

CF CARBON FIBER POST

Instructions for Use

Introduction

Carbon fiber is very strong and virtually unbreakable. It has a similar elasticity as dentin, enabling the carbon post to flex with the natural dentin. Carbon posts dissipate occlusal stress and do not transmit it as metal posts do. This post consists of strong carbon fiber bundles embedded in a special composite material, which will chemically bond with the dental material used for cementation and core build-up. The carbon fiber bundles are made of a carbon fiber reinforced epoxy resin with the reinforcing fibers in the form of a braided plait. Carbon fiber as a braided plait in a multi-axial arrangement gives superior resistance to bending and torsion forces than fibers in an ordinary axially parallel arrangement. Fiber content is approximately 65%. CF Carbon Fiber Post is fitted into the root canal in a passive and precise way and the post has passive retention slots instead of active cutting treads.

CF Carbon Fiber Post is smooth, cylindrical, and available in 4 sizes at 19 mm

23-100550	Kit includes 24 CF Carbon Fiber Posts of 4 different sizes; Ø1.10, Ø1.25, Ø1.40, Ø1.55 mm corresponding to post sizes L1, L2, L3, L4, and 4 corresponding reamers.
23-100551	Refill box of 6 CF Carbon Fiber Posts, L1
23-100552	Refill box of 6 CF Carbon Fiber Posts, L2
23-100553	Refill box of 6 CF Carbon Fiber Posts, L3
23-100554	Refill box of 6 CF Carbon Fiber Posts, L4

Special fiber spiral reamers must be used

23-100560	Assortment box of 4 reamers, L1-L4
23-100561	Refill box of 3 reamers, L1
23-100565	Refill box of 3 reamers, L2
23-100570	Refill box of 3 reamers, L3
23-100575	Refill box of 3 reamers, L4

Precautions

- Posts are used to give retention for the reconstruction of non-vital teeth, where the root canal has been endodontically treated.
- Posts can be shortened with a diamond bur or separating disk.
- It is of utmost importance that the canal is prepared with a reamer of appropriate size and shape corresponding to the post selected.
- Reamers should be used at moderate rpm speed and with a careful up and down movement only.
- If these precautions are not taken, reamers may get stuck and/or break off inside the root canal.
- Never use force when inserting post as this can cause root fracture.
- Use appropriate cement to increase retention of posts.
- Posts should be used with professional judgment.

Instructions for use

CF Carbon Fiber Post is a passive post and easily shaped with a regular diamond bur. It is to be used in the following manner:

1. Endodontic treatment must be completed before restoring with post and core build-up material.
2. Use a radiograph to determine the appropriate diameter and depth of the post space preparation in order to maintain sufficient root wall thickness and prevent perforation.
3. Using a Gates Glidden drill or a Peeso reamer, remove gutta percha to the same length as that of the clinical crown or 2/3 of the total root length.
4. Prepare the post space with a special fiber spiral reamer corresponding to the chosen size of post.
5. Insert the post into the prepared post space. The insertion should be possible without any effort and the post should fit snugly into place. Check carefully for occlusal clearance.
6. Remove post, shorten as necessary from either the apical or occlusal end with a diamond bur or a separating disk.
7. Before cementing, wipe the post with disinfecting solutions.
8. Self-cure or dual-cure resin cements are recommended for cementation. Treat the canal and/or apply primer/adhesive as per cement manufacturer's instructions.
9. Following the manufacturer's instructions, apply cement to post surface.
10. Seat post immediately, slowly inserting the post to full depth, allowing the excess cement to vent. Apply pressure about 60 seconds. Remove the excess cement.
11. Light cure, if required. See cement manufacturer's instructions.
12. Complete the core with core build-up material and fabricate the final restoration.

Possible risks with carbon fiber post

- If clinician does not use appropriate reamers to prepare root canal, problems may occur. If the post is too small, the restoration may fall out and it must be redone. If the post is too large and forced into a small root canal, this may cause the root to fracture.
- Carbon fiber post is non-corrosive and biocompatible.
- Retention of carbon fiber post may break if restoration is not properly prepared.
- If so, remaining carbon fiber post may easily be removed from root canal by drilling.
- All risks with carbon fiber post are linked to improper handling. These risks are minimized as carbon fiber post is only sold to qualified dentists who usually have a 4-year degree.
- In regards to the above, the risk in the use of carbon fiber posts may be regarded as very minimal.

Sterilization

Ramers can be sterilized by all methods. Posts can be disinfected using any commercially available disinfecting solutions.

Storage

Store in dry area.