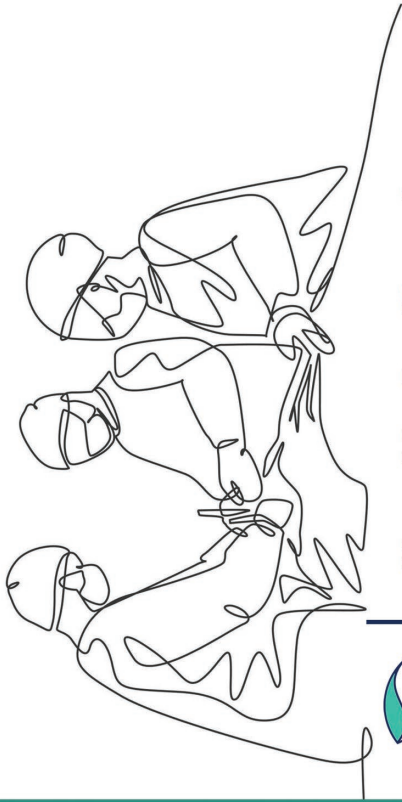
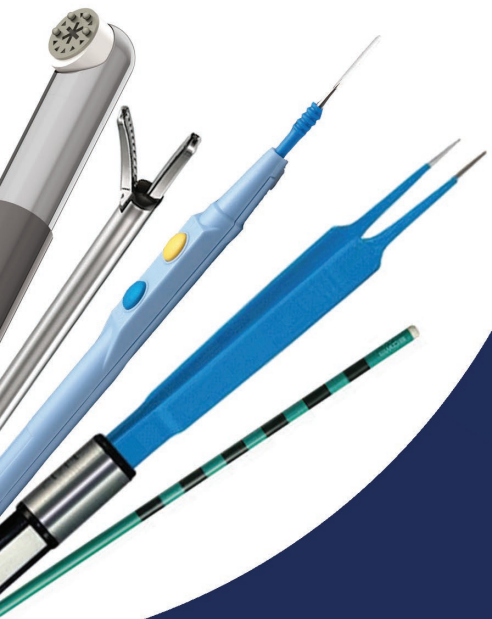


AVANTeb

ELECTROSURGERY UNITS & SURGICAL EQUIPMENT

INDEX



VISUA - 1

Merging Electrosurgery + SMART Seal + SMART Ablation +Argon Plasma Coagulation in one unit

Technical Specification:

Input Voltage: 210-230 VAC or (100-120 VAC*)
Input Frequency: 50-60 Hz
Max Supply Current: 2.92 A or (5.8 A*)
Main Fuses: 2x4 AT, 250 VAC or (2 × 6.3 AT, 250 VAC*)
Weight: 9.5 Kg
Dimensions (W x H x D): 42 × 18 × 52 Cm
*Depends on customer request

Safety Futures:

In accordance with EN60601-1, EN60601-2-2, EN60601-1-2, EN 62304
Type of Output: CF
Neutral Electrode-Earth Connection: Floating Output
HF Leakage Current:
Monopolar <150 mA, Bipolar< 50 mA
LF Leakage Current:
Normal Condition < 10 µA
Single Fault Condition < 50 µA
Protection Class: I
Sink Current < 500 µA

VISUA 1

VISUA-1 Features:

- Directly control all device functions via the single interactive touchscreen, such as Argon gas flow.
- 10.1-inch capacitive touch screen TFT LCD
- Smart Ablation Output
- Smart Seal Output
- Smart Output Power Adjustment
- Plug & Play
- Continues and Pulsed Argon Coagulation
- Appropriate for endoscopic polypectomy, papillotomy, and ERCP
- Appropriate for TUR surgery
- Appropriate for Cardiac and Thoracic surgery
- Double synchronous Monopolar output
- Equipped with HF Leakage / OUTPUT ERR / TIMEOUT ERR recognition systems
- Equipped with continuous gas leakage detection, Output flow, and gas pressure monitoring
- Fully compatible with split and non-split patient return electrodes (diagnosing contact quality to the patient's body)
- Separate footswitch for activating Monopolar, Bipolar, and SMART PARTS systems

SMART-4

Merging three devices

Electrosurgery + SMART Vessel Seal + SMART Plasma Ablation

Smart Output Power Adjustment

In common devices, the device's output power decreases by a change in the tissue type and impedance. Then, to solve this deficiency, the output current and voltage are measured continuously, and the output power is adjusted smartly based on the target tissue resistance. This leads to delivering a fixed power within a wide range of tissues, minimizing thermal effects and the risk of burning.

