

ESU

Accessories - flexible tool for your help...



- E001 Trolley 01
- E110 Cord for Mains Supply, 3mtr
- E114 Cord for patient return electrode, 3mtr, Autoclavable
- E121 Cord for Bipolar forceps, 3mtr
- E131 Cord for Endoscopy, 3mtr
- E141 Universal adapter
- E151 Needle Electrode, 3/32, 5cm
- E152 Blade Electrode, 3/32, 5cm
- E153 Ball Electrode, 5cm, Ball size 4mm
- E154 Angled Blade Electrode, 5cm
- E155 Blade Electrode, 8cm
- E161 Blade Electrode, 12cm
- E171 Loop Electrode, 5 cm, Dia 8mm
- E172 Loop Electrode, 5 cm, Dia 12mm
- E174 Loop Electrode, 5 cm, Triangular 6mm
- E176 Loop Electrode, 8 cm, Dia 8mm
- E181 Loop Electrode, 12 cm, Dia 8mm
- E201 Footswitch, Single Paddle
- E202 Footswitch, Double Paddle
- E205 Patient return electrode, Steel
- E206 Patient return electrode, Steel, Pediatric
- E211 Patient return electrode, Rubber
- E213 Patient return electrode, Rubber Dual
- E214 Patient return electrode with cable, Rubber
- E216 Patient Plate with Cable, Single area, Disposable
- E221 Patient Plate with Cable, Dual area, Disposable
- E222 Patient Plate with Cable, Dual area, Pediatric, Disposable
- E241 Foot switching chuck handle
- E251 Monopolar Handswitching Pencil, Reusable
- E256 Monopolar Handswitching Pencil, Disposable
- E260 Monopolar Electrode Tip Cleaner
- E261 Bipolar Forceps, Jewelers, 10cm, 0.5mm tip
- E262 Bipolar Forceps, Adson, 12cm, 0.5mm tip
- E267 Bipolar Forceps, straight, 20cm, 1mm tip
- E268 Bipolar Forceps, Bayonet, 20 cm, 0.5mm tip
- E272 Bipolar Forceps, straight, 22 cm, 2mm tip
- E273 Bipolar Forceps, straight, Blunt, 22 cm, 2mm tip
- E276 Bipolar Forceps, Bayonet, 22 cm, 2mm tip
- E285 Bipolar Forceps, Bayonet, Non-Stick, 20 cm, 0.5mm tip
- E291 Bipolar Forceps, Bayonet, Irrigation, 18 cm, 1mm tip
- E295 Bipolar Forceps, Bayonet, Non-Stick, Irrigation, 20 cm, 0.5mm tip
- E305 (R219) Bipower Handle, Spring Action
- E321 (R344) Bipower Insert, Maryland, 32cm
- E322 (R326) Bipower Insert, Fenestrated, 32 cm



Shalya- extended range...



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

Complete range of electro surgical solutions...



www.shalya.in



Xcellance Medical Technologies Pvt. Ltd.

Plot No. W239, Rabale MIDC, TTC Industrial Area,
Rabale, Navi Mumbai - 400 701. INDIA
T: +91-22-7114 2400
E: info@shalya.in W: www.shalya.in

Helping you make the right choice..

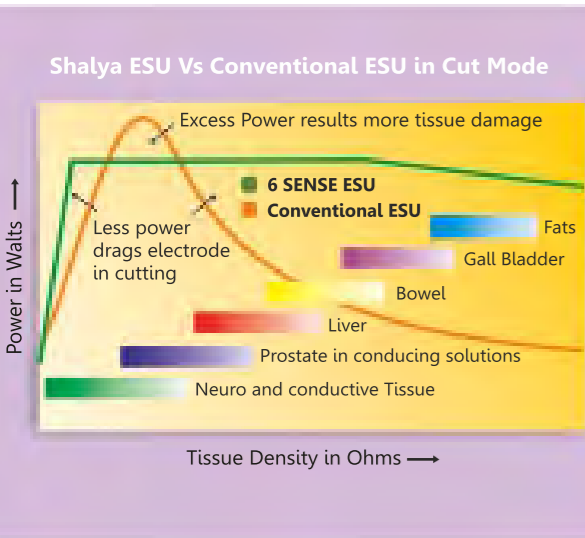
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ISO 13485

Shalya - advanced technological innovations...

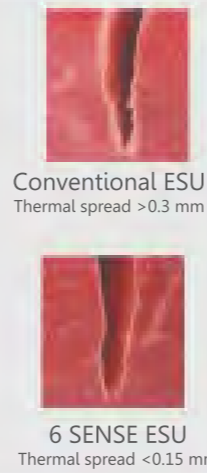
6SENSE Technology- more and more sensible...



This is a 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 "2000 TIMES" per second.

