



surtron.com



SURTRON[®]

ELECTROSURGICAL units



DOWNLOAD LED SPA APP



SURTRON®

50D // 80D



50D



SURTRON® 50D is a radiofrequency electrocautery unit suitable for minor monopolar surgery. SURTRON® 50D through the functions selection makes pure cut, cut coagulation (CUT 1 - CUT 2) and pure coagulation possible. The on-board microcontroller and digital display guarantees consistent safety and reliability under any conditions. SURTRON® 50D offers outstanding professional surgical results due to its ergonomic and superior safety features.

Reference code	10100.051
Maximum output power CUT	50 W – 400 Ω
Maximum output power CUT/COAG1	45 W – 400 Ω
Maximum output power CUT/COAG2	40 W – 400 Ω
Maximum output power COAG	40 W – 400 Ω
Working frequency	600 kHz
Patient circuit	F
Selectable input voltage	115/230 Vac
Mains frequency	50-60 Hz
Electrical input power	280 VA
Size WxHxD mm	190x85x239
Weight	2,5 Kgs

80D



SURTRON® 80D is a radiofrequency electrocautery unit suitable for minor monopolar surgery. SURTRON® 80D has a multi-function selector which makes cutting (CUT), cut coagulation (BLEND), coagulation (COAG) and micro-coagulation (MICRO) possible. The one-board microcontroller and digital display guarantees consistent safety and reliability under any conditions. SURTRON® 80D offers outstanding professional surgical results due to its ergonomic and superior safety features.

Reference code	10100.081
Maximum output power CUT	80 W – 400 Ω
Maximum output power BLEND	60 W – 400 Ω
Maximum output power COAG	50 W – 400 Ω
Maximum output power MICRO	20 W – 600 Ω
Working frequency	700 kHz
Patient circuit	F
Selectable input voltage	115-230 Vac
Mains frequency	50-60 Hz
Electrical input power	220 VA
Size WxHxD mm	190x85x239
Weight	2,5 Kgs

Compact, ergonomic
and user-friendly



DENTAL
DERMATOLOGY
AMBULATORY SURGERY
FIRST AID
VETERINARY
VASCULAR SURGERY

50D

Standard Composition:

- Reusable monopolar handle F4814
- Assorted electrodes (10 pcs) 00500.00
- Cable for rod neutral electrode 00404.02
- Rod neutral electrode 00403.01
- Foot switch 00304.00
- Power supply cable 2 mt 00100.03

80D

Standard Composition:

- Reusable monopolar handle F4814
- Assorted electrodes (10 pcs) 00500.00
- Cable for neutral electrode 00404.08
- Steel neutral electrode 5365
- Foot switch 00304.00
- Power supply cable 2 mt 00100.03



SAFETY

EN60601-1
EN60601-1-2
EN60601-2-2
Electrical Class: I CF
MDD 93/42/EC Class: II b

CONTROLS

Patient/Plate circuit monitoring (80D)
Output power monitoring
Self check control

SURTRON

80 // 120 // 160



SURTRON® is a high frequency electrocautery equipment which is suitable to light and medium surgery.

SURTRON®, through its performance, allows pure CUT, cut-coagulation BLEND, superficial coagulation FORCED COAG, deep coagulation in absence of necrosis SOFT COAG and, with a special adapter, BIPOLAR coagulation.

The digital reading of delivered power and the monitoring of operative function by microcontroller guarantees the absolute reliability of working conditions.

SURTRON® allows a highly professional surgery thanks to the user-friendly and safety solutions normally used.

The connection of neutral electrode is constantly monitored. Safety control of patient/plate contact using split neutral electrode. The possibility to control by the handle the monopolar output functions as well as the delivery of output power, allows to implement the surgical operation without turning away the surgeon attention from the surgical field.

