Evolution of the Captek Crown/Bridge Kit

- 2 years of evaluations
- Top Opinion Leaders
- Designed to help improve Crown and Bridge predictability, understanding, efficiency.
- Eliminate any failures
- Better overall results
Instructions shown in the following sequence are completed using the rotary instruments in the Captek/Brasseler Crown and Bridge kit.

Purchase of this kit is not required yet may be helpful. Call your laboratory, Captek or Brasseler representative for additional questions.
One of the many benefits of Captek™ crowns and bridges is the versatility that the dentist has when choosing a preparation style that is comfortable for him/her, appropriate for the tooth being treated and the desired esthetic outcome of the case.

The following sequence shows a basic chamfer margin design on the molar sequence (Dr. John Cranham) and a very light chamfer in the perio-involved series (Dr. Harold Baumgarten.)

Captek can be fabricated on a chamfer, shoulder, knife edge or beveled edge margin. Consult with your Captek certified laboratory for further details and opinions.
Posterior Step by Step Series
Step one: Interproximal slice with 169L Bur

Utilizing the 169L will help avoid over tapering of final preparation. Standard retention and resistance form should be followed.
Leaving lip of tooth structure against adjacent tooth
Lip of tooth structure can then be fractured, leaving pristine adjacent tooth.
Facial & lingual depth cuts with 169L, 1mm deep.
Depth cuts...

The 169L is .9mm wide. Taken to full depth, this depth guide, when gross reduction is completed, should produce minimum reduction of 1mm buccally and lingually. This is a very conservative preparation depth and may be helpful in situations where minimal reduction is the only option.
Facial depth cuts should be two plane.
The 5856 016 blk (super course) can be used for depth cuts as seen demonstrated here.

5856 blk Dimensions:
- 1.6 mm
- 1.25 mm

1.5 mm buccal reduction tapering to .8 mm reduction at the gingival can also provide predictable esthetic results with Captek crowns and/bridges. Consult your certified Captek lab for their input.
Occlusal depth cuts in the shape of a “spider” with 330 bur, 1.5 to 2 mm deep.
Completed depth guides on facial, lingual and occlusal.

Occlusal clearance demonstrated here is important for appropriate porcelain coverage over the Captek crowns and bridges. At least 1.5mm to 2mm of occlusal reduction is necessary for maximum strength. Occlusal clearance together with proper retention and resistance form are important preparation parameters for predictable results.
Standard conventional preparation philosophy on resistance and retention form still applies for Captek crowns and bridges.

Research and recommendations on standard resistance and retention form is available upon request.
Occlusal reduction with Brasseler 5811-033 trapezoid shaped diamond.
Connect the dots…
Facial, lingual and interproximal gross reduction with Brasseler 5856-016 diamond. “connect the dots:...
Gross reduction is two plane on facial.
Preparation finishing & margination with the Brasseler med 8856-016 finishing diamond.
Final preparation & polishing with discs and cups.
Finished Captek crown preparation.
Step one: Start with an ideal foundation: proper build-up

Review of Preparation on actual Case
Step Two: Break contact with 169L carbide bur
Breaking contact…
Step three: Cut three facial and two lingual depth cuts with 169L bur (1 mm deep).
Facial depth cuts are in two planes
Cutting lingual depth cuts (1mm deep)
Depth cuts complete...
Step four: Use 330 carbide bur to cut 1.5 to 2 mm occlusal depth guide in a “spider” shape.
Cutting occlusal depth cuts...
All Depth cuts complete...
Step five: Use Brasseler 5811-033 trapezoid shaped bur to complete “deep V” occlusal reduction. Connect the dots...
Occlusal reduction complete...
Step Six: Prepare facial, lingual and interproximal with Brasseler 5856-0166 diamond bur. Connect the dots...
Gross reduction complete...
Finishing & polishing for optimum fit...
Preparation complete…
Provisional placed...
The Captek coping or bridge is fabricated by a Captek trained and certified laboratory and readied for ceramic application.

Due to the non-oxidizing, warm yellow color of Captek, 75% less opaque thickness is necessary than with traditional PFM. It is recommended by the manufacture to apply two very thin applications of opaque to integrate into the Captek porcelain couplers.
Any standard porcelain can be utilized over Captek.
Seating of the Captek crown

Achieving a passive, complete seat of the Captek restoration should be a standard occurrence with this technology.
1 week post op

Dentistry and Photography by Dr. John Cranham
Eight Month Post Op.
Periodontally Involved Tooth
Periodontal Therapy Completed

Note that when this crown is prepared subgingivally, the margin will be on the root surface...not enamel!
Step one: Interproximal slice with 169L Bur
Step two: Occlusal depth cuts in the shape of a “spider” with 330 bur. 2 mm deep.

Since cervical area is on root, traditional labial & lingual depth cuts are not used.
Step three: Occlusal reduction with Brasseler 5811-033 trapezoid shaped diamond. Connect the dots…
Step four: Facial, lingual and interproximal supragingival reduction with Brasseler 5956-016 diamond.

Goal is to create a small circumferential chamfer at the gingival margin. It will ultimately be removed in the subgingival preparation. The deeper the eventual subgingival preparation, the deeper the chamfer.
Gross reduction is two plane on facial.
Step five: Subgingival feather edge preparation finishing & margination is with the Brassler 30006-60-016 diamond.
Note that initial chamfer was removed, leaving a subgingival, feather edge finish line.

Finished Captek crown preparation.