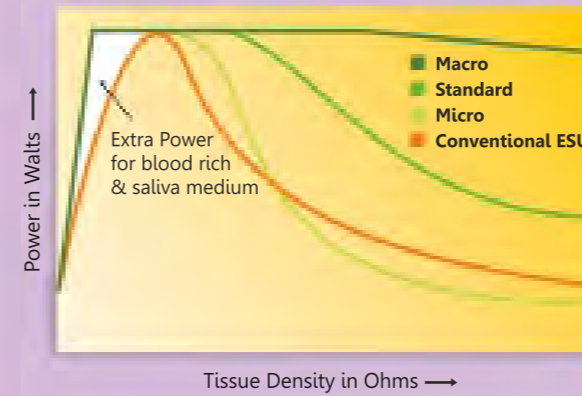
Features

- 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



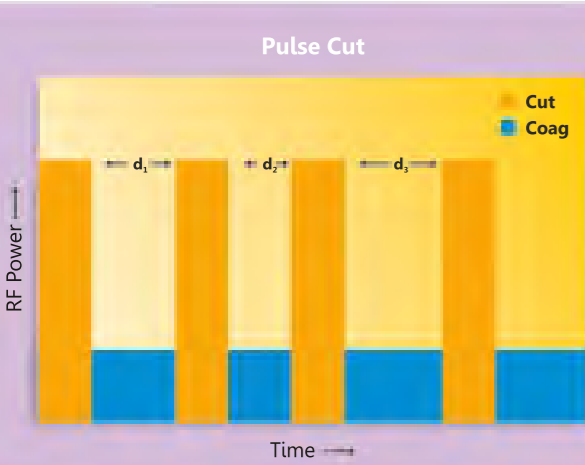
Effect Modes- plotted response as the tissue demands...

Shalya ESU Vs Conventional ESU in Bipolar mode



- Cut Modes:** Achieves consistent cutting in all types of tissues by 6SENSE Technology.
- SP Cut / Low Cut:** Offers precision cutting at lower voltages, hence suitable for delicate cutting process where adjacent tissue damage should be minimum such as Neuro or ENT. This also reduces capacitive coupling in endoscopy hence suitable for such procedures.
- Pure Cut:** Suitable for clean & precisely controlled consistent cutting in all types of tissues. Minimum Dragging effect, useful for TURP.
- Blended Cut:** Consistent cutting power delivery with effective coagulation through a wide range of tissue types, reduces re-bleeding.
- Coag Modes:** These modes offer every range of coagulation ability for modern surgeries.
- Desiccate:** Specifically designed for contact coagulation at lower voltages, hence suitable for Neuro, ENT & Endoscopy cases.
- Fulgurate:** Suitable for non contact coagulation with moderate sparking in variety of applications such as cardiothoracic surgeries.
- Spray Coag:** Non touch coagulation for large areas with minimum depth of tissue damage & necrosis. Useful in Liver Cancer & Trauma.
- Bipolar Modes:** Delivers optimum Bipolar performance for improved coagulation.
- Micro /Precise Bipolar:** This mode offers clinical precision at lower voltages, prevent Sparking and reduce adjacent tissue damage used in Neuro, ENT, Ophthalmic surgery.
- Standard Bipolar:** Suitable for most of bipolar processes with optimized Coagulation.
- Macro Bipolar / Bipolar Cutting:** This mode offers smart control over consistent CUTTING effects in all types of tissues. Output is specifically designed for today's new generation of cutting instruments, bipolar needles and hooks.

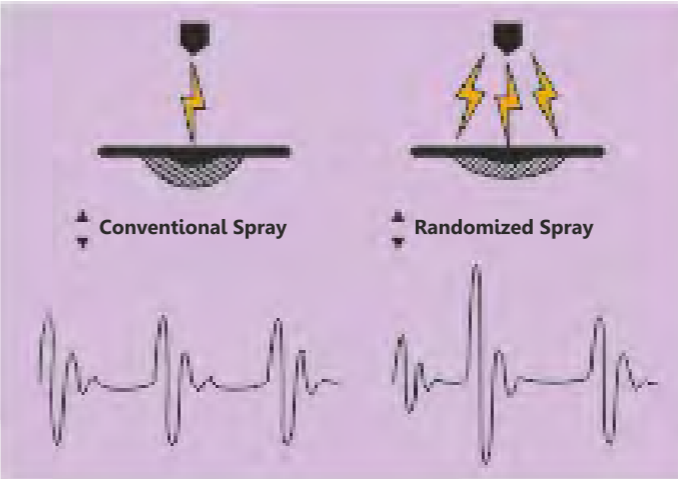
Smart Pulse Cut- power on demand for Endo surgery...



For polypectomy & papillotomy, cutting is smartly divided in cut & pause, so that coagulation occurs in each pause. The system is intelligent to change the pause interval as tissue density changes, hence produces fine cutting with coagulation effect.

Smart Pulse Cut : Change in cut & pause as tissue demands. d_1, d_2, d_3 are dependent on the tissue impedance.

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 covering 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

PREM- ultimate safety from burns...



Patient Return Electrode Monitoring – PREM - is the care & safety against the return electrode site burns. This ensures burn-free electrosurgery using DUAL AREA patient return electrode by continuous monitoring the contact quality with the patient. PREM system gives an audio-visual alarm and stops the RF output ensuring the safe procedure.

Upgradeability - with the recent technology...



Argon delivery along with electrosurgical RF current allows efficient non - contact, uniform superficial and faster coagulation for better clinical results. Very effective for superficial & high impedance tissue and reduces collateral tissue damage, hence suitable to use with delicate tissue. Argon enhancement reduces smoke during open and endoscopic surgeries.

Features

- Uniform & faster coagulation
- Very effective for superficial & high impedance tissue such as bones, cancer fatty tissues
- Reduces collateral tissue damage, hence suitable to use with delicate tissue
- Reduces smoke
- System stops Argon delivery & ESU output if any of the system is not ready or fault condition in handshake mode

UEM - Ultrasound Electrosurgical Module :

System can be connected to work with ultrasonic surgical Aspirator system in Sp. Cut and Soft Coag modes.