80 120 160

Reference code	10100.101	10100.201	10100.301
Maximum output power CUT	80 W-250 Ω	120 W-250 Ω	160 W-250 Ω
Maximum output power BLEND	60 W-200 Ω	90 W-200 Ω	120 W-200 Ω
Maximum output power FORCED COAG	50 W-150 Ω	80 W-150 Ω	100 W-150 Ω
Maximum output power SOFT COAG	40 W-100 Ω	60 W-100 Ω	80 W-100 Ω
Maximum output power BIPOLAR	30 W-100 Ω	40 W-100 Ω	60 W-100 Ω
Working frequency	600 KHz	600 KHz	600 KHz
Patient circuit	F	F	F
Selectable input voltage	115-230 Vac	115-230 Vac	115-230 Vac
Mains frequency	50-60 Hz	50-60 Hz	50-60 Hz
Electrical input power	230 VA	300 VA	350 VA
Size WxHxD mm	254x104x288	254x104x288	254x104x288
Weight	5 Kgs	5 Kgs	5 Kgs

Possibility of use for minimum invasive surgery
Possibility of use of bipolar forceps
Possibility of use of split neutral electrodes
Planning of the working conditions

Memorization of the last used settings
Activation of the monopolar power with pedal and/or handle
Digital regulation and indication of the output power
Adjustment of the volume

**Bipolar coagulation
for safe surgery**

CASUALTY SURGERY
PEDIATRIC SURGERY
PLASTIC SURGERY
VASCULAR SURGERY
DERMATOLOGY
FIRST AID
UROLOGY
GINECOLOGY
VETERINARY
DENTAL
OTORHINOLARYNGOLOGY

80 // 120 // 160

Standard Composition:

- Reusable handle with switches F4243
- Assorted electrodes (10 pcs) 00500.00
- Cable for neutral electrode 00404.08
- Steel neutral electrode 5365
- Foot switch 00304.00
- Power supply cable 2 mt 00100.03



SAFETY
EN60601-1
EN60601-1-2
EN60601-2-2
Electrical Class: I CF
MDD 93/42/EC Class: II b

CONTROLS
Patient/Plate circuit monitoring
Output power monitoring
Self check control



SURTRON

FLASH // FLASH HF



SURTRON® FLASH HF is a High Frequency RadioSurgical equipment which is suitable for precision monopolar and bipolar surgery and micro-surgery without tissue alterations.

SURTRON® FLASH can supply RF operative powers either for programmable time as short as hundreds of a second.

SURTRON® FLASH through its performances allows pure CUT, cut-coagulation BLEND, incision with reduced production of eschar ENHANCED, superficial coagulation FORCED COAG, deep coagulation in absence of necrosis SOFT COAG, BIPOLAR coagulation and ABLATION. The digital reading of the delivered power and the overseeing through microcontroller of the operational functions, assure the absolute reliability of the conditions of job.

SURTRON® FLASH allows a highly professional surgery thanks to the user-friendly and safety solutions normally used.

The connection of neutral electrode is constantly monitored. Safety control of patient/plate contact using split neutral electrode. The possibility to control by the handle the output functions as well as the delivery of output power, allows to implement the surgical operation without turning away the surgeon attention from the surgical field.

120 160HF 200

Reference code	10300.101	10300.201	10300.401
Max output power CUT	120 W-250 Ω	150 W-500 Ω ⁽¹⁾	200 W-250 Ω
Max output power BLEND	90 W-200 Ω	100 W-500 Ω ⁽¹⁾	120 W-200 Ω
Max output power ENHANCED	90 W-250 Ω	100 W-500 Ω ⁽¹⁾	120 W-250 Ω
Max output power FORCED COAG	80 W-150 Ω	100 W-150 Ω	150 W-150 Ω
Max output power SOFT COAG	60 W-100 Ω	80 W-100 Ω	90 W-100 Ω
Max output power BIPOLAR COAG	60 W-50 Ω	60 W-50 Ω	80 W-50 Ω
Max output power BIPOLAR ABLATION	-	60 W-100 Ω ⁽¹⁾	-
Working frequency	600 KHz	600 KHz	600 KHz
Working frequency ⁽¹⁾ FUNCTION ONLY	-	4.0 MHz	-
RF power pulse emission time	10 ms - 30 sec	10 ms - 30 sec	10 ms - 30 sec
RF power pulse interval	1 - 9	1 - 9	1 - 9
Patient circuit	F	F	F
Selectable input voltage	115 - 230 Vac	115 - 230 Vac	115 - 230 Vac
Mains frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Electrical input power	300 VA	350 VA	350 VA
Size WxHxD mm	370x144x319	370x144x319	370x144x319
Weight	6 Kgs	6 Kgs	6 Kgs

