Tube & Screw System

Preliminary and Initial Attachment Procedures

Phase 1: Always refer to the Preliminary and Initial Attachments Procedures, page 8. Only this will guarantee a successful restoration.

Description: The use of small precision screws has provided new alternatives to the technician and the dentist. When faced with cases that should be designed as retrievable, these attachments provide viable options. The wide assortment of sizes and relative ease of use make them an excellent choice for retrievable cases.

Note: Regular or Type IV gold should be used to cast to the tubes. The collars may be cast with precious or semi-precious alloys.

CONSIDERATIONS

The new and advanced Tube & Screw (A) should be used exclusively with precious or semi-precious alloys. When utilizing this attachment, the tube (melting range 1400 - 1490 Celsius) is always incorporated in the primary structure. Use yellow type III or IV gold alloy for the primary structure. The collar is cast into the superstructure and may be cast with precious or semi-precious alloy.

The complete 1.0mm (slot screw), 1.2mm (hex screw) and 1.4mm (hex screw) Tube & Screw now include the Titanium Fixing Pin, which can be dissolved in Hydrofluoric acid if necessary (Strip-it or Super Stripper*). This is an another exclusive of Attachments International, Inc.

The collar and waxing extension sleeve are then incorporated into secondary structure. The screw fastens the secondary structure to primary (B). To utilize this attachment to its greatest degree, select the largest diameter and medium length which space allows. Medium length Tube & Screw attachment can be reduced to length of short Tube & Screw. A screw end refiner is recommended when shortening screws.

The Tube & Screw is most commonly placed vertically into telescopic copings (B) or distal extension blocks (C). The Tube & Screw may also be placed horizontally or any angle in between as long as it does not create an undercut. (D)

Phase 2: TECHNICAL

1. Wax the substructure which may be a primary coping, crown extension for custom screw block, bar or custom implant abutment. Position the metal tube into the wax-up. Let the opening of the tube extend approximately 0.10mm or more from the surface (E). This will allow the investment to seal the junction of the tube and the fixing pin and will prevent gold flashing into the tube. Oxidize the titanium fixing pin with a Bunsen burner and apply anti-flux, pencil graphite or liquid graphite to the screw threads. This assures release of the fixing pin or waxing screw from the tube after casting. Screw the oxidized titanium fixing pin into the tube. The fixing pin does not have to be very tight.

For bar restorations, the tube may be opened if desired. The closed end of the tube may be cut off with the tube placed through the bar pattern. No fixing pin is used with this method. Allow investment to flow through metal tube.

2. Invest, cast, and devest the primary unit. Unscrew the fixing pin from the tube. If the titanium fixing pin breaks during deflasking use Hydrofluoric acid to dissolve the broken piece from the tube. Reduce the length of the tube to the height of the casting. Finish the primary structure. If the primary coping requires milling, use the proper milling burs.

3. Slide the waxing screw through the metal collar and fasten to the primary casting. Place the plastic waxing extension sleeve over the screw and wax it to the collar. Complete wax-up or resin pattern for super structure. Attach sprue as desired. Remove the screw, invest and cast with precious or semi-precious alloy. (F)

4. Finish the secondary structure and attach it to the primary with the precious alloy screw. Shorten screw head height if necessary. Leave sufficient height for slot or hex driver.