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# BLUBERRY™

ULTRASONIC SURGICAL SEALING SYSTEM

WORLD-CLASS PRECISION AND LARGE
VESSEL SEALING CAPABILITIES

MAVERA® Surgery

# “A superior surgical method going beyond just ‘cutting and sealing‘ the tissue.”

## The Bluberry™ Ultrasonic Surgical Sealing System

A Revolutionary Device Offering Better Results

- **Selecting and adapting tissue and reducing thermal injury**
- **Providing advanced hemostasis**

## Mechanism of Action

*The Bluberry™ Ultrasonic Surgical Sealing System is used as an adjunct to or substitute for electro-surgery, laser surgery, and traditional scalpels in general, gynecological, thoracic surgery, and exposure to orthopedic structures (such as hip joint). The system is designed to be used in combination the Hand-piece and Transducer form a scissor-like device enabling the user to perform soft tissue cutting a sealing of small vessels whilst controlling bleeding by coaptive coagulation at low temperatures in the range of 50°C-100°C. When the blade couples with protein, coagulation occurs whereby protein denaturation, and this coagulum tamponades and seals vessels. System is used in soft tissue incisions and where bleeding control and minimum lateral thermal damage is wanted.*

## Principle of Operation

*Ultrasonic surgery is realized between 20-100 kHz. In principle, the outlet voltage is supplied at 50 to 60 hertz. The generator boosts the frequency to 54-56 K hertz. The resulting ultrasonic frequency is delivered into the hand-piece and amplified to the motion. After activation, the blade can vibrate 54.000-56.000 strokes per second and results in cavitation. The combination of low frequency ultrasonic energy and jaw pressure has ability to both cut and coagulate the tissue without current passage through the patient.*

1. ### Selecting and adapting tissue and reducing thermal injury:

   Bluberry™ Ultrasonic Surgical Sealing System provides greater accuracy by regulating energy delivery when needed. The temperature begins to rise more rapidly during a transaction and as tissue divides. The tissue-compatibility algorithm responds by decreasing the power output. This change in audible activation tone provides an enhanced feedback mechanism and hemostasis is achieved. Consequently, unnecessary power output is decreased and this results in reducing thermal injury.[1]

2. ### Providing advanced hemostasis:

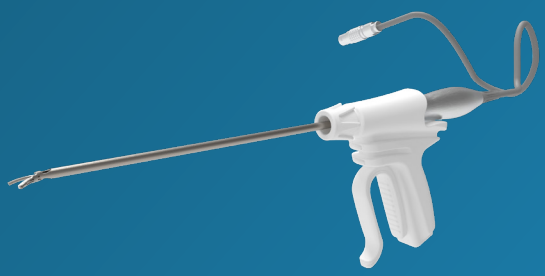
   Bluberry™ Ultrasonic Surgical Sealing System use vibration at 55.5 kHz in order to coagulate and cut tissue and seal vessels at the same time. Transmission of the vibration to the tissue provokes hydrogen bonds of proteins fracture, and therefore denatures protein to form a coagulum, that seals the vessels and provides hemostasis at low temperatures which is about 80°C and . This advanced hemostasis allows surgeons to seal up to 7mm diameter vessels and results in reduction in the unnecessary power output which can cause to thermal injury.[2]

## Indications

Bluberry™ Ultrasonic Surgical Sealing System is indicated for fragmentation, emulsification, resection and sealing of soft tissue when bleeding control and minimal thermal injury are important. Ultrasonic instruments and Bluberry™ Ultrasonic Surgical Sealing System instruments when used with the Bluberry™ Generator has not been shown to be effective for sterilization procedures or tubal coagulation. Do not use these instruments for these procedures.