Shalya DX

- 6 SENSE Technology ESU • 6 Bipolar Modes with 3 AutoBip Modes, Max Power – 70W
- 4 Cut Modes with PULSE CUT Mode for ERCP, Max Power - 300W
- 4 Coag Modes with low CF Fulgurate, Max Power – 120W • Randomized SPRAY Coag
- PREM - Patient Return Electrode Monitoring • BiCoag Alarm • Self Diagnosis
- Bipolar Cut - in Macro Bip • AutoBip : Auto Start & Stop of Bipolar without foot switch
- Argon Beam Coagulator up-gradable • User Programmable : TWENTY Surgical Programs
- Pulse Cut for Polypectomy & Papillotomy • Remote Power Setting from surgical field



Shalya MX

- 2SiCoag : Two Simultaneous coag • 6 SENSE Technology ESU • PREM - Patient Return Electrode Monitoring
- 4 Cut Modes with PULSE CUT Mode for ERCP, Max Power - 300W • Pulse Cut for Polypectomy & Papillotomy
- 4 Coag Modes with low CF Fulgurate, Max Power – 120W • Randomized SPRAY Coag
- 6 Bipolar Modes with 3 AutoBip Modes, Max Power – 70W • BiCoag Alarm • Bipolar Cut - in Macro Bip
- AutoBip : Auto Start & Stop of Bipolar without foot switch • Argon Beam Coagulator up-gradable
- User Programmable : THIRTY Surgical Programs • Self Diagnosis • Remote power Setting from surgical field
- Applications : Urology (Under water), Onco, Laparoscopy, Gynaecology, Cardiac Surgery, Neuro Surgery, Orthopedic, General Surgery, Plastic, Ent.



Shalya Sigma+

- 5 inch Touch Screen for flexible use • 2SiCoag : Two Simultaneous coag
- 4 Bipolar Modes, Max Power – 100W • Bipolar Cut - in Macro Bip
- 4 Cut Modes with PULSE CUT Mode for ERCP, Max Power - 400W
- 4 Coag Modes with low CF Fulgurate, Max Power – 150W
- 6 SENSE Technology ESU • PREM - Patient Return Electrode Monitoring
- Randomized SPRAY Coag • BiCoag Alarm • Self Diagnosis
- Argon Beam Coagulator up-gradable • Remote Power Setting from surgical field
- User Programmable : THIRTY Surgical Programs
- Auto-Bipolar
- Time-out Function

D U R A B I L I T Y

S A F E T Y



Shalya EASY+

- 2 Bipolar Modes, Max Power – 70W
- 4 Cut Modes with optional PULSE CUT Mode for ERCP, Max Power - 300W
- 3 Coag Modes, Max Power – 120W • 6 SENSE Technology ESU
- PREM - Patient Return Electrode Monitoring
- Randomized SPRAY Coag • Bipolar Cut - in Macro Bip • BiCoag Alarm
- Pulse Cut (Optional) for Polypectomy & Papillotomy • Remote Power Setting (up-gradable)
- User Programmable : TEN Surgical Programs • Self Diagnosis • Argon Beam Coagulator up-gradable

Shalya EASY

- 2 Bipolar Modes, Max Power – 60W • 3 Cut Modes, Max Power - 250W
- 3 Coag Modes, Max Power – 100W • 6 SENSE Technology ESU
- PREM - Patient Return Electrode Monitoring • Randomized SPRAY Coag
- Bipolar Cut - in Macro Bip • BiCoag Alarm (Optional)
- User Programmable : THREE Surgical Programs • Self Diagnosis
- Argon Beam Coagulator up-gradable



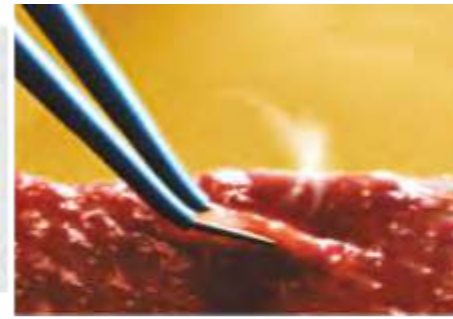
Shalya LX

- 2 Bipolar Modes, Max Power – 50W • 3 Cut Modes, Max Power - 200W
- 3 Coag Modes, Max Power – 80W • 6 SENSE Technology ESU
- PREM - Patient Return Electrode Monitoring • Randomized SPRAY Coag
- Bipolar Cut - in Macro Bip • User Programmable - ONE Surgical Program
- Self Diagnosis • Argon Beam Coagulator up-gradable



Smart Bipolar - auto bipolar & bicoag alarm for modern bipolar tools...

BiCoag Alarm : Audio feedback after completion of Bipolar Coag, reduces charring and sticking.
AutoBip : Automatic Start & Stop of Bipolar current by tissue sensing without foot switch activation.



2SiCoag - two coagulation generation in one...

This is the unique feature of Shalya series, which system delivers two simultaneous coagulation outputs at a time with independent control. Two surgeons can work at a time on different surgical area in a same case with flexibility as using separate ESU. This makes the system more useful in cardiovascular & trauma surgeries. (Optional feature in Shalya TURoSeal)

Remote Power & Mode Settings - from surgical field..

Surgeon can change power and mode settings of ESU directly from sterile surgical field using conventional hand switching electro-surgical pencil.



