



Add Hi-Tech Precision to your Surgical Expertise...

H i g h P e r f o r m a n c e

Shalya® Touch Series



**ISO
13485**

Shalya Vessel Seal & RFaST Module

Innovative technology to seal the artery, vein and tissue bundle by applying calibrated pressure with RF energy. The Collagen & Elastin within the tissue vessel wall melts & restructures to form translucent seal.

System senses the density of tissue held in the instrument & delivers an appropriate amount of energy to form the permanent seal.

Radio Frequency ablation Scalpel Technology gives cutting & coagulation with modern bipolar instruments.



7mm



6mm



5mm



4mm



3mm



2mm



1mm



CE
1639



Seal



Bipolar Cut



Bipolar Coag



Sealing Cycle



Ensure Seal Zone



Cut the Tissue

**Sealing Steps of 5mm
Lap Instruments**

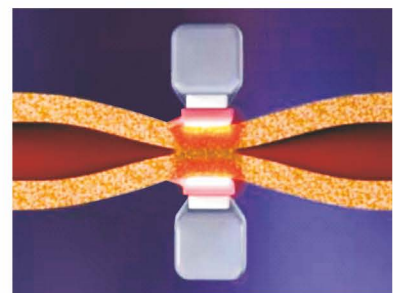
Applications

- Abdominal Hysterectomy • Adrenalectomy • Appendectomy • Colectomy • Colon Resection • Cystectomy
- Gastrectomy • Gastric Bypass • Hemorrhoidectomy • Lap-Assisted Vaginal Hysterectomy (LAVH)
- Lap-Cholecystectomy • Liver Resection • Nephrectomy • Nissen Fundoplication • Radical Hysterectomy
- Radical Prostatectomy • Splenectomy • Salpingo-oophorectomy • Vaginal Hysterectomy • Whipple



Seal of Confidence

- Tissue seal can withstand up to 3 times of normal systolic pressure
- Seals artery, vein or tissue bundles up to 7mm
- Minimal thermal spread to adjacent tissue
- Reduced tissue sticking & charring
- No foreign material left behind after surgery
- Minimum cost per case due to reusable attachments
- Compatible with all international sealing attachments
- Independent activation of Bipolar Cutting & Coagulation



Pressure and Energy Creates Seal



Shalya Touch Series

Cut Modes



Coag Modes :



Bipolar Modes



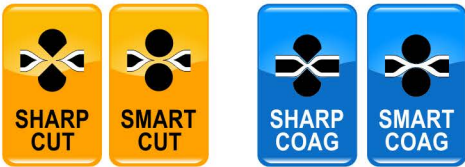
Vessel Seal Modes



Saline Resection Modes



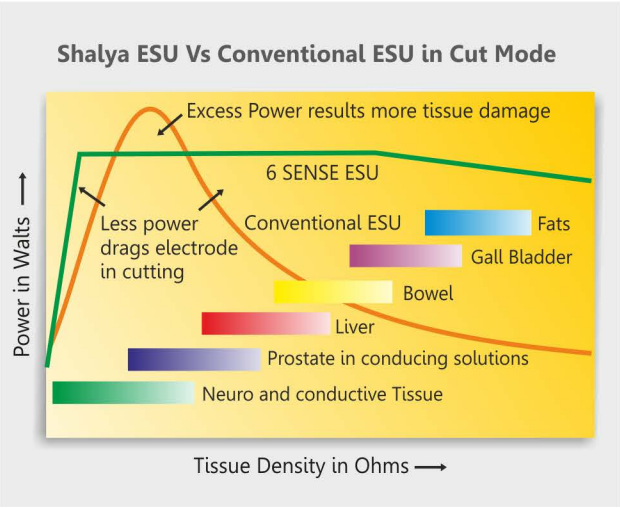
RF Modes



High Performance Duo



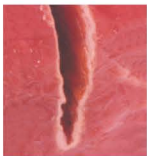
6SENSE Technology-more and more sensible...



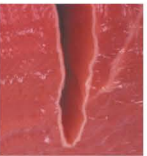
This is recent innovation in field of advance feedback controlled Electrosurgical Technology. System maintains the set power over wider range of tissue by sensing -voltage, current, power, tissue density, patient return electrode monitoring and leakage RF current- at "4000 TIMES" per second.