Plug & Play

This unit recognizes the surgical instruments connected to the system smartly and adjusts the operating mode and output power automatically based on the connected instruments.

Ease of activation

To make it easily applicable, SMART Seal and SMART Ablation can be activated using a handpiece and a footswitch.

SMART 4

AUTO ADJUST OUTPUT POWER

plug & play

SMART-4 Features:

- Compatible with Argon Plasma Coagulation unit
- Compatible with SMART Ablation instrument
- Double synchronous monopolar outputs
- Appropriate for Cardiac and Thoracic surgery
- Appropriate for TUR surgery
- Five Working Modes on Cut
- Five Working Modes on Coagulation
- Two Working Modes on Bipolar
- Two Working Modes on SMART Vessel Sealing
- Two Working Modes on SMART Ablation
- Auto start and Auto stop of Bipolar system
- Equipped with HF Leakage / OUTPUT EPR/ TIMEOUT ERR recognition systems
- Fully compatible with split and non-split patient return electrodes (Diagnosing contact quality to the patient's body)
- Separate footswitches for activating Monopolar, Bipolar, and SMART PARTS systems
- Compatible with Smart Seal instruments
- Appropriate for endoscopic polypectomy, papillotomy, and ERCP

Technical Specification:

Input Voltage: 210 - 230 VAC or (100 - 120 VAC*)
Input frequency: 50 - 60 Hz
Max supply Current: 2.92 A or (5.8 A*)
Main fuses: 2 x 4 AT, 250 VAC or (2 x 6.3 AT, 250 VAC*)
Weight: 10.5 Kg
Dimensions (W x H x D): 40 x 16.7 x 48 Cm
Depends on customer request

Safety features:

In accordance with EN60601-1, EN60601-2-2, EN60601-1-2, EN 62304

Type of output: CF
Neutral Electrode-Earth connection: Floating Output
HF leakage Current:
Monopolar < 150 mA, Bipolar < 50 mA
LF Leakage Current:
Normal condition< 10 µA
Single fault condition < 50 µA
Protection class: I
Sink current < 500 µA

SMART Ablation Technology

SMART Ablation technology that belongs to AVANteb Company is a modern method for the intelligent elimination of the target tissue.

This technology creates a controlled, stable plasma field to remove tissue precisely at a low relative temperature using bipolar radiofrequency energy under a conductive medium like normal saline (Sodium chloride solution).

AVANteb's electrosurgical units create this bipolar radiofrequency energy. When current from the radiofrequency instrument passes through the saline medium, it breaks saline into sodium and chloride ions. These highly energized ions form a plasma field that is sufficiently strong to break organic molecular bonds within soft tissue, causing **its dissolution and resulting in minimal thermal** damage to surrounding soft tissues.

SMART Ablation Application:

Arthroscopy Surgery:

Knee, shoulder, pelvis, ankle, elbow and wrist joints

Urology Surgery:

TURBT and TURP surgeries

ENT Surgery:

