



# ESB05

## Electrosurgical generator

For standard and Argon-enhanced electrosurgery



OPERATING THEATRE



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# ESB05



## Electrosurgical generator

The ESB05 is a versatile system designed to deliver standard and argon-enhanced electrosurgery. It features 10 different power setting, 9-channel program memory, max.400 watt floating output and optional Argon-enhanced system to give optimal cutting and coagulation with minimal tissue damage, which well combines safety and effectiveness for a broad range of electrosurgical needs, like General surgery, Cardiology, ENT surgery, Gastroenterology, Gynaecology, Laparoscopy, Neuro surgery, Plastic surgery, Thoracic surgery and Urology (like TURP, TUVV).



Cod. **ESB05**

### Features

- Microprocessor-controlled output by max. 400 watts (all floating)
- 7 monopolar and 3 bipolar outputs are available.
- Easy to use interface.
- Automatic power adjustment and compensation for tissue variation
- This electrosurgical generator ensures smooth cutting through all types of tissue.
- It realizes automatic recognition of return electrode(REM), whether solid or spilt.
- 9-channel program memory
- It offers automatic current monitoring and program memory functions.
- TURP, TUVV capability
- Up to 3 different instruments can be configured simultaneously
- The argon optional module is available for enhanced cutting and coagulation.
- Optional adaptor for laparoscopy and thoracoscopy application.
- CE marked

### Specifications of ESB05 - Electrosurgical Generator

<b>Model</b>	<b>ESB05</b>
<b>Dimension</b>	525x410x160 mm (WxDxH)
<b>Weight</b>	16 kg
<b>Protection class</b>	I
<b>Unit type</b>	CF
<b>Input power supply</b>	220V $\pm$ 10%/50Hz, max 6,3A
<b>Working frequency</b>	512 KHZ
<b>Potential equalization connection</b>	YES
<b>Standard compliance</b>	EN 60601-1-2, 60601-2-2



**ESB05** Electrosurgical generator +  
**ESB05/AR** Optional Argon Module +  
**ESB05/CH** Optional cart

Working modes			
	Cut mode	Power at impedance load	V p-p
<b>Monopolar</b>	Pure	400 watts at 500 ohms	2300V
	Blend1	300 watts at 500 ohms	2700V
	Blend2	200 watts at 500 ohms	3200V
	Blend3	150 watts at 500 ohms	3700V
<b>Bipolar</b>	Bipolar	70 watts at 500 ohms	1450V
	Coagulation mode	Power at impedance load	V p-p
<b>Monopolar</b>	Soft	120 watts at 500 ohms	3400V
	Point	120 watts at 500 ohms	5600V
	Spray	120 watts at 500 ohms	8500V
<b>Bipolar</b>	Bipolar standard	70 watts at 500 ohms	240V
	Bipolar precise	70 watts at 500 ohms	360V

### Standard Accessories

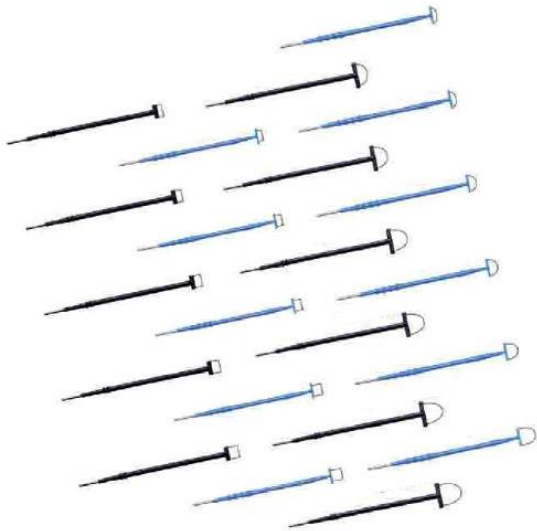
*'All specifications and figures are subject to change without notice*

Foot-control pen switch, Reusable hand-control pen, Reusable foot-control pen, Straight knife electrode (L=70mm), 2 Standard surgical blade adaptor, Standard surgical blade, Bipolar coagulation forceps (200mm, bayonet, 1.0mm), Disposable adult patient dual return electrode (soft), Connecting cable for disposable (dual) return electrode, Connecting cable for disposable (single) return electrode, 2 Reusable patient single return electrode (hard), Connecting cable of bipolar coagulation forceps.



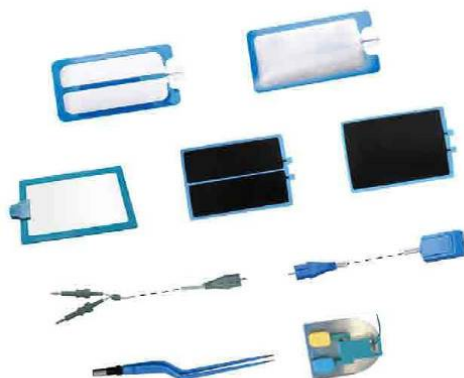
Description
Disposable Hand-control pencil
Disposable Foot-control pencil
Reusable Hand-control pencil
Reusable Foot-control pencil

Description
Disposable or Reusable Blade, 70mm handle
Disposable or Reusable Angled Blade, 70mm handle
Disposable or Reusable Needle, 70mm handle
Disposable or Reusable Angled Needle, 70mm handle
Disposable or Reusable Extended Blade, 130mm handle
Disposable or Reusable Extended Needle, 130mm handle
Disposable or Reusable Ball (Ø 2mm), 70mm handle
Disposable or Reusable Ball (Ø 3mm), 70mm handle
Disposable or Reusable Ball (Ø 4mm), 70mm handle
Disposable or Reusable Ball (Ø 5mm), 70mm handle
Disposable or Reusable Extended Ball (Ø 3mm), 130mm handle
Disposable or Reusable Extended Ball (Ø 5mm), 130mm handle
Disposable or Reusable Angled Ball (Ø 2mm), 70mm handle
Disposable or Reusable Angled Ball (Ø 3mm), 70mm handle
Disposable or Reusable Angled Ball (Ø 4mm), 70mm handle
Disposable or Reusable Angled Ball (Ø 5mm), 70mm handle



Description
Disposable or Reusable Loop, WxD= 10x5mm,
Disposable or Reusable Loop, WxD= 10x7mm,
Disposable or Reusable Loop, WxD= 10x8mm,
Disposable or Reusable Loop, WