Rebilda® Post GT

INNOVATIVE BUNLED
GLASS FIBER-REINFORCED RESIN POST
Rebilda® Post GT

STRONG, ADAPTABLE, PRESERVES HEALTHY TOOTH STRUCTURE

One of the big negatives involved with the use of root posts, often required in support of a core build-up restoration when repairing endodontically treated teeth, is the necessity to remove healthy tooth substance in order to have enough space to be able to place the root post. An additional common challenge can often be atypical root canal anatomy, e.g. strongly curved root canals, oval root cross-sections and pronounced conicity, that requires further mechanical preparation (removal of healthy tooth substance) and use of valuable chair time. Today with VOCO’s introduction of Rebilda Post GT a solution to these age old problems is available.

Rebilda Post GT – The post that saves healthy tooth structure

For such relatively frequent occurring situations, VOCO has developed a glass fiber-reinforced resin root post which consists of a bundle of fine individual posts (0.3 mm in diameter) in varying numbers dependent on the post size. Rebilda Post GT is characterized by high radiopacity (408 %Al) as well as high fracture resistance and flexural strength (1,040 MPa), while its elasticity is similar to that of dentin (31.5 GPa). Just like conventional root posts, Rebilda Post GT is indicated for all post / core build-ups, but offers further value as the solution to the treatment of the situations outlined above due to the individual fine posts and their flexibility.

So whether it be for treating a tooth with atypical anatomy or a mechanically prepared root canal, Rebilda Post GT is highly effective. Once initially seated the sleeve is removed, the bundle is spread and the fine individual posts are distributed in the entire root canal. In contrast to conventional root posts, this provides homogeneous reinforcement of the entire core build-up. Rebilda Post GT also offers advantages in the subsequent treatment procedure that include:

No need for a special drill to suit the size of the post
The post bundle adapts to the root canal, so when using Rebilda Post GT, minimal if any additional tooth substance needs to be sacrificed and there is no further weakening of the tooth structure. Rebilda Post GT will work with any drill system.

Simple insertion into the root canal
The bundling of the fine individual posts with the color-coded sleeve makes placement of Rebilda Post GT as simple if not more simple than the placement of a conventional root post.

Adapts to any root canal morphology
After insertion of the post and prior to polymerization of the post cement, the sleeve used to bundle the posts must be removed and the individual posts spread out in the root canal with a suitable instrument (e.g. a spreader). This ensures more homogeneous reinforcement of the post cement.

Reinforcement of the build-up
Distributing the fine individual posts fans them out in the area of the core build-up. This increases the surface area and thus the adhesion and retention attained between the core build-up material and the Rebilda Post GT, resulting in a stronger build-up.
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EFFECTIVE SYSTEMATIC CORONAL BUILD-UP

Properties

- Bundled glass fiber-reinforced resin root post
  ~ approx. 70 % glass fibers
  ~ approx. 10 % fillers (high radiopacity of 408 % Al)
  ~ approx. 20 % DMA matrix
- High fracture resistance and flexural strength (1,040 MPa)
- Elasticity similar to dentin 31.5 GPa
- Translucent
- Diameter of a single fine post: 0.3 mm

The aim of a post-assisted core build-up is to absorb any force peaks occurring in the build-up or coronal restoration via the reinforcing root post.

The bond strength shown below simulates a core build-up and measures the shear force required to cause the overall construction to fail. It is evident that the bond strength of Rebilda Post GT comprising 12 fine individual posts is comparable to, or higher than, that of the single-post systems with an equivalent diameter.

In addition, the absorption of force peaks from the complete build-up by Rebilda Post GT can be calculated in an FEM analysis. This simulates the maximum loads occurring in the root post and the surrounding build-up material caused by an applied force of 50 N. The calculated “von Mises stresses” show that even the smallest size of Rebilda Post GT (No. 4) is equivalent to a single master post (ST post) of the same material and a diameter of 1.5 mm.

As the number of individual posts increases, the intended result is achieved even more effectively: the stress peaks in the core build-up material decrease with the increase in post numbers, which means that the force peaks are absorbed by the individual posts which are capable of accepting considerably higher loads. As a result, the entire build-up is significantly reinforced.
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Indications
Core build-up restorations with root posts for endodontically treated teeth

Advantages
• Innovative bundled fine posts enable easy placement within any root canal morphology
• Minimizes the need to mechanically prepare root canals preserving healthy tooth structure and saving valuable chair time
• Increases surface area within build-up restoration maximizing adhesion and retention values
• Optimal adaptation to all canal morphologies and geometries
• All materials in the set are perfectly coordinated to maximize the success of the restoration

• Futurabond® U
  – Reliable self-curing
  – High bond strength without separate etching

• Rebilda® DC
  – Also suitable for post cementation
  – Cuts like dentin which minimizes ditching
  – Excellent physical properties enhances longevity
  – Low setting temperature

Presentation
REF 1972 Set 5 posts each of (~ ø 0.8 mm, ~ ø 1.0 mm, ~ ø 1.2 mm, ~ ø 1.4 mm), Ceramic Bond bottle 5 ml, Futurabond U SingleDose 20 pcs., Rebilda DC dentin QuickMix syringe 10 g, accessories
REF 1973 Post 4 (~ ø 0.8 mm), 5 pcs.
REF 1974 Post 6 (~ ø 1.0 mm), 5 pcs.
REF 1975 Post 9 (~ ø 1.2 mm), 5 pcs.
REF 1976 Post 12 (~ ø 1.4 mm), 5 pcs.