AMBULATORY SURGERY
 DERMATOLOGY
 VASCULAR SURGERY
 GYNECOLOGY

120 // 160 **HF** // 200 DENTAL

Standard Composition:

- Reusable handle with switches F4243
- Handle for microsurgical needle 00201.00
- Assorted electrodes (10 pcs) 00500.00
- Needles for micro-surgery (5 pcs) 00500.L11
- Blade electrode 7 cm (3 pcs) 152-110
- Needle electrode 7 cm (3 pcs) 152-120
- Ball electrode 6 cm (3 pcs) 152-150
- Cable for neutral electrode 00404.08
- Steel neutral electrode 5365
- Disposable split neutral electrode (2 pcs) F7920
- Disposable neutral electrode (2 pcs) 0350
- Waterproof foot switch 00304.00
- Power supply cable 5mt 00100.01



OTORHINOLARYNGOLOGY
 PEDIATRIC SURGERY
 FIRST AID
 PLASTIC SURGERY
 ENDOSCOPY
 OPHTHALMOLOGY
 NEUROSURGERY
 PNEUMOLOGY
 UROLOGY
 VETERINARY



- Activation of the monopolar power with pedal and/or handle
- Patient to plate contact control
- Split return electrode use allowed
- Minimally invasive surgical treatment allowed
- Monopolar and Bipolar independent output
- Auto Start/Stop in Bipolar Coag
- Working condition storing
- Digital regulation and indication of the output power
- Sound level control
- Planning of the working condition
- RF power pulse emission time setting
- RF power pulse interval setting
- HF Dual Frequency for best performances
- HF Least amount of lateral heat
- HF Less smoke in cutting mode

SAFETY

- EN60601-1
- EN60601-1-2
- EN60601-2-2
- Electrical Class: I CF
- MDD 93/42/EC Class: II b

CONTROLS

- Patient/Plate circuit monitoring
- Output power monitoring
- Self check control



SURTRON

200



SURTRON 200® is a high frequency electrocautery equipment which is suitable for light and medium surgery.

SURTRON 200® allows to execute surgical minimally invasive procedure of resection, evaporation and coagulation.

SURTRON 200® through its performances allows pure CUT, cut-coagulation BLEND, incision with reduced production of eschar ENHANCED, superficial coagulation FORCED COAG, deep coagulation in absence of necrosis SOFT COAG and BIPOLAR coagulation. The digital reading of the delivered power and the overseeing through microcontroller of the operational functions, assure the absolute reliability of the conditions of job.

SURTRON 200® allows a highly professional surgery thanks to the user-friendly and safety solutions normally used. The connection of neutral electrode is constantly monitored. Safety control of patient/plate contact using split neutral electrode. The possibility to control by the handle the output functions as well as the delivery of output power, allows to implement the surgical operation without turning away the surgeon attention from the surgical field.

