Competitive Product and Procedure Comparison

3M™ RelyX™ Fiber Post 3D
Glass Fiber Post
Offered by 3M

ParaPost® Fiber/Taper™ Lux™
Glass Fiber Post
Offered by Coltène

Summary – Advantages of 3M Solution over Coltène/Whaledent
• Faster and simpler 3M post and core solution with proven products (Fig. 1)
• Reliable post and core build-up procedure with fewer clinical steps and fewer products (Fig. 1)
• Easier cementation with 3M™ RelyX™ Unicem 2 Automix Cement: no post silanating, no root canal conditioning, no application of cement to post, no lentulo usage (endo tip application of RelyX Unicem 2 Automix enables a virtually void-free cementation (Fig 1.))
• Easier bonding with 3M™ Scotchbond™ Universal Adhesive for the core build-up: No etching or priming (Fig. 1)

3M post and core solution compared to Coltène/Whaledent

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<td>Apply etching gel</td>
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<td>3M</td>
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Fig. 1: Less components and steps compared to ParaPost® & ParaCore® System. Source: Steps according to instructions for use of ParaPost®, ParaCore® and 3M™ RelyX™ Fiber Post 3D.

RelyX Fiber Post 3D – Major features
• No pre-treatment of the post needed due to the micro-porosity at the surface (Fig. 2)
• Integrated 3D macro retention in the coronal part for a high bond strength to the core build-up (Fig. 3)
• Excellent radiopacity for better post position control (Fig. 4)

Fig. 2: Surface (SEM, 200x magnification) of 3M™ RelyX™ Fiber Post 3D. Source: R. Pezz, R. Hamp, S. Hader, E. Popp, J. Edington: Evaluation of a New Cement Post and Core Procedure System, J Dent Res 94 (Spec Iss A): 0105, 2015, (www.dentalresearch.org)

Fig. 3: The coronal macro retention of 3M™ RelyX™ Fiber Post 3D give a high and secure mechanical retention to the core build-up material, immediate depth control and guidance for post shortening.

Fig. 4: Comparative radiography of both posts. Source: THE DENTAL ADVISOR, Research Report Number 70 – June 2015
### Product description and benefits:
(As stated by the manufacturer)

- **3M™ RelyX™ Fiber Post 3D**
  - Glass fiber reinforced composite post with uniquely designed coronal macro-retention. Embedded in a fast and simple 3M post and core solution for a secure bond from root to core.

- **ParaPost® Fiber/Taper Lux™**
  - Parallel and tapered translucent fiber post systems. An alternative to metal posts when an esthetic metal-free restoration is desired.

### Cement

- **3M™ RelyX™ Unicem 2 Automix Cement**
  - Self-adhesive universal resin cement, no need for etching, priming and bonding
  - Reduces significant number of steps
  - Endo tip allows easy and virtually void-free application
  - Delivers reliable and strong bond of post to root canal

- **ParaPost® Para Core®**
  - Dual cured, glass-reinforced composite resin
  - Radiopaque
  - To produce a restoration with an unusually long life and very high strength

### Post

- **3M™ RelyX™ Fiber Post 3D**
  - High mechanical retention to core due to coronal macro retention
  - Secure bond in the root canal due to superficial micro-porosity
  - High radiopacity
  - Dentin-like elasticity to avoid root fracture
  - Esthetic alternative to metal posts
  - The flattened coronal macro retention offer a safe grip with the tweezer

- **ParaPost® Fiber/Taper Lux™**
  - Rounded head design reduces stress and locks-in composite core material
  - Light transmitting for fast cementation
  - Higher concentration of fibers for excellent strength characteristics
  - More radiopaque and removable
  - Outstanding strength

### Adhesive

- **3M™ Scotchbond™ Universal Adhesive**
  - Light-curing, self-adhesive
  - Reliable and strong bond to root and core
  - Bonds to all surfaces including enamel, dentin, glass ceramic, zirconia, noble and non-precious alloys, and composites – without additional primer
  - One application of adhesive sufficient (no etching or priming)
  - Combined total-etch, self-etch and selective-etch adhesive

- **ParaBond® Non-Rinse Conditioner, ParaBond® Adhesive A+B**
  - Chemically-curing, self-adhesive
  - Ideal for situations where light might not penetrate, such as for post cementation, metal crowns, deep cavities or opaque ceramic
  - High shear bond strengths on dentin and enamel

### Core build-up

- **3M™ Filtek™ One Bulk Fill Restorative**
  - Improved opacity and esthetics
  - Excellent cavity adaptation
  - One-step placement up to 5 mm
  - Excellent handling and sculptability
  - Excellent wear resistance and polish retention
  - High radiopacity

- **ParaPost® Para Core®**
  - 2 versions: ParaCore® and ParaCore® SLOW
  - 3 shades: dentin, white and translucent
  - Optimal monoblock bond interface between dentin-post-crown
  - Superior bond strength and stable consistency
  - Radiopaque

### How it works

- **3M™ RelyX™ Fiber Post 3D with alcohol**
- **Apply RelyX Unicem 2 Automix Cement into root canal**
- **Insert post into root canal**
- **Apply Scotchbond Universal Adhesive to the coronal part of post and tooth**
- **Build-up core with Filtek One Bulk Fill Restorative**

- **Clean post with alcohol**
- **Brush silane onto post (optional)**
- **Condition canal with non-rinse conditioner and/or apply primer/adhesive e.g. with ParaBond® Adhesive A+B**
- **Apply cement to post surface and into root canal**
- **Insert post in the root canal**
- **Bond post and tooth structure with ParaBond® Adhesive A+B**
- **Build-up core with ParaPost® ParaCore®**

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*Information obtained from [http://www.coltene.com/10033/Products.html](http://www.coltene.com/10033/Products.html)*

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