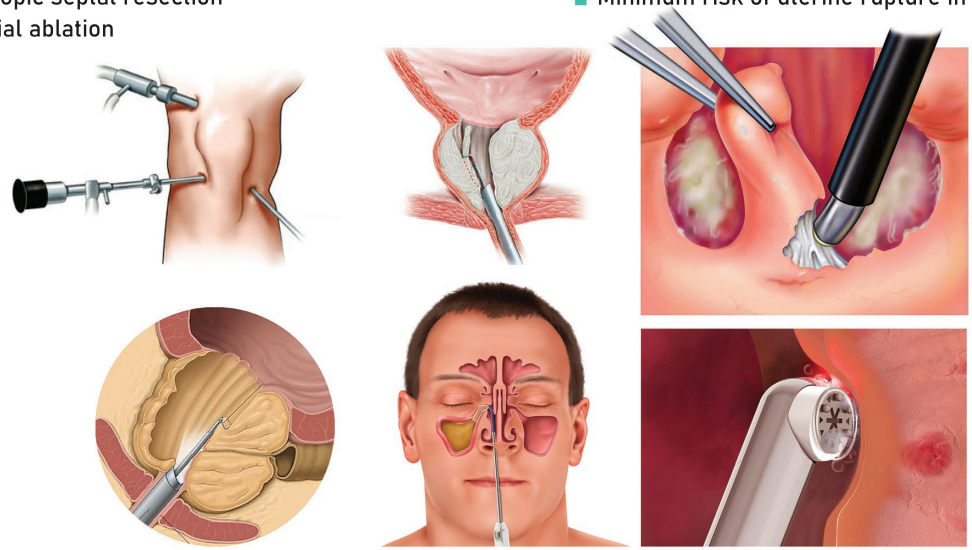
Reducing turbinate mass, Tonsillectomy, Adenoid, Sinus surgery, Snort treatment, Nose bleeding treatment, Orthognathic surgery, Throat ulcers treatment, and Laryngeal damage.

Gynecology:

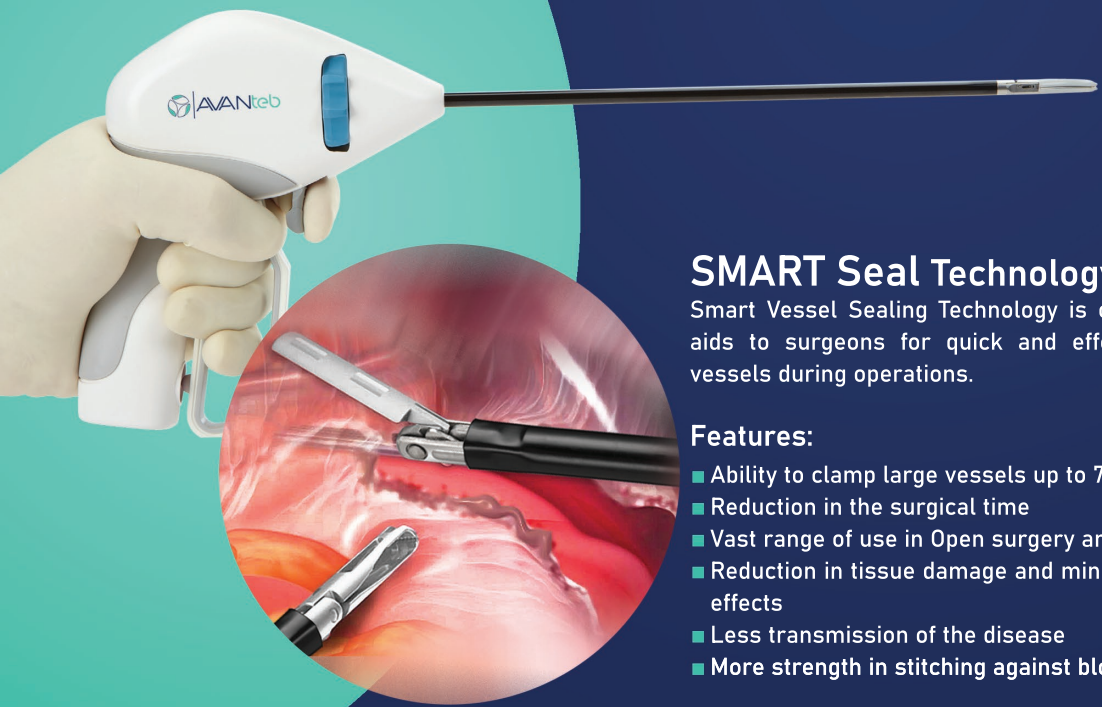
Submucosal fibroids (Myoma)
Hysteroscopic septal resection
Endometrial ablation

SMART Ablation Technology Features:

