

RF Plasma Electrosurgical System

Othopedics, urology, neurosurgery and arthroscopic low-temperature plasma surgery

Product Description :

It is a bipolar, radiofrequency (RF) electrosurgical systems indicated mainly in othopedics, urology, neurosurgery and arthroscopic low-temperature plasma surgeries. It is for ablation, cutting, vaporization and coagulation on soft tissue and clamping for hemostasis on blood vessels below $\phi 7\text{mm}$ when equipped with various plasma electrodes.

Main features :

- Low treatment temperature
- Low energy penetration
- Flexibly and conveniently in Usage
- Widely used in different joint surgeries
- Excellent hemostatic performance
- Small trauma, quick healing
- Low pain level



Principle of Operation :

The system uses 100kHz ultra-low frequency stable electric field as low-temperature plasma technology. It can excite the electrolyte between the electrode and the tissue into a thin plasma layer, in which a argenumber of ionized high-energy particles can lbreak the molecular bonds between protein molecules, allowing the tissue cells at the surgical site to be broken down on a molecular basis. Since the current does not flow directly through the tissue during the operation, little heat is generated and the temperature is low (40~70°C). It not only ensures the contraction of collagen molecules, but also maintains the vitality of cells, achieving ablation, cutting, coagulation on human tissue and clamping for hemostasis on blood vessals below $\phi 7\text{mm}$.

Contraindications :

The system is contraindicated in any procedures where a conductive solution is not used. The System is also contraindicated for patients who have cardiac pacemakers or other electronic implants without specific instructions from the manufacturer of the cardiac pacemaker or implant. Please refer to the Wand Instructions for Use for a more comprehensive list of contraindications regarding specific procedures. The controller is not intended to be used with a neutral electrode.

Main Technical Specifications :

Input Power

AC Voltage	100-120V / 220-240V
Frequency	50/60Hz
RMS Current	8Amp max.
Fuse Classification	T8A250V / T4A250V

Power Output

Voltage Range	0-320Vrms@100kHz
Classification	Class I Type BF
Operating Frequency	100KHz $\pm$ 10%
Leakage Current	$\leq 100\text{mA}$
Max. Output Power	400W@225 Ω

Physical Parameter

Dimension	420*400*110mm	
Net Weight	Mainframe	5.5kg
	Foot switch	2.2kg
Application Conditions	Temperature	10 °C ~40 °C
	Humidity	$\leq 80\%$

Product Description :

Bipolar plasma electrode is for sports medicine surgery to ablate, stanch, cut or make heat shrinkage on soft tissues under low temperature. It is the surgery system that can be applicable to various joint parts including the knee joint, shoulder joint, hip joint, small joints, articular cartilage, tendon disorders and spinal surgery.

Electrical Specifications :

Working Frequency	0.3MHz -1.0MHz
Polarity	Bipolar
Rated Voltage	750V
Power Plug	Plasma Plug / 2-ping Plug



Type : SG7



Probe Shape : Hooklike in 30°C
Probe Diameter : 3.5mm
Working Length : 100-280mm

Indications

Ligament laxity, meniscus resection of knee, shoulder and hip joints.

Type : SGX2



Probe Shape : Sphere
Probe Diameter : 5.0mm
Working Length : 100-280mm

Indications

For ablation and suction in orthopedic surgery.

Type : SGX6



Probe Shape : Sphere
Probe Diameter : 3.6mm
Working Length : 100-280mm

Indications

It is suitable for ablation of large area of soft tissue in the shoulder and knee joints, with multiple suction holes for efficient ablation and suction.

Type : SGX7



Probe Shape : Abnormal 30°
Probe Diameter : 3.8mm
Working Length : 100-280mm

Indications

For the synovial membrane of the knee joint and the narrow area of the meniscus posterior corner to suction and efficiently perform vaporization, cutting and hemostasis.



Plasma electrode

For Spine Orthopedic Surgery

Product Description :

Bipolar plasma electrode is for spine orthopedic surgery to ablate, stanch, cut or make heat shrinkage on soft tissues under low temperature. It is the surgery system that can be applicable to surgery on various spine parts including lumbar vertebra, cervical vertebra.

Model No. : **SG18-100**

Cervical Spine Plasma Electrode



Indications :

Radicular pain (lateral herniation) : upper limb pain > neck pain, MRI shows inclusive disc herniation, and discography is positive;

Shoulder pain (central herniation) : Conservative treatment was ineffective for 3 months, discography was positive, and there was no obvious instability in the intervertebral structure.

- ▶ Total Length : 100mm
- ▶ Puncture cannula outer diameter : 1.09mm
- ▶ Electrode Diameter : 0.9mm
- ▶ Working Length : 1.8mm
- ▶ Cable Length : 3000mm

Model No. : **SG18-200**

Lumbar spine plasma Electrode

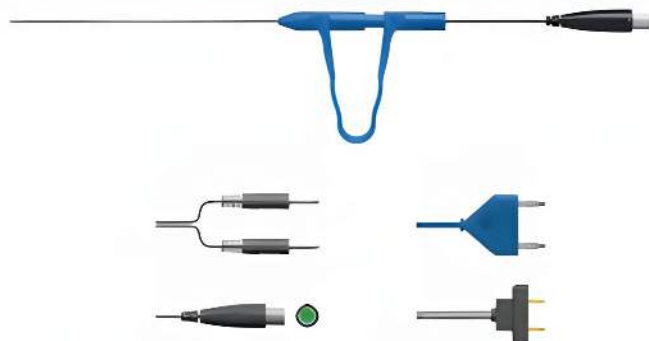


Indications :

Intervertebral disc herniation pain : positive discography, bulging or mild herniation, and no obvious instability of the intervertebral structure;

Discogenic low back pain : low back pain ≥ leg pain, MRI confirmed to be inclusive disc herniation, push discography positive,

- ▶ Total Length : 157mm
- ▶ Puncture cannula outer diameter : 1.52mm
- ▶ Electrode Diameter : 1.1mm
- ▶ Working Length : 5.00mm
- ▶ Cable Length : 3000mm



Type : **SG17**



Probe Shape : Roundness
Probe Diameter : 1.6mm
Working Length : 240-400mm

Indications

Ablation, hemostasis under spinal endoscope surgery