



Misonix BoneScalpel Platform powered by neXus

The Misonix BoneScalpel platform provides the following unique features;

- The BoneScalpel is an ultrasonic surgical device vibrating longitudinally at a frequency of 22.5 kHz, providing users with hard tissue resection, while providing tissue selectivity for adjacent soft tissues given their elastic nature.
- The system is comprised of an ultrasonic generator/console (i.e. neXus), reusable (autoclavable) handpiece(s) containing a piezoelectric ceramic stack transferring electrical energy to mechanical energy, and various tip & tubing packs
- An integrated peristaltic pump ensures a consistent flow of irrigation and can be varied from 12 cc/min to 85 cc/min.
- The system provides users the ability to adjust multiple parameters, including that of Ultrasound (aka. Vibration/Intensity/Power) and irrigation. The Ultrasound can be set to 21 unique setpoints, whereas the Irrigation includes 20 unique setpoints.
  - Ultrasound can be set to linear (variable) or pre-set (on/off) modes, providing the user ultimate control.
  - Irrigation contains a "Flush" mode, which can be activated at the console, resulting in a flow rate of 76 cc/min
- The system is activated by a Wireless Footswitch; thus, eliminating unnecessary cords in the Operating Room/Theatre.
- The system includes Onboard Trouble Shooting & Diagnostics, providing users visual and audible notifications.
- Tubing Setup & Installation is simplified with magnetic pucks, which ensures proper connection and orientation.
- The BoneScalpel allows for various clinical approaches including open, mini-open and minimally-invasive surgery (MIS).
- The BoneScalpel blades contain three key design elements, including Flat Lateral Edges, Central Lumen Irrigation, and a Beveled Edge allowing users a consistent and reproducible experience during each use.
  - Flat Lateral edges provide a uniform cross-section, allowing for consistent pressure while cutting.
  - Central Lumen Irrigation allows for cooling and lubrication across the bone-blade interface.
  - A leading Beveled Edge allows easier entry into the bone when initiating various cuts.
- The BoneScalpel portfolio includes 10 different titanium alloy attachments, consisting of Blade & Shaver configurations that vary in working length and size.
  - The blade portfolio includes blunt and serrated options with working lengths ranging from 34mm to 100mm.
  - The blade portfolio includes 10mm, 20mm & 25mm cutting depth options.
  - The blade portfolio includes options varying in thickness from 0.5mm to 1.0mm.
  - The shaver portfolio includes automatic and 360° options with working lengths ranging from 34mm to 140mm.
  - The shaver portfolio includes a 1.3 x 1.8mm, 2.2 x 3.0mm and Ø4.4 mm options.

In Summary, the Misonix BoneScalpel, powered by neXus, is a versatile system providing users unparalleled hard tissue resection in multiple surgical specialties while sparing adjacent soft tissues. This revolutionary ultrasonic surgical device provides users with maximum control, precision & safety.

Sincerely,  
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