- Least tissue necrosis in the depth of almost zero (40 µm)
- Eliminating the risk of blood sugar syndrome
- Reduction in surgical time
- Preventing wound inflammation
- Quicker postoperative healing period
- Least bleeding during and after surgery
- Keeping a low temperature in the wound
- Minimum risk of postoperative adhesion and endometrial damage to lower the risk of infertility in Gynecology
- Minimum risk of uterine rupture in Gynecology



	Technology	
Parameter	SMART Ablation	Electrocautery
Temperature	40to 60 C	More than 400 C
Thermal Diffusivity	Minimum	Deep
Effect in target tissue	Smooth elimination	Quick heating, carbonization irritation, incision
Effect in adjacent tissue	Minimum liquidation	Random carbonization

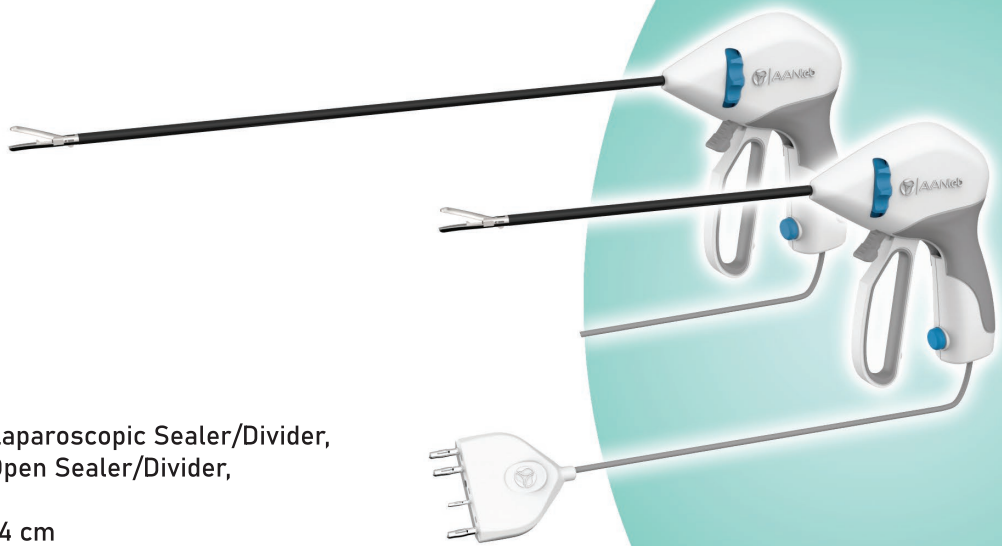


SMART Seal Technology

Smart Vessel Sealing Technology is one of the greatest aids to surgeons for quick and effective Clamping of vessels during operations.

Features:

- Ability to clamp large vessels up to 7 mm in diameter
- Reduction in the surgical time
- Vast range of use in Open surgery and Laparoscopy
- Reduction in tissue damage and minimum carbonization effects
- Less transmission of the disease
- More strength in stitching against blood pressure



Models:

- SmartSeal Maryland Laparoscopic Sealer/Divider,
- SmartSeal Maryland Open Sealer/Divider,
- Shaft Diameter: 5 mm
- Shaft Length: 23-37-44 cm

SMART 3

SMART-3 Features:

- Appropriate for minor and office base surgeries such as Dermatology,
- Dentistry, ENT, Gynecology and animal surgery
- Fully user friendly
- Pure and Blend modes on Cut
- Spray and Desiccate modes on Coagulation
- Soft and Forced modes on Bipolar
- Equipped with patient return electrode continuity monitor (PCM)
- **Equipped with High Voltage Power Supply Monitoring system (PSM)**
- Equipped with High-Frequency Leakage Monitoring system (HFLM)
- Activating Cut and Coagulation by instrument
- Activating Monopolar and Bipolar by footswitch
- Separate alarms for Cut, Coagulation, and Bipolar
- Memory mode included for saving the device last working mode

SMART 3

Technical Specification:

Input Voltage: 220 VAC or (110 VAC*)
Input frequency: 50-60 Hz
Max input Current: 2 A or (4 A*)
Main fuses: 2×4 A, 250 VAC or (2 × 6.3 A, 250 VAC*)
Weight: 5.18 Kg
Dimensions (WxHxD): 29x12.5x34 cm
*Depends on customer request

