



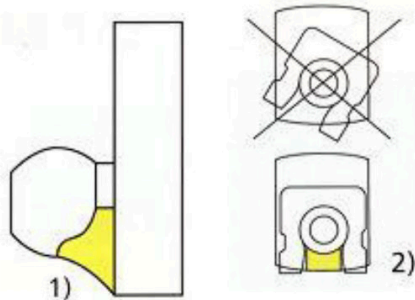
## CSA Instructions

### Castable Spherical Attachment

#### Benefits

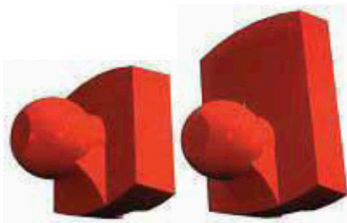
Reinforcement for the sphere.

- Increased strength of the sphere (**FIG 1**)
- **Guide for the alignment of the cap** (**FIG 2**)
- Cast metal cooling more balanced.



May be used on the side of a cast bar when vertical space is limited, and also on the distal of an abutment crown for removable partial dentures.

#### Components



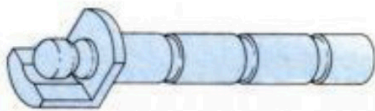
*CSA Male*



*CSA Metal Housing*



*CSA Female*



*CSA Analogue*



*CSA Male Paralleling Mandrel*



*CSA Female Insertion Tool*

## CSA Instructions



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Survey the model to determine the path of insertion. Wax the crowns/bar to full contour. Place the castable male pattern--either the standard or high--into the CSA Paralleling Mandrel (**FIG 1**). It is very important that the males are positioned parallel to each other, and that the males are as close to the tissue as possible without impinging on the tissue. Position the male(s) on to the crown (**FIG 2**), or bar (**FIG 3**), and incorporate the castable male into the wax pattern. For removable partial dentures, when possible, a lingual shoulder for a lingual bracing arm is recommended.



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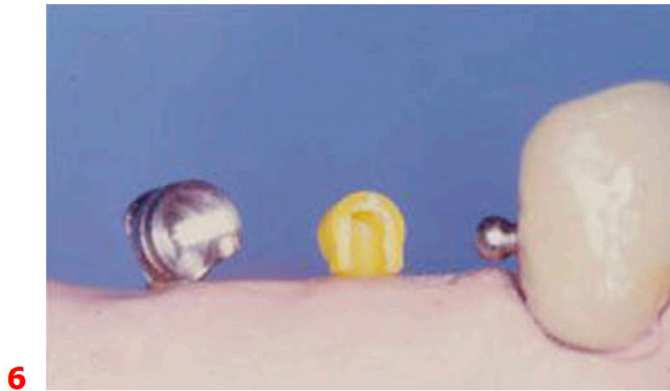


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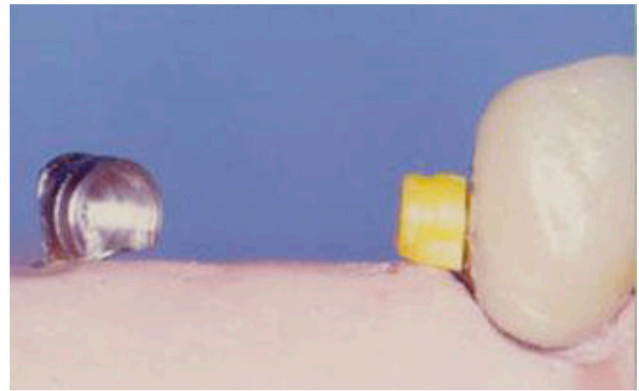
Invest, sprue, and cast (**FIG 4**) in a hard alloy. Do not sandblast to deinvest, as this will leave a very rough surface on the sphere. Polish the casting (**FIG 5**), but do not rubber wheel the sphere as this will change the size of the sphere and the female will not fit. The cast components are sent out for try-in and picked up in a new master impression.



## Fabrication using the Steel Housing



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The finished casting, female cap, and metal housing (**FIG 6**). Place the female cap on the male (**FIG 7**)

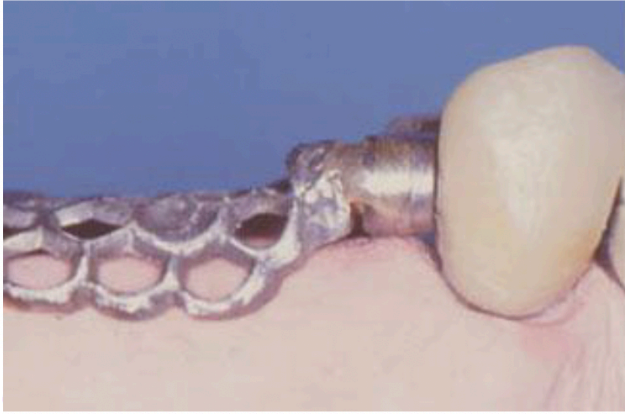


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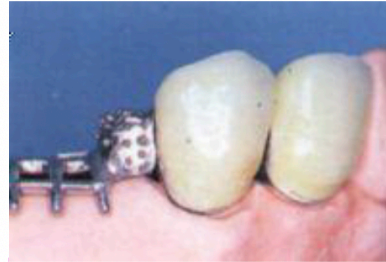


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Seat the metal housing on the female cap (**FIG 8**). Duplicate the model and pour up a refractory model for the cast framework. Wax up the framework on the refractory model. Do not cover the female or housing area with wax (**FIG 9**).



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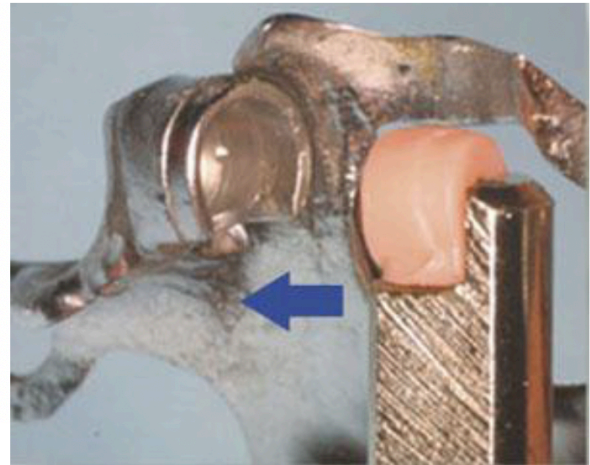


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The steel housing may be soldered to the framework (**FIG 10**), or the housing may be attached to the cast frame with self-curing resin (**FIG 11**).



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The housing may be also bonded to the cast frame with anaerobic cement (i.e. Ceka Site) (**FIG 12**).

Complete processing the acrylic resin of the final prosthesis. Place the final female cap into the housing using the CSA insertion tool (**FIG 12**). Insert the cap from the vertical side.