Smart Surgical Assistant - to help you in need...

User set able and Preset Programs : This helps you in setting up the system very fast after turning ON.
 By pressing **PROGRAM** key, power setting display shows procedure's name or number of program. After selection of required program, press **RECALL** just once to set system for selected application.

Self Diagnosis- fastest error identification & solution...

System features the self diagnostic function during self test at the time of starting ON to ensure smooth functioning. As soon as fault is detected, it gives alarm and error code is displayed. The Service manual may be referred to rectify the error.



Application-

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	SOFT - 25 - 35	MICRO - 01 - 10
Lapro/ Endo/ GI/ Ortho/ Open/ General surgery	PURE - 35 - 45	FULGURATE - 30 - 40	MACRO - 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	SOFT - 35 - 40	-
Urology TURP/ Gynac TCRE/ Hysteroscopy	PURE - 100 - 140	FULGURATE - 45 - 55	-

General Technical Specifications - comparison at a glance...

Monopolar Cut : Pure Sine wave 390 kHz
 Sp Cut - Programmable Pulse or continuous output, 300 W at 300 Ω, CF 1.5
 Pure - Continuous output, 300 W at 300 Ω, CF 1.5
 Blend - Bursts repeating at 29 kHz 50% ON cycle, 200 W at 300 Ω, CF 2.5

Bipolar : Pure Sine wave 390 kHz
 Micro - Lower output voltage, 70 W at 100 Ω, CF 1.5
 Standard - Medium output voltage, 70 W at 100 Ω, CF 1.5
 Macro - Higher output voltage, 70 W at 100 Ω, CF 1.5

LEAKAGE CURRENTS

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

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

Monopolar Coag : Damped Sine wave 460 kHz
 Soft - Repetition Frequency 55 kHz, 120 W at 500 Ω, CF 5.0
 Fulgurate LCF - Repetition Frequency 36 kHz, 120 W at 500 Ω, CF 6.0
 Fulgurate HCF - Repetition Frequency 29 kHz, 120 W at 500 Ω, CF 7.0
 Spray - Randomized Repetition Frequency 23 kHz < f < 35 kHz, 120 W at 500 Ω, CF 8.0

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

PREM SYSTEM
 Measuring Frequency : 80 kHz ± 10 kHz
 Measuring current : < 10 μA
 Acceptable Resistance Range.
 Dual Area PREM Patient Return Electrode : 05 - 135 Ω
 Single Area Patient Return Electrode : 0 - 10 Ω

INPUT POWER
 Operating Voltage : 180-265Volt AC, (other ratings available on request)
 Max. Power input : 1000 VA,
 Fuse : 4 A, UPS Backup : 1.5KVA

Specification	MX	DX	Easy+	Easy	LX	Sigma 300	Sigma+
BIPOLAR							
Micro	70W	70W	70W	60W	50W	70W	100W
Standard	70W	70W				70W	100W
Macro	70W	70W	70W	60W	50W	70W	100W
Bipolar Cut						70W	100W
CUT							
SP Cut (Low)	300W	300W	300W	250W	200W	300W	300W
Pure	300W	300W	300W	250W	200W	300W	400W
Blend	200W	200W	200W	150W	120W	200W	250W
Pulse Cut	300W	300W	300W,Optional			Optional	400W
COAG							
Desiccation/Soft	120W	120W	120W	100W	80W	120W	150W
Fulgurate	120W	120W	120W	100W	80W	120W	120W
Fulgurate LCF/Force	120W	120W				120W	120W
Spray	120W	120W	120W	100W	80W	120W	120W
SAFETY							
PREM	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Leakage RF current	Yes	Yes	Yes	Yes	Yes	Yes	Yes
O/P CHANNELS							
Monopolar	2 F/H	1 F/H	1 F/H	1 F/H	1 F/H	1 F/H	1 F, 1H
Bipolar	1 F/H/A	1 F/H/A	1 F	1 F	1 F	1 F	1 F
FEATURES							
2SiCoag	Yes						Yes
Inbuilt programs	30	20	10	3	1	10	30
Argon Enhancement	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BiCoag Alarm	Yes	Yes	Yes	Up -gradable		Yes	Yes
Auto Bipolar	Yes	Yes				Optional	Optional
Remote Power Setting	Yes	Yes	Up -gradable			Yes	Yes
DIMENSIONS							
In cm LxWxH	45.0x35.5x11.5	45.0x35.5x11.5	38.0x30.5x11.5	38.0x30.5x11.5	38.0x30.5x11.5	38x31x12	38x31x12
Weight in Kgs	< 7.5	< 7.5	< 5.0	< 5.0	< 5.0	< 6.0	< 6.0

Notes : F : Foot Control, H : Hand Control, A : Auto Control, O/P : Output
 CF : Crest factor indicates the ability of a waveform to coagulate without cutting, Note : Unit is available in other HF power ratings on request.

Sigma

Export to More than
60+
Countries

The best-in-class
Operating Room Equipments Under One Roof...



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Shalya Sigma

Touch Series

Complete Electrosurgical Solutions



CE
1639



Xcellance Medical Technologies Pvt. Ltd.

