



### **Tonsillectomy Technique Guide**

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#### **Introduction**

Tissue Welding Technology (TW), offered by Starion Instruments, is an innovative technology for tonsillectomy procedures. TW utilizes heat and pressure as a means to coagulate and cut soft tissue. Unlike monopolar and bipolar RF technologies, TW does not depend upon conducting electrical current through human tissue for operation. Rather, TW instruments have a heating element at the tip that precisely heats tissue that it is in contact with. The instruments are designed to minimize collateral tissue damage for improved patient outcomes.

#### **Setup**

Refer to the Instructions for Use for equipment preparation. Set the Universal Power Supply (UPS) dial at number "2".

#### **Tonsillectomy Technique**

Perform standard intubation and general anesthesia induction. The tonsil is grasped in routine fashion with a tenaculum and the TW forceps are first applied to the mucosa above the superior pole of the tonsil. Pinch the tissue between the tines of the forceps while simultaneously depressing the "cut", or right, foot pedal. (You must squeeze the forceps completely or the circuit will not activate.) Activating this pedal generates the highest energy output, cutting the tissue.

Once this initial incision is made, place the black tine of the forceps beneath the mucosa. The forceps are then gently closed and advanced inferiorly in the "cutting" mode. Once the anterior pillar mucosa has been incised, medially retract the tonsil further, exposing the underlying fascial plane. If any blood vessels are visually identified, the forceps are applied laterally on the vessel and the "coagulation", or left, foot pedal is depressed for 3 to 5 seconds. The amount of tissue heating using the "coagulation" foot pedal is adjustable on the UPS dial. *Using a dial setting between "1" and "2" delivers the most effective coagulation.*

Once the blood vessels are sealed, the forceps are reapplied medially and used to sever the vessel using the "cut", or right, foot pedal.

After complete removal of both tonsils, the tonsil fossae should be thoroughly inspected for any evidence of bleeding and, if necessary, the coagulation mode can be used further.

#### **Tips and Pointers**

- The learning curve for tonsillectomies using the Starion device is typically 3-5 cases for the new user, resulting in quicker procedures thereafter.
- Activate the forceps in the coagulation mode laterally on larger vessels before cutting medially.
- The user must first coagulate and then cut tissue as a step-by-step process of removing the tonsil. Using only the cut mode to save time in the excision may lead to ineffective coagulation of vessels.
- The variable dial on the UPS only affects the left foot pedal's "coagulation" energy output.
- Optimal coagulation is obtained using a setting of "1"- "2" on the UPS dial.
- Changing the variable dial does not affect the power output when using the "cut", or right, foot pedal. The right foot pedal generates the highest power output at all times, and is therefore used for cutting only.
- Activation of the left foot pedal at a higher setting on the UPS dial, such as "5"- "6", results in a blended cut/coagulation mode. Tissue will coagulate first, and subsequently divide over time. However, the coagulation will not be as effective as when using a setting of "1"- "2".
- Using a setting of "8" on the dial with the left foot pedal is equivalent to using the right foot pedal at any time.