Features

- Minimizes dragging of electrodes in different tissues
- No need to adjust the power setting as the tissue changes
- 50% Less thermal damage than conventional ESU's
- Minimizes the patient recovery time
- Reduces the risk of collateral tissue damage
- Minimum RF noise in other OT equipments
- Reduces the risk of neuro - muscular stimulation
- Less charring and sparking hence precise & clean cutting



6 SENSE ESU
Thermal spread <0.15 mm



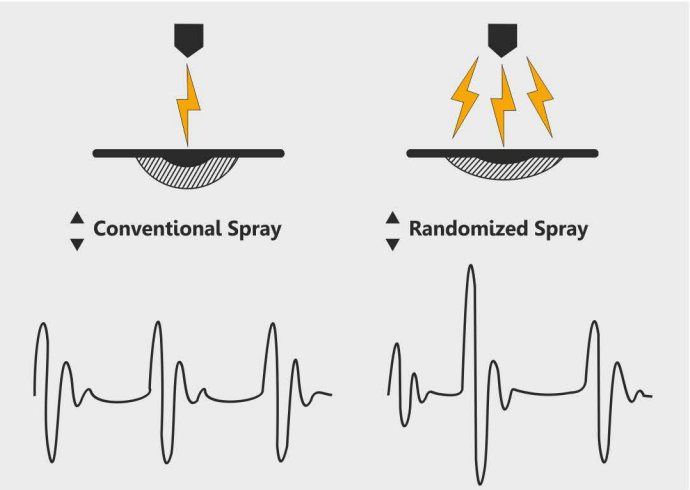
Conventional ESU
Thermal spread >0.3 mm

Randomized SPRAY COAG-The real spray...

In conventional spray coag, beam tends to follow the same path left by previous spark resulting in non uniform coagulation over larger area. By randomizing spray frequency & amplitude, spark tends to take multiple paths resulting coverage of larger area.

Features

- Starts the sparking from longer distance
- Uniform & homogeneous coagulation over large surface area at lower power settings
- Less tissue necrosis & carbonization
- Increases the speed of coagulation
- Reduces the output voltages
- Drastically improves the performance when combined with Argon enhanced ESUs