# Product Overview

| PRODUCT LIST | REF NO |
|---|---|
| Ultrasonic Generator (Non-Sterile, Reusable) | BLU-GN01-N |
| Modular Ultrasonic Generator (Non-Sterile, Reusable) | BLU-GN02-N |
| Ajar Ultrasonic Transducer (Non-Sterile, Re-Sterilizable) | BLU-HL01-N |
| Cobalt Ultrasonic Transducer (Non-Sterile, Re-Sterilizable) | BLU-HL02-N |
| Foot Switch (Non-Sterile, Reusable) | BLU-FW01-N |
| Foot Switch (Non-Sterile, Reusable) | BLU-FW02-N |
| Sterilization Case (Non-Sterile, Re-Sterilizable) | BLU-STE01-N |
| Ajar Sonic Shears 515 Curve (Sterile, Single Use) | BLU-515AC |
| Ajar Sonic Shears 523 Curve (Sterile, Single Use) | BLU-523AC |
| Ajar Sonic Shears 536 Curve (Sterile, Single Use) | BLU-536AC |
| Ajar Sonic Shears 545 Curve (Sterile, Single Use) | BLU-545AC |
| Ajar Sonic Shears 515 Straight (Sterile, Single Use) | BLU-515AS |
| Ajar Sonic Shears 523 Straight (Sterile, Single Use) | BLU-523AS |
| Ajar Sonic Shears 615 Curve (Sterile, Single Use) | BLU-615AC |
| Ajar Sonic Shears 623 Curve (Sterile, Single Use) | BLU-623AC |
| Ajar Sonic Shears 636 Curve (Sterile, Single Use) | BLU-636AC |
| Ajar Sonic Shears 645 Curve (Sterile, Single-Use) | BLU-645AC |
| Ajar Sonic Shears 615 Straight (Sterile, Single-Use) | BLU-615AS |
| Ajar Sonic Shears 623 Straight (Sterile, Single-Use) | BLU-623AS |
| Ajar Sonic Shears 636 Straight (Sterile, Single-Use) | BLU-636AS |
| Cobalt Sonic Shears 9cm (Sterile, Single-Use) | BLU-9C |
| Cobalt Sonic Shears 17cm (Sterile, Single-Use) | BLU-17C |
| Curve Blades 5Øx23mm | BLU-CB-01 |
| Hook Blades 5Ø36mm | BLU-HB-01 |
| Ball Sealing Tip | BLU-BST-01 |
| Ball Sealing Tip SS | BLU-BST-01-SS |
| Curved Sealing Tip | BLU-CST-01 |
| Curved Sealing Tip SS | BLU-CST-01-SS |
| Hook Sealing Tip | BLU-HST-01 |
| Hook Sealing Tip SS | BLU-HST-01-SS |



# References


[1]*Clymer, J., Broughton, D., Welling, A., Monroe, E., Pirozzi, K., & Schulte, J. (2013). Tissue effects in vessel sealing and transection from an ultrasonic device with more intelligent control of energy delivery. Medical Devices: Evidence and Research, 151. doi:10.2147/mder.s51663*

[2]*El Sherpiny WY. A comparative study between harmonic scalpel hemostasis and conventional hemostasis in total thyroidectomy. Int Surg J 2020;7:954-60.*

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BEYOND FROM WITHIN™

Bluberry™ Ultrasonic Surgical Sealing System should be used by surgeons who have received the appropriate training. Bluberry™ Ultrasonic Surgical Sealing System is indicated for fragmentation, emulsification, resection and sealing of soft tissue when bleeding control and minimal thermal injury are important. Indications, contraindications and instructions for use can be found on the product labeling supplied with each device.

Disclaimer
A surgeon must always rely on his or her own professional clinical judgment when deciding whether to use a particular product when treating a particular patient. Mavera does not dispense medical advice and recommends that surgeons be trained in the use of any particular product before using it in surgery. A surgeon must always refer to the package insert, product label and/or instructions for use before using any Mavera product. Products may not always be available in all markets in a similar capacity due to the local regulatory and/or medical practices. It is advised that you contact a Mavera representative if you have questions about Mavera products. Bluberry ™ is a Registered Trademark of Mavera Medical Devices Inc. U.S. and foreign patents pending

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