Reference code	10100.401
Maximum output power CUT	200W - 250Ω
Maximum output power ENHANCED	120W - 250Ω
Maximum output power BLEND	120W - 200Ω
Maximum output power FORCED COAG	150W - 150Ω
Maximum output power SOFT COAG	90W - 100Ω
Maximum output power BIPOLAR COAG	80W - 50Ω
Working frequency	600 kHz
Patient circuit	F
Mains voltage	115-230 Vac
Mains frequency	50-60 Hz
Electrical input power	350 VA
Size WxHxD mm	370x144x319
Weight	6 Kgs

Patient to plate contact control
Split return electrode use allowed
Minimally invasive surgical treatment allowed
Monopolar and Bipolar independent output
Auto Start/Stop in Bipolar Coag

Working condition storing
Activation of the monopolar power with pedal and/or handle
Digital regulation and indication of the output power
Sound level control
Planning of the working condition

AMBULATORY SURGERY
 ENDOSCOPY
 FIRST AID
 GASTROENTEROLOGY
 GENERAL SURGERY
 GYNECOLOGY
 NEUROSURGERY
 OTORHINOLARYNGOLOGY
 ORTHOPEDICS
 PEDIATRIC SURGERY
 PLASTIC SURGERY
 PNEUMOLOGY
 UROLOGY
 VASCULAR SURGERY
 VETERINARY

Minimally invasive surgery allowed



Standard Composition:

- Reusable handle with switches F4243
- Assorted electrodes (10 pcs) 00500.00
- Blade electrode 7 cm (3 pcs) 152-110
- Needle electrode 7 cm (3 pcs) 152-120
- Ball electrode 6 cm (3 pcs) 152-150
- Cable for neutral electrode 00404.08
- Steel neutral electrode 5365
- Disposable split neutral electrode (2 pcs) F7920
- Waterproof foot switch 00304.00
- Power supply cable 5mt 00100.01



CONTROLS
 Patient/Plate circuit monitoring
 Output power monitoring
 Self check control

SAFETY
 EN60601-1
 EN60601-1-2
 EN60601-2-2
 Electrical Class: I CF
 MDD 93/42/EC Class: II b



SURTRON

300HP // 400HP



TWIN OPERATIVE ACTIVITY

- Two output channels for monopolar cutting
- Two independent setting and output channels for the most frequent monopolar coagulation

CONTROLLED CUTTING PROCEDURES

- Automatic adaptive system of power* (TACS - Tissue Adaptive Contact System)
- Enhanced cutting current for eschar free incision
- Cutting current with selectable coagulating property for bleeding controlled dissection
- Low capacitive coupling by slow BLEND current for endoscopic procedures

TWIN CONTROLLED COAGULATIVE PROCEDURES

- SPEEDY** coagulation and DEEP***coagulation available to two operators
- SPRAY coagulation available by hand switch or foot switch controls

WIDE BIPOLAR FEATURES

- Bipolar cutting current with selectable bleeding control
- Slow BLEND cutting current
- Separately activable Automatic Start/Stop coagulation
- Vessel Sealing up to 7mm

SURGEON AND PATIENT TOTAL SAFETY

- Acceptability of contact impedance between patient body and return electrode continuously watched by Skin Plate Electronic Control (SPEC)

- H.F. Leakage currents continuously monitored

- Mains fluctuation automatically compensated before to start the delivery of HF power

PERSONALIZED PROCEDURES

- Independent choice of coagulative currents and power levels by each of two operators
- Ten personal configurable and immediately recallable procedures

EXTENSION DRIVER AND INTERLOCK SIGNALS

- Driven output connection to external Argon Plasma unit and Smoke Evacuator unit

AUTOMATIC SELF DIAGNOSIS

- Automatic diagnostic control of the actual complete functionality of the electronic unit and the connected accessories with coded report of failures

*Monopolar CUT mode until 100 Watt.