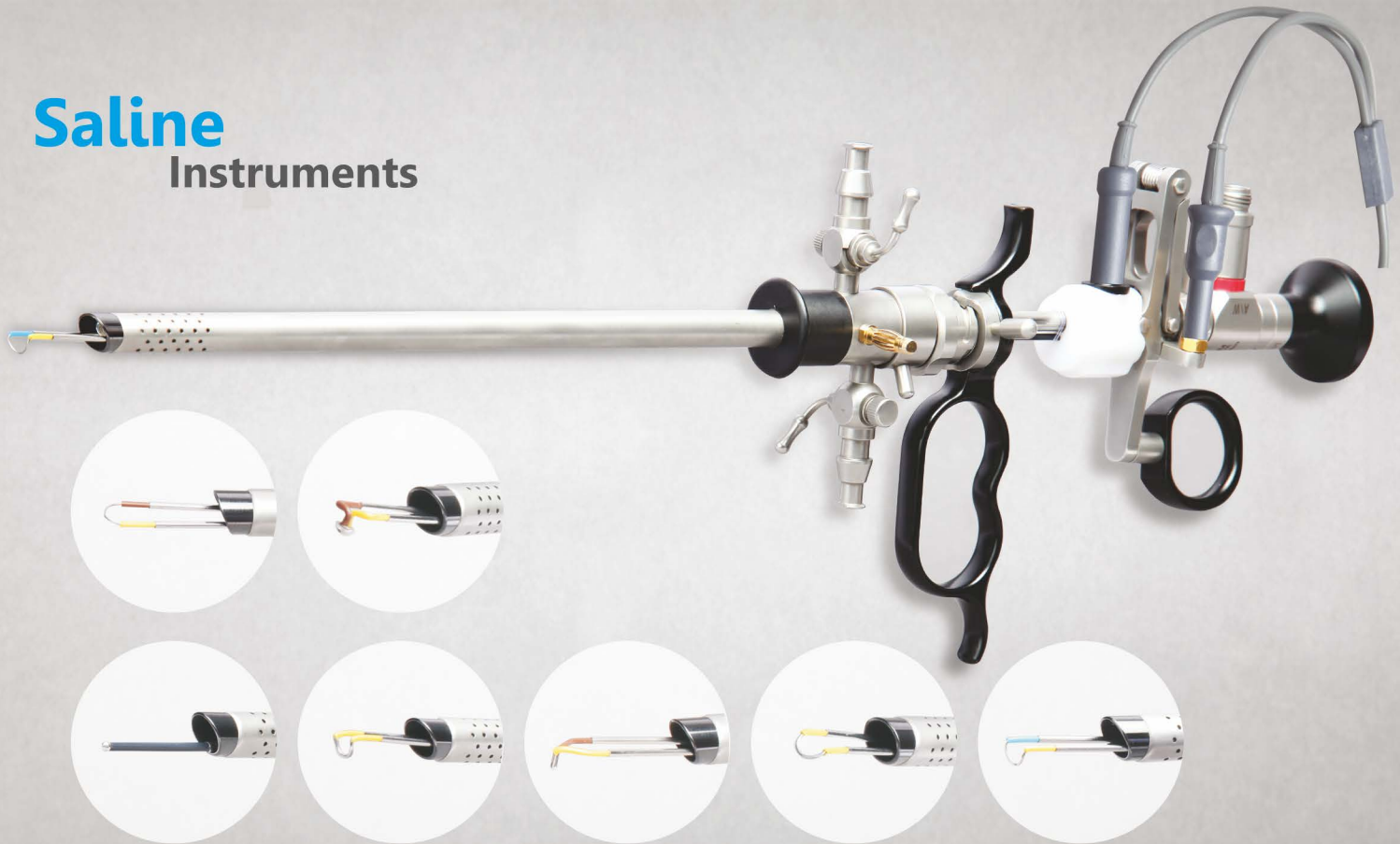


RECOMMENDED POWER SETTINGS: The below recommended settings are derived after feedback from various procedures & users. However, some deviations may be required. Power setting depends on anatomy, tissue type & size of electrode used.

PROCEDURES/ SURGERY	CUT (W)	COAGULATION (W)	BIPOLAR (W)
Plastic/ Neuro/ ENT/ Spine/ Ophthal/ Neurosurgery	PURE - 25 - 35	SWIFT - 25 - 35	MICRO - 01 - 10
Lapro/ Endo/ GI/ Ortho/ Open/ General surgery	PURE - 35 - 45	FULGURATE - 30 - 40	STANDARD - 15 - 20
Onco surgery/ Gynaccology/ Hernia/ Fatty Tissues	PURE - 50 - 60	SPRAY - 45 - 55	MACRO - 15 - 25
GI Endocut/ Pulse Cut/ Papillotomy/ Polypectomy	ENDO CUT - 80 - 100	SWIFT - 35 - 40	-
Urology TURP/ Gynac TCRE/ Hysteroscopy	PURE - 100 - 140	FULGURATE - 45 - 55	-
Bipolar TURP / Saline Resection / Bipolar TCRE	SALINE CUT II - 100 - 140	SALINE FORCE - 50 - 80	
Vessel Sealing / Hysterectomy / LAVH / Lap	BI CUT - 40 - 50	STANDARD - 15 - 25	RAPID SEAL - L 2

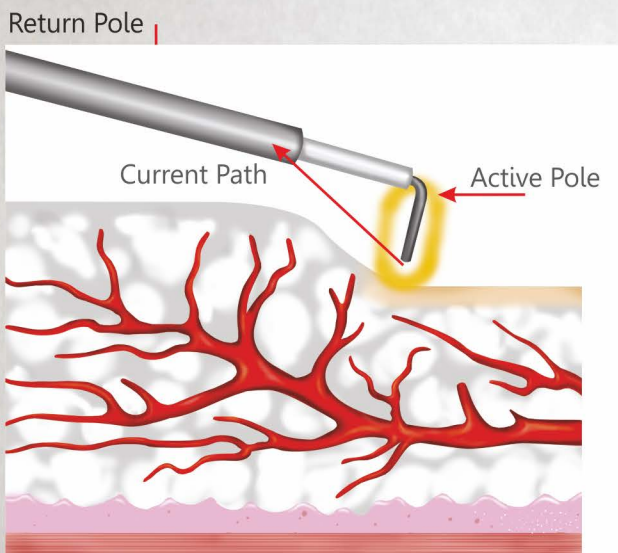
- RF Scalpel Mode Coagulation & Cutting of Tissue by Shalya Bipolar Scalpel (Up-gradable).
- PREM-Ultimate safety from burns with dual area patient return electrode.
- LCD Screen for flexible use with up-gradable Internet Enable and Data Logging.
- Vessel Sealing up to 7mm with audio indication at completion or alarm if improper sealing.
- 2 Vessel Sealing Mode Available in Penta.
- Saline Plasma Bipolar Cut & Coag with Non Saline activation Alarm.
- Smart Bipolar - Auto stop or alarms for modern bipolar tools.
- 2SiCoag - Two coagulation generation in one (Available in Penta, Optional in Vista).
- Smart Surgical Assistant to help you in need with programs and recall.
- 2 Smart PULSE CUT - Power on demand for Endo Surgery.
- User Programmable with 100+ programs & self Diagnosis function with display Error Codes if any.
- Argon Beam Coagulation (Optional) - Built in Argon Beam Coagulation for uniform superficial Coagulation.
- Time Out Function (Optional) - Automatically stops the HF output if prolong unintended activation.

