductive fixative. The plastic section will melt and catch fire if the flame touches it.



7) Grind the acrylic plate and metallic wire

- * Never grind the plastic section. That may cause discoloration or breakage.
- * Never clean the plastic part with a concentrated alcohol such as ethanol.



8) Final adjustment

- In case the plastic part does not fit the dental arch correctly, reheat the plastic section and refit the dental arch or adjust with the loop.

Choice and Application of Heating Device



1) Check the type of hair dryer

- There are two types of hair dryer in general.
 - Type A
L-shaped type with handle
 - Type B
Dryer with detachable hair brush



* Detach the nozzle or hair brush when applying heat to the Q.C.M. Retainer Wire.

2) Check the electric power of the dryer

- It is recommended to use one of the following dryers.
 - Type A •••over 1200W
 - Type B •••over 700W

* If the electric power is insufficient, the plastic part may not fit the dental arch.



3) Check the thermal fuse

- It is recommended to use a dryer with a thermal fuse listed above 180-centigrade degrees (or equivalent in Fahrenheit).

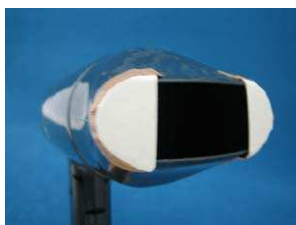
* If the temperature of the dryer is too low, the plastic part may not fit the dental arch correctly.



When fabricating Q.C.M. Retainer

Type B is recommended

As the nozzle is narrow, the direction of the heat is focused and the ventilating temperature is generally stable.



《Cases in which the above does not apply》

The effect of ambient temperature or the performance of the hair dryer used may prevent the dryer from attaining the desired temperature.

- Narrow the blower's nozzle a little by taping it. Then the temperature of the air exiting the dryer will increase.

* Never narrow more than necessary nor use for too long, as the fuse will burn out or the user will be burned.



Some dental technicians in North America have suggested the use of an embossing heat tool rather than a hair dryer, because their dryers are not good at softening the plastic labial bow.

It is your own responsibility to deal with the heating tool safely.