**SPEEDY coagulation also said Fulgurate or Forced coagulation

***DEEP coagulation also said Pin Point, Dessicate or Soft coagulation

300HP

400HP

Reference code

Maximum output power monopolar pure CUT

Maximum output power monopolar cut-coag CUT80%

Maximum output power monopolar cut-coag CUT60%

Maximum output power monopolar cut-coag CUT40%

Maximum output power monopolar cut ENHANCED

Maximum output power monopolar cut-coag BLEND

Maximum output power monopolar coag SPEEDY

Maximum output power monopolar coag DEEP

Maximum output power monopolar coag SPRAY

Maximum output power monopolar coag SPRAY ARGON

Maximum output power bipolar CUT

Maximum output power bipolar cut-coag CUT80%

Maximum output power bipolar cut-coag CUT60%

Maximum output power bipolar cut-coag CUT40%

Maximum output power bipolar cut-coag BLEND

Maximum output power bipolar coag COAG

Vessel sealing

Working frequency Monopolar / Bipolar

Patient circuit

Selectable input voltage

Mains frequency

Electrical input power

Size WxHxD mm

Weight

10400.801

300 W - 300 Ω

250 W - 300 Ω

200 W - 300 Ω

150 W - 300 Ω

200 W - 500 Ω

200 W - 300 Ω

100 W - 500 Ω

100 W - 200 Ω

70 W - 2000 Ω

70 W - 2000 Ω

120 W - 50 Ω

120 W - 50 Ω

120 W - 50 Ω

100 W - 50 Ω

120 W - 150 Ω

120 W - 50 Ω

200 W - 50 Ω

425 kHz / 525 kHz

F

115 - 230 Vac

50 - 60 Hz

1000 VA

470x150x400

17,5 Kgs

10400.901

400 W - 300 Ω

300 W - 300 Ω

250 W - 300 Ω

200 W - 300 Ω

250 W - 500 Ω

250 W - 300 Ω

120 W - 500 Ω

120 W - 200 Ω

100 W - 2000 Ω

100 W - 2000 Ω

120 W - 50 Ω

120 W - 50 Ω

120 W - 50 Ω

100 W - 50 Ω

120 W - 150 Ω

120 W - 50 Ω

200 W - 50 Ω

425 kHz / 525 kHz

F

115 - 230 Vac

50 - 60 Hz

1000 VA

470x150x400

17,5 Kgs

AMBULATORY SURGERY
 ENDOSCOPY
 FIRST AID
 GASTROENTEROLOGY
 GENERAL SURGERY
 GYNECOLOGY
 NEUROSURGERY
 OTORHINOLARYNGOLOGY
 ORTHOPEDICS
 PEDIATRIC SURGERY
 PLASTIC SURGERY
 PNEUMOLOGY
 UROLOGY
 VASCULAR SURGERY
 VETERINARY



SAFETY

EN60601-1
 EN60601-1-2
 EN60601-2-2
 Electrical Class: I CF
 MDD 93/42/EC Class: II b

CONTROLS

Patient/Plate circuit monitoring
 Output power monitoring
 Self check control
 H.F. Leakage currents control
 Compensation of mains fluctuation

300HP // 400HP

Standard Composition:

- | | |
|---|----------|
| - Disposable handle with switches (5pcs) | 755VL |
| - Reusable handle with switches | F4243 |
| - Blade electrode 7 cm (3 pcs) | 152-110 |
| - Blade electrode 16 cm (3 pcs) | 152-115 |
| - Needle electrode 7 cm (3 pcs) | 152-120 |
| - Ball electrode 6 cm (3 pcs) | 152-150 |
| - Cable for neutral electrode | 00404.08 |
| - Disposable split neutral electrode (5pcs) | F7920 |
| - Electrode cleaning sponge | F7520 |
| - Double water-proof foot-switch (2 pcs) | 00305.04 |
| - Power supply cable 5 mt | 00100.01 |



SURTRON® EVAC



SURTRON EVAC is an aspiration and filtering system for the smokes produced during the surgical procedures.

The smokes, generated during the surgical procedures, have a bad, strong and long smell. These smokes consist of water vapour, organic gas, visible or invisible solid particles and viral parts. So a good aspiration and filtration eliminates bad smells, reduce the bacteriologist and/or viral risks, and solves the particularly annoying problem of the optimal vision of the zone of the intervention, during the laparoscopic procedures.