Shalya Avenue, W-239, Rabale MIDC,
Navi Mumbai - 400 701. INDIA
T:+91-22-7114 2400

info@shalya.in

www.shalya.in

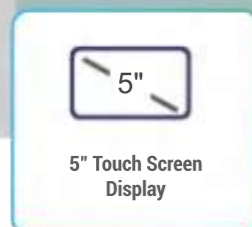
Precision - Performance - Safety - Durability
State-of-the-art 4th Generation Electrosurgery Unit





Why Sigma Electrosurgical Unit

- 4 Cut Modes, 4 Coag Mode, 2 Bipolar Cut Modes, 3 Bipolar Coag Modes
- 2 SiCoag : Two simultaneous coagulation output with independent control
- Bipolar Cut & Coag : Modes with independent display setting
- Smart Surgical Assist : This allows smart access to programs & settings
- Unit Startup Function : Previously activated, standby, factory reset
- Self-illuminating Socket : Helps during power settings and RF activation
- Time Out Function : Stops the HF output incase of prolonged activation



Features of Sigma Touch Series

State-of-the-art 4th Generation Electrosurgery Unit from Shalya with array of functions and features to add Precision - Performance - Safety - Durability...

1 Sigma200

- 200 Watts Electrosurgery Unit
- Bipolar Cut and Coag Function
- 5 Programmable Memory Location

2 Sigma300

- 300 Watts Electrosurgery Unit
- Bipolar Cut and Coag Function
- 10 Programmable Memory Location
- BiCoag Alarm

3 Sigma400

- 400 Watts Electrosurgery Unit
- Bipolar Cut and Coag Function
- BiCoag Alarm and Auto Bipolar (Optional)
- Pulse Cut and Argon Plasma Coagulation (Upgradable)
- 20 Programmable Memory Location
- Time out Function (Optional)

4 Sigma+

- 400 Watts Electrosurgery Unit
- 2 Monopolar : two simultaneous coag output with independent control
- Bipolar Cut and Coag Function
- BiCoag Alarm and Auto Bipolar (Optional)
- Pulse Cut and Argon Plasma Coagulation (Upgradable)
- 30 Programmable Memory Location
- Time out Function (Optional)

Surgical Applications :

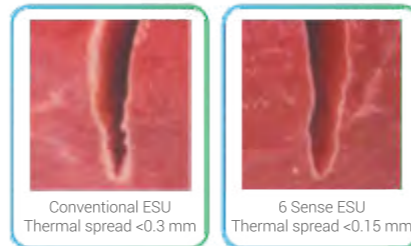
Useful for wide range of surgical application as : Plastic, Neuro, ENT, Spine, Opthal, Laparo Surgery, Ortho, Open & General Surgery, Pediatric, Onco, Gynecology, Hernia, GI Endocut, Papillotomy, Polypectomy, Under Water Urology, TCRE, Hysteroscopy, Thoracotomy, Thoracic and Cardiac Surgery, Open, Endoscopic, Laparoscopic and Minimally Invasive Surgery.



Features of Sigma Touch Series

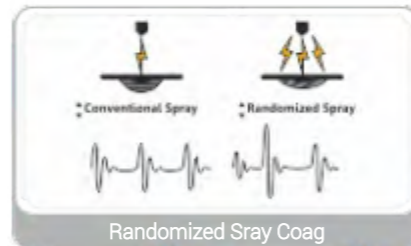
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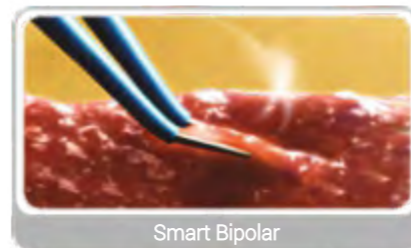
2 Randomized Spray Coag

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.



3 Smart Bipolar

Auto bipolar & bicoag alarm for modern bipolar tools... BiCoag Alarm : Audio feedback after completion of Bipolar Coag, reduces charring and sticking. AutoBip: Automatic Start & Stop of Bipolar current by tissue sensing without foot switch activation.



4 Pulse Cut

For polypectomy & papillotomy, cutting is smartly divided in cut & pause, so that coagulation occurs in each pause. The system is intelligent to change the pause interval as tissue density changes, hence produces fine cutting with coagulation effect.



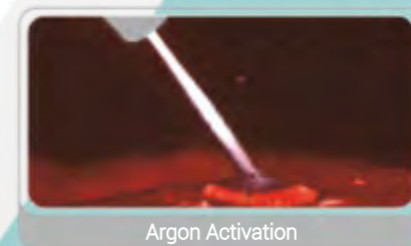
5 Remote Power & Mode Settings

Surgeon can change power and mode settings of ESU directly from sterile surgical field using conventional hand switching electrosurgical pencil.



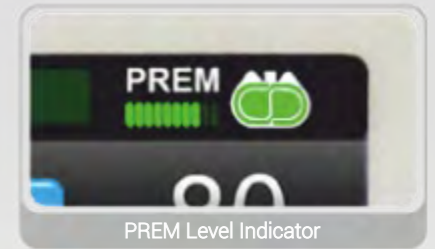
6 Argon Upgradable

Argon delivery along with electrosurgical RF current allows efficient non-contact, uniform superficial and faster coagulation for better clinical results. Very effective for superficial & high impedance tissue and reduces collateral tissue damage, hence suitable to use with delicate tissue. Argon enhancement reduces smoke during open and endoscopic surgeries.