Saline Instruments

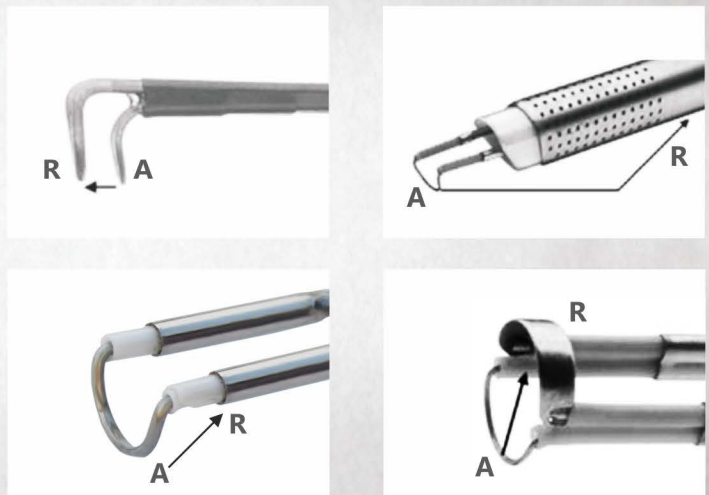


Advantage of Saline Plasma Bipolar Resection

- Saline solution virtually eliminates the risk of TUR syndrome
- Allows longer resection with safety for the larger prostate, avoids open prostatectomy
- Less blood loss due to superficial haemostasis
- Improved visualization by simultaneous resection and vaporization
- Avoids obturator nerve reflections by use of Bipolar energy
- Eliminates the chances of burns due to Patient return electrode
- Minimises the thermal damage of adjacent tissue, hence shorter recovery period
- Can be used as day care surgery, patient requires less nursing
- More safer and economical over monopolar procedure
- Saline vaporization with button electrode



Shalya Saline Plasma Bipolar Current Path



RF current path in different types of working elements
A : Active Pole R : Return Pole

Shalya Saline Plasma Module

A Plasma Corona generated in saline medium due to discharge of highly energized electric current. The mobility of ions around the loop creates a cutting effect. Sufficient amount of haemostasis enables coagulation of the capillary bleeders with resection.

By applying low voltage energy, resistive heating of tissue achieves coagulation and the depth is controlled by firm application of pressure with sufficient amount of time to control the bleeders.



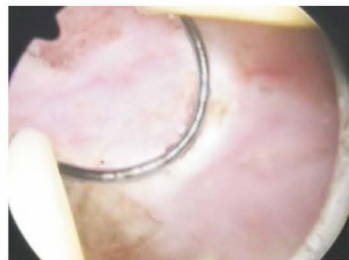
Saline Cut



Saline Coag



Saline Resection



Saline Coagulation



Post Surgery Result

Applications - Saline Plasma- TURP • TCRE • Hysteroscopy • TCRE • Arthroscopic surgery

Features :

- With SHALYA technology, conventional TURP set can be used for Bipolar TURP surgery with additional attachments.
- No need of separate TURP set and loops which avoids dependency & saves running cost.
- Audio alarm for disconnection or non saline activation, which ensures the safety.