Safety features:

In accordance with EN60601-1, EN60601-2-2, EN60601-1-2, EN 62304
Type of output: CF
Neutral Electrode-Earth connection: Floating Output
HF Leakage Current:
Monopolar < 150 mA, Bipolar< 50 mA
LF Leakage Current:
Normal conditions < 10 µA
Single fault condition < 50µA
Protection class: I
Sink current < 500 µA

PROFSKIN 1

PROFSKIN 1

PROFSKIN-1 Features:

- Appropriate for minor and office base surgeries such as Dermatology, Dentistry, Gynecology
- Fully user friendly
- Pure and Blend Modes on Cut
- Spray and Desiccate Modes on Coagulation
- Equipped with patient return electrode continuity monitor (PCM)
- Equipped with high voltage Power Supply monitoring system (PSM)
- Activating Cut and Coagulation by instrument and footswitch
- Separate alarms on Cut and Coagulation
- Memory included for saving the device last working mode

Technical Specification:

Input Voltage: 210 - 230 VAC or (100-120 VAC*)
Output Freq: 4.5 MHz
Input frequency: 50-60 Hz
Max. supply Current: 2 A or (4 A*)
Main fuses: 2 x 4 A, 250 VAC or (2 x 6.3A, 250 VAC*)
Weight: 4.18 Kg
Dimensions (WxHxD): 29x12.5x34 Cm
*Depends on customer request

Safety features:

In accordance with EN60601-1, EN60601-2-2, EN60601-1-2, EN 62304
Type of output: CF
Neutral Electrode-Earth connection: Floating Output
HF leakage Current:
Monopolar < 150 mA
LF Leakage Current:
Normal condition < 10µA
Single fault condition <50µA

SMART APC-1 Argon Plasma Coagulation Unit

Advantages of Argon Plasma:

- Immediate hemostasis helps efficiently coagulate large areas of bleeding surface
- Minimum risk of perforation results from limited coagulation depth
- Tissue carbonization is minimal compared to standard electro coagulation
- No tissue vaporization minimizes the risk of perforation
- No contact between the applicator and tissue means no tissue adhesion
- Less surgical smoke gives good visibility of the operating area
  Reduced smoke eliminates unpleasant odors
- Precise application of thermal energy results in reducing procedure time
- Variable argon flow for various applications

Version1

Adjustable setting by its interface

Version 2

Adjustable setting by the ESU interface

Technical Specification:

General Features:

- Wide range argon gas flow delivery from 0.1 to 9.9 SLPM
- Output gas flow setting resolution 0.1 SLPM
- Separately setting gas flow for Cut and Coagulation.
- Graphical display of the gas cylinder's pressure
- Easy connection of pneumatic connectors by user
- Supporting two argon gas cylinders simultaneously
- Automatic switch between argon gas cylinders

Safety Futures:

- Intelligent monitoring and controlling gas flow
- Continuously monitoring gas pressure
- Visual sound alarm when errors occur
- Classification: Class1
- Compliance with EN 60601-1
- Compliance with EN 60601-1-2

Input Power:
Mains voltage: 100 V to 240 V
Mains frequency: 50 Hz
Maximum Power Consumption: 40 VA
Fuse: Standard 2*0.5 A-250 VAC

Dimensions and Weight:
W×H×D: 40 × 8.5 ×46 cm
Weight: 5 kg

SMART APC-1

General Comparison Table of AVANteb Electrosurgery Systems

MODE \ UNIT	VISUA-1	SMART-4	SMART-3	PROFSKIN-1
MONOPOLAR CUT	300 W	360 W	100 W	100 W
MONOPOLAR COAG	130 W	180 W	70 W	55 W
BIPOLAR CUT	120 W	120 W	50 W	----------
BIPOLAR COAG	120 W	120 W	50 W	----------
SMART Ablation	✓	✓	----------	----------
SMART Seal	✓	✓	----------	----------
ARGON PLASMA COAG	✓	✓	----------	----------
OUTPUT FREQUENCY	400 KHZ	400 KHZ	400 KHZ	4.5 MHZ

CE 2195

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