7 PREM

Patient Return Electrode Monitoring - PREM - is the care & safety against the return electrode site burns. This ensures burn-free electrosurgery using DUAL AREA patient return electrode by continuous monitoring the adequacy of contact with the patient. PREM system gives an audio-visual alarm indicating contact is not adequate and stops the RF output ensuring the safe procedure.



8 Touch Screen Display

LCD have been replacing standard 7 segment display in embedded system at tremendous pace. It offers endless possibilities to the interaction between human and the devices. Our touch screen display enables more flexibility in the design and advanced functionalities. It gives user friendly experience during the interface of human and our unit.



9 Toggle & Cordless Footswitch

To Toggle between Monopolar & Bipolar by using dual paddle foot switch just by pressing a toggle button provided on the footswitch. Cordless footswitch uses data connectivity feature for its operation.



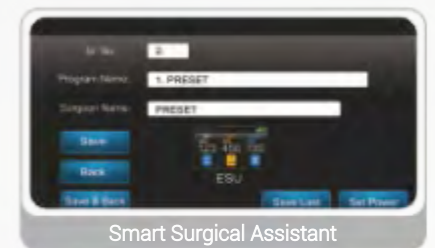
10 Onsite Calibration

This feature is provided in Shalya Sigma and Sigma + unit for easy calibration of the PREM level, Energy, voltage and power.



11 Smart Surgical Assistant & Self Diagnosis

"Program" option on the main screen allows user to set and save surgeon's name, surgery name and power required. Error codes will be displayed in case of any problem in unit & accessories during the self diagnosis function.



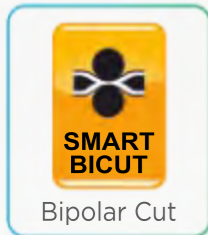
UNMATCHED SURGICAL PERFORMANCE...

Performing a successful surgical procedure is about art, skills & precision, which can be supported by the latest microcontroller based electrosurgical technology. Safety & performance are combined in shalya product to achieve high degree of clinical precision.



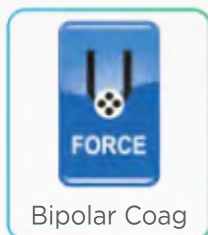
Sigma+V

- Vessel Sealing and Smart BiCut mode for effective sealing with cutting
- User programmable output sockets for Smart BiCut mode & Bipolar Coag
- Vessel Sealing and Bipolar Cut/ Coag mode on same instrument
- No need on changing instruments during surgery
- Independent 2 Bipolar Cut and 3 Bipolar Coag modes
- 4 Cut modes with Pulse Cut and 4 Coag modes



Special Features :

- 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
- Smart Bicut & Bicoag with socket selection feature for ease of operation



Vessel Sealing with Smart Bicut

Innovative technology to seal the artery, vein and tissue bundle by applying calibrated pressure with RF energy & specific shape of electrode. 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. Electrosurgical spark due to activation of Bipolar RF cutting current which cuts the tissue. Tissue thermal damage is controlled due to pulse current.

Applications

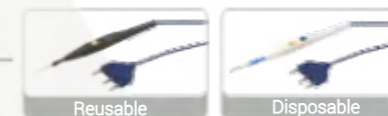
- Abdominal Hysterectomy • Adrenalectomy • Appendectomy • Colectomy • Colon Resection • Cystectomy
- Gastrectomy • Gastric Bypass • Hemorrhoidectomy • Lap-Assisted Vaginal Hysterectomy (LAVH)
- Lap-Cholecystectomy • Liver Resection • Nephrectomy • Nissen Fundoplication • Radical Hysterectomy
- Radical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

Output Characteristics

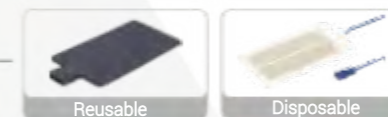
		Sigma 200	Sigma 300	Sigma 400	Sigma+	Sigma+v
Mode		Max Power (Watts)				
Monopolar Cut	Low	200	300	300	300	300
	Pure	200	300	400	400	400
	Blend	120	200	250	250	250
	Pulse Cut	-	Optional	400	400	400
Monopolar Coag	Soft	80	120	150	150	150
	Swift	-	-	120	120	120
	Fulgurate	80	120	120	120	120
	Spray	80	120	120	120	120
Bipolar Cut	Macro	-	-	100	100	100
	BiCut	50	70	100	100	-
	Smart Bicut	-	-	-	-	C3 : 100
Bipolar Coag	Micro	50	70	100	100	100
	Standard	50	70	100	100	100
	Force	50	70	100	100	100
	Sealer (Rapid)	-	-	-	-	L-3 : 100
Argon Upgradability		Yes	Yes	Yes	Yes	Yes
Inbuilt Programs		5	10	20	30	30
Bicoag Alarm		No	Yes	Yes	Yes	Yes
Auto Bipolar		No	Optional	Optional	Optional	Optional
2Si Coag		No	No	No	Yes	No
Remote Power Settings		No	Optional	Optional	Optional	Optional
Time Out Function		No	Optional	Optional	Optional	Optional

Monopolar

Handswitch Pencil



Patient Plate



Bipolar

Forcep

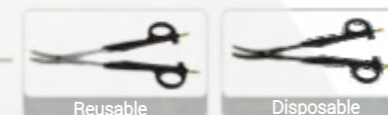


Forcep Cable

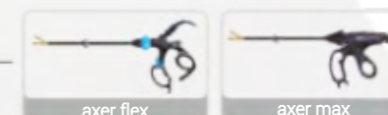


Vessel Sealer

Open Surgery



Lap Surgery



More than
18 years

Experience of Electrosurgical Expertise with
Precision - Performance - Safety - Durability

Vista



Technical Specifications of Shalya Vista

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
 Bipolar 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 4,00,000 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 ± 10 kHz, Measuring current : <10 μA
 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 μA
 - Normal polarity, ground open : < 50 μA

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.