MONOPOLAR CUT : SEVEN Modes : 390 kHz

Low Cut : Continuous output, 300 W at 300 Ω , CF 1.5, Low Volt
 Pure Cut : Continuous output, 400 W at 300 Ω , CF 1.5
 Blend1 : Bursts at 29 kHz, 65% ON cycle, 250 W at 300 Ω , CF 2
 Blend2 : Bursts at 31 kHz, 55% ON cycle, 200 W at 300 Ω , CF 2.5
 Endo1 : Pulse output, 400 W at 300 Ω , CF 1.5, Low Pulse Intr.
 Endo2 : Pulse output, 400 W at 300 Ω , CF 1.5, High Pulse Intr.
 Hydro : Continuous output, 400 W at 300 Ω , CF 1.5, Rapid

BIPOLAR : FIVE Modes

Bipolar Cut Modes: 440 kHz
 Bip Cut : Continues output, 120 W at 100 Ω , CF 1.5, High Volt, Rapid
 Macro Cut : Continues output, 120 W at 100 Ω , CF 1.5, High Volt
 Bipolar Coag Modes: 440 kHz
 Micro : Continues output, 120 W at 100 Ω , CF 1.5, Low Volt
 Standard : Continues output, 120 W at 100 Ω , CF 1.5, Medium Volt
 Force : Continues output, 120 W at 100 Ω , CF 1.5, High Volt

VESSEL SEALING : TWO Modes : 440 kHz

Fine Seal : Low Pulse output, 5 Levels, 150 W at 100 Ω , CF 1.5
 Rapid Seal : High Pulse output, 5 Levels, 150 W at 100 Ω , CF 1.5

FEEDBACK SYSTEM :

- 3 Microprocessor Controlled 6SENSE Technology with sampling rate above 4000 sense/second.
- Maximum output power deviation < 15% or 5 watts, whichever is greater at any setting with PER-98

PREM SYSTEM

Measuring Frequency : 80 kHz \pm 10 kHz, Measuring current : <10 μ A
 Resistance Range : Dual Area : 5-135 Ω , (Adaptive) Single Area : <10 Ω

LEAKAGE CURRENTS

- RF leakage current • Monopolar : < 150 mA rms
 - Bipolar : < 60 mA rms
- Low Frequency leakage currents
 - Normal polarity, intact ground : < 10 μ A
 - Normal polarity, ground open : < 50 μ A

MONOPOLAR COAG : SEVEN Modes : 460 kHz

Soft : Continuous output, 300 W at 300 Ω , CF 1.5, Low Volt
 Dessicate : Repetition Frequency 83 kHz, 200 W at 500 Ω , CF 4.0
 Swift : Repetition Frequency 55 kHz, 120 W at 500 Ω , CF 5.0
 Fulgurate : Repetition Frequency 29 kHz, 120 W at 500 Ω , CF 7.0
 Randomized Spray : Randomized Repetition Frequency 23 < f < 35kHz, 120 W at 500 Ω , CF 8.0
 Hi-Spray : Repetition Frequency 13 kHz, 70 W at 500 Ω , CF 10.0
 Hydro : Repetition Frequency 29 kHz, 120 W at 500 Ω , CF 7.0, Rapid

SALINE RESECTION MODE : SIX Modes

Saline Cut Modes: 390kHz
 Cut I : Continues output 300 W at 100 Ω , CF 1.5, Low Voltage
 Cut II: Continues output 300 W at 100 Ω , CF 1.5, Medium Voltage
 Cut III : Continues output 300 W at 100 Ω , CF 1.5, High Voltage
 Saline Coag Modes: 440kHz
 Soft: Continues output 200 W at 100 Ω , CF 1.5, Low Voltage
 Standard: Continues output 200 W at 100 Ω , CF 1.5, Medium Voltage
 Force: Continues output 200 W at 100 Ω , CF 1.5, High Voltage

RF Scalpel Mode : Sinusoidal Radio Frequency Output

Smart Cut : Pulse output, 5 Levels, 135 W at 100 Ω , CF 1.5, Low voltage
 Sharp Cut : Pulse output, 5 Levels, 135 W at 100 Ω , CF 1.5 High voltage
 Smart Coag : Pulse output, 5 Levels, 80 W at 100 Ω , CF 1.5, Low voltage
 Sharp Coag : Pulse output, 5 Levels, 80 W at 100 Ω , CF 1.5 High voltage

DESIGN STANDARD

Classification according to the EC- Directive 93/ 42/ EEC: Class IIb
 General Safety Standards: IEC 60601-1-1, IEC 60601-2-2
 EMI/EMC Compatibility Standard: IEC 60601-1-2
 IS Safety Standard: IS 7583

INPUT POWER (other ratings available on request)

Operating Voltage : 180-265 Volt AC, 50-60 Hz
 Max. Power input : 1000 VA, Fuse : 6 A, UPS Backup : 1.5KVA

DIMENSIONS

L x W x H in cm - 42.5 x 35.5 x 15.5, Weight in kg < 7.5

Note : Unit is available in other HF power ratings on request.



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