In **SURTRON EVAC** the activation of the aspiration can be:

AUTOMATIC, through electronic system of survey of the activation of the high frequency electrosurgical unit;

MANUAL, acting directly on the unit through a foot switch (optional)

The flux of the aspiration can be regulated to be suitable with the singular necessities.

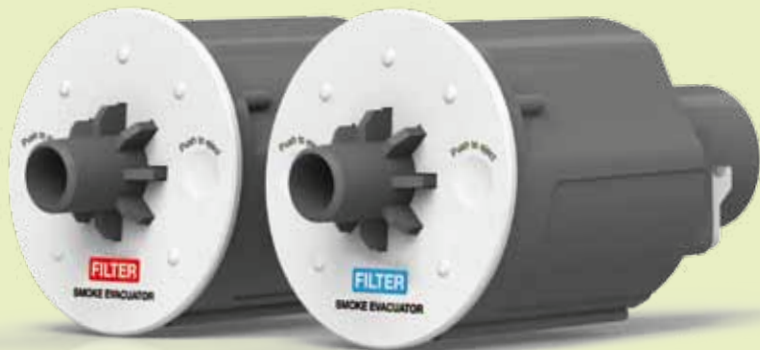
For laparoscopic procedures there is a specific function, quickly selectable.

SURTRON EVAC has an electronic control of the aspiration with the indication of the usury status of the filters.



Reference codes	10200.10 (230 Vac) - 10200.10/115V (115 Vac)
Input voltage	230 Vac or 115 Vac
Mains frequency	50 Hz
Electrical input power	800 VA
Max vacuum flow rate	1000 LPM (35 CFM)
Max static suction	250 mbar (83 in H ₂ O)
Filter type	ULPA with active carbon
Filter efficiency	99,999%
Particles diameter	0,3 micron
Size WxHxD mm	370x144x319
Weight	4 Kg

- AUTOMATIC AND / OR MANUAL FUNCTIONING
- REGULATION OF THE ASPIRATION FLUX
- AUTOMATIC FUNCTION FOR LAPAROSCOPY
- CONTROL AND INDICATION OF USURY STATUS OF THE FILTER
- FAST SUBSTITUTION OF THE FILTERS
- DIFFERENT TYPE OF FILTERS
- ACTIVATED CARBONS FILTERS FOR THE ELIMINATION OF THE SMELLS



There are two different kind of filter, quickly substituable and constituted by a filtering ULPA type with a active carbons part dedicated to the elimination of the bad smells of the electrosurgical smokes and connector of 7/8" (22mm).

The filters have an electronic system for the control of the status of use.

FILTER BLUE

The **BLUE** filter is the standard filter and it is included with the unit for a first time of use.

FILTER RED

The **RED** filter is an optional spare part, created for a long time of use.

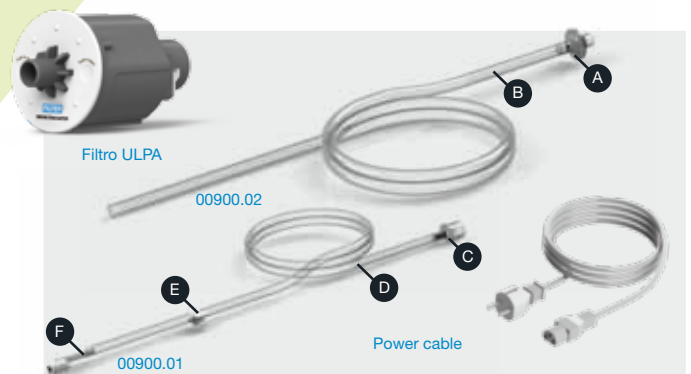
Standard Composition

- Power cable
- First ULPA Filter (5h) - BLU
- Apiration kit: **A** Filter **B** Pipe dia. 22mm lenght 2,4 mt (100")
- 4 Handle apsiration kit: **C** Adapter 10mm/22mm **D** Pipe dia.10 Lenght 1,8 mt (72") **E** Clip to fix the pipe on the handle **F** Adapter for the handle

Replacement parts

- ULPA Filter (20h) - RED
- Aspiration kit (6 pcs)
- Handle aspiration kit (12 pcs)

00900.FU01
00900.02/06
00900.01/12



SURTRON[®] ABC



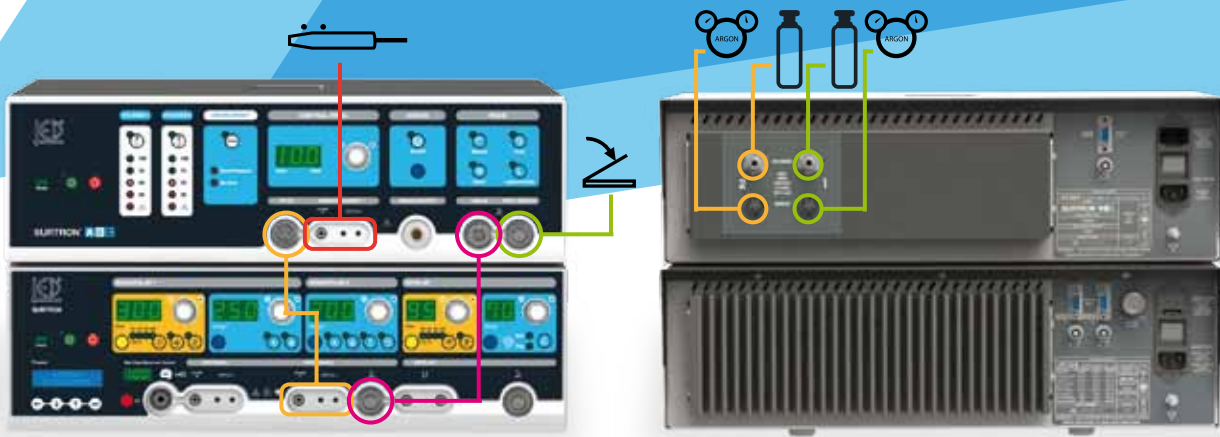
SURTRON ABC is a module that can be connected with a compatible electro-surgical unit, specific for coagulation electro-surgical procedures with Argon gas, indicated for both open surgery and laparoscopy.

Argon is an inert gas that used in combination with specific currents for high frequency coagulation generated by an electro-surgical unit, allows to obtain a superficial coagulation without contact thanks to the ionization of the gas flow through the high-frequency current.

SURTRON ABC is realized so that the connection to an electro-surgical unit with compatible characteristics to the Argon procedures, allows the erogation both through a manual activation and foot activation. The connection to the ABC unit doesn't preclude the use of other functions of the electro-surgical units, in fact, in case of use of the compatible LED units, the erogation of the Argon gas occurs only in case of erogation of current of high-frequency coagulation (SPRAY).



Reference code	10500.20
Input voltage	90-240 Vac
Mains frequency	50/60 Hz
Electrical input power	70 VA
Flow regulation	0.2 - 10 LPM
Maximum inlet pressure	3.0 bar (43,5psi)
Electrical Class	I CF
Size WxHxD mm	470x150x400
Weight	8 Kgs



Connection with SURTRON HP (Not included)

- REGULATION AND CONTROL OF THE FLOW GAS SUPPLY
- STATUS CONTROL OF THE GAS ARGON CYLINDER
- ACTIVATION THROUGH THE HANDLE OR THE FOOT-SWITCH
- SPECIFIC FUNCTION FOR LAPAROSCOPY
- AUTOMATIC FUNCTION FOR COMPATIBLE LED UNITS
- MANUAL FUNCTION FOR CONNECTION WITH UNITS OF OTHER BRANDS



www.surtron.com



LED SpA

via Selciatella, 40 - 04011 - Aprilia (LT) - Italy
www.led.it - info@led.it - www.surtron.com
Tel. +39 06 92870045 Fax +39 06 92870046