XMT/AMK/VT8 rev 06 JUN /2022 Exclusive Rights by XMITPL We reserve the right to make alterations

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

High Performance

Shalya® Touch Series

www.shalya.in



XcellLance Medical Technologies Pvt. Ltd.

Shalya Avenue, W-239, Rabale MIDC,
 Navi Mumbai - 400 701. INDIA
 T:+91-22-7114 2400

info@shalya.in

www.shalya.in



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.



CE 1639



Seal



Bipolar Cut



Bipolar Coag



Sealing Cycle

Ensure Seal Zone

Cut the Tissue

Sealing Steps of 5mm Lap Instruments

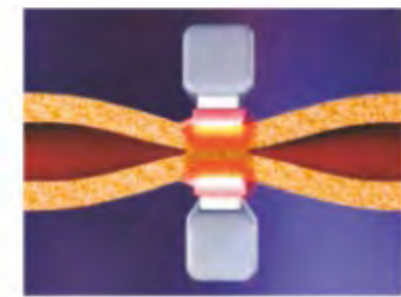
Applications

- 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



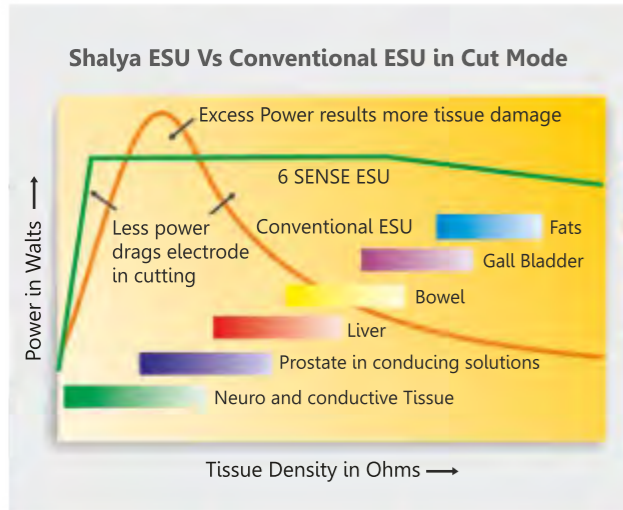
RF Modes



High Performance Duo



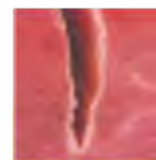
6SENSE Technology-more and more sensible...



