

Components of acrylic removable partial denture

1. The acrylic denture base:

The base acts as a saddle and a connector and has a reciprocal function for the retentive wrought wire clasp arm.

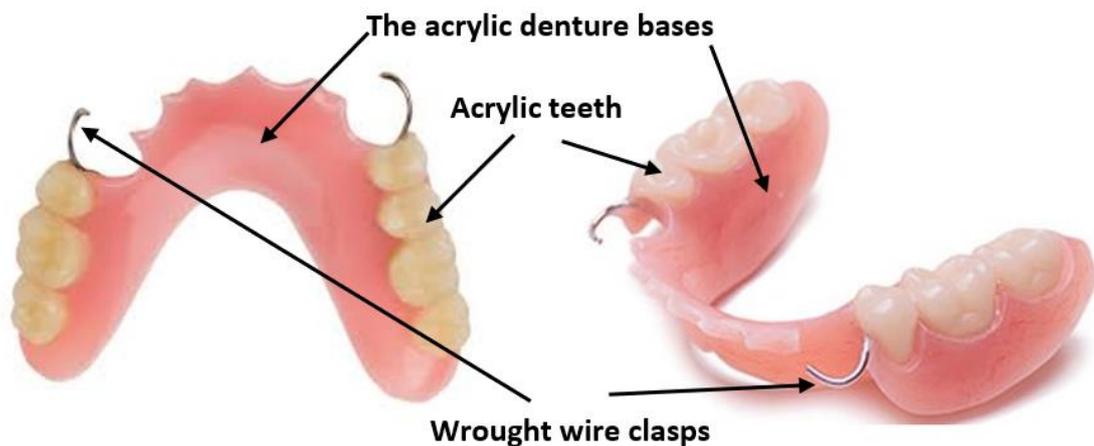
2. Wrought wire clasps:

Wrought stainless steel wire clasps are used with acrylic P.D; they are attached to the acrylic denture base by embedding its non-retentive portion in the denture base.

The wrought wire clasp consists of the tag, a retentive part (retentive tip) and a non-retentive part, which should be looped or twisted to help anchoring it in the acrylic resin of the base.

3. Acrylic teeth:

Acrylic teeth are attached by chemical bond with the acrylic denture base.



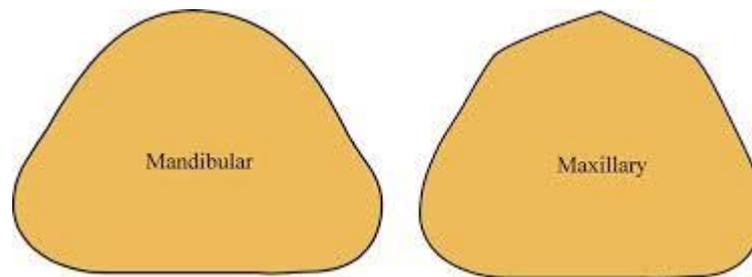
Requirements of removable partial denture: -

1. Stability against horizontal movements: is the quality of prosthesis to be firm, stable or constant to resist the displacement by horizontal forces.
2. Stability against rotational movements: is the quality of prosthesis to be stable or constant to resist the displacement by rotational stress.
3. Support against vertical movements.
4. Retention: is the quality of the denture that resist the vertical forces of the dislodgement for example force of gravity, adhesiveness of saliva or forces associated with the opening of jaws.

Trimming of the cast:

A set of finishing steps for a study cast in which the bases, posterior borders, sides, heels, and anterior surfaces are smoothed and shaped to ensure a finished product that is attractive, well proportioned, and useful as a diagnostic tool. The treatment is best accomplished using a mechanical model trimmer.





Preliminary steps

Before trimming the cast, you must soak it in a saturated dehydrate solution (SDS). Never trim a dry cast because the slushy debris coming off the trimming wheels will fall on the dry surface and become permanently attached to the cast surface. Mark the cast with trimming lines. These lines will help you determine the base thickness; align the base plane to the occlusal plane of the teeth; and trim the outer boundary alongside the posterior teeth, the anterior teeth, and the posterior border of the cast.



Trimming procedures

1. Figure 1 shows the desired cast dimensions of a trimmed cast. Start trimming the cast by grinding the cast bottom parallel to the occlusal plane of the teeth.
2. The cast should be about 15mm (5/8 inch) thick at its thinnest place (usually the palatal vault of the upper and the tongue space region of the lower).
3. Make sure the cast includes all the denture support areas and all of the features that define denture borders.
4. Keep the cast free of nodules or voids. When trimming a maxillary cast, make it as much like the general shape.
5. Trim a mandibular cast to correspond with the shape shown in the same figure. Fully represent the sulci area in the cast, but not more than 3mm deep.
6. The sulci are routinely protected by a peripheral "land" area or ledge extending 4mm outward.
7. Make sure the cast extends 5mm beyond the hamular notch area of the maxillary arch and 5mm beyond the retromolar pads of the mandibular notch.