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



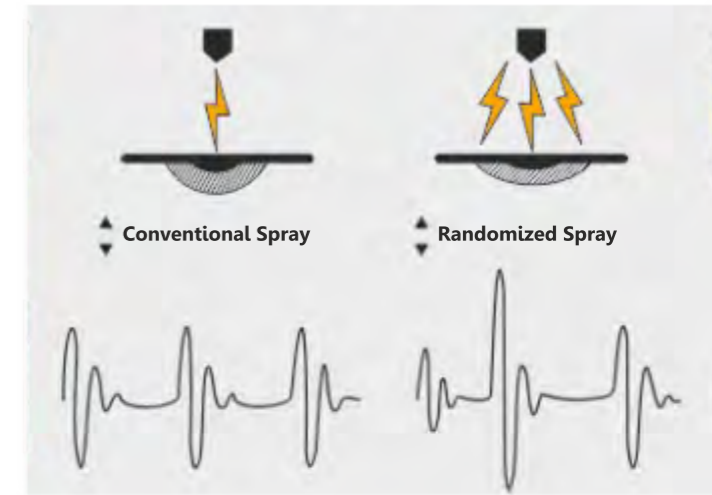
Conventional ESU
Thermal spread >0.3 mm

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

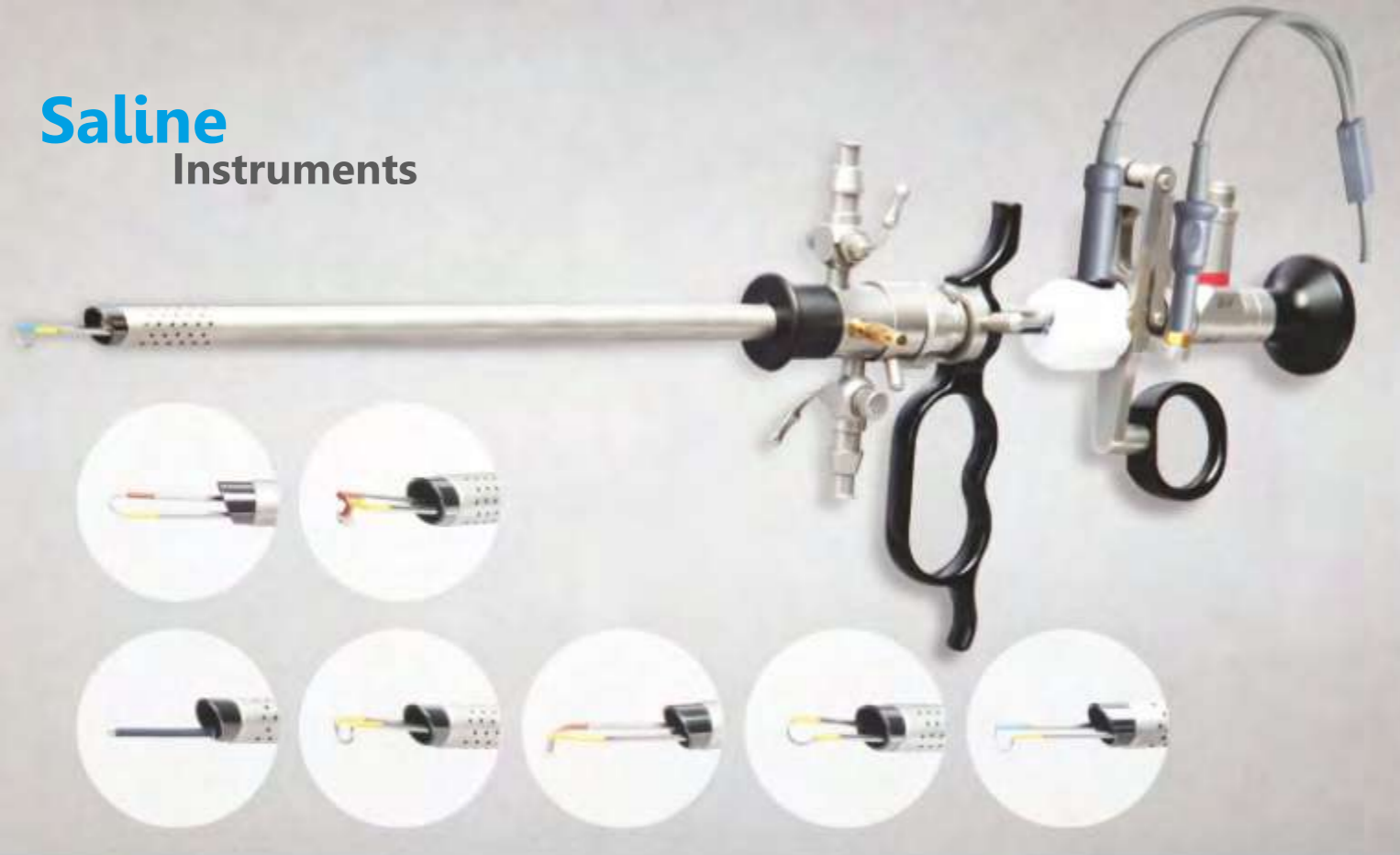


RECOMMENDED POWER SETTINGS: The below recommended settings are derived after feedback from various procedures & users. However, some deviations may be required. Power setting depends on anatomy, tissue type & size of electrode used.

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

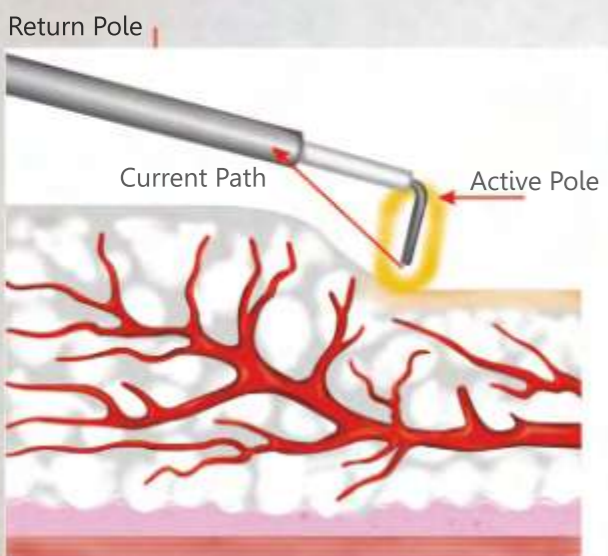
- RF Scalpel Mode Coagulation & Cutting of Tissue by Shalya Bipolar Scalpel (Up-gradable).
- PREM-Ultimate safety from burns with dual area patient return electrode.
- LCD Screen for flexible use with up-gradable Internet Enable and Data Logging.
- Vessel Sealing up to 7mm with audio indication at completion 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

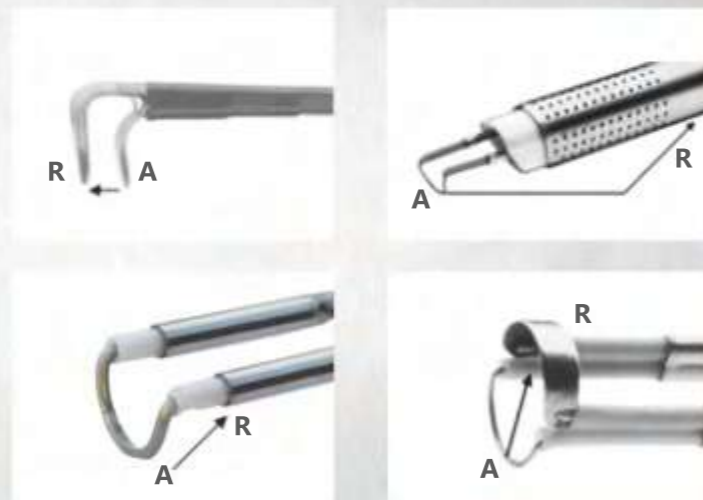


Advantage of Saline Plasma Bipolar Resection

- 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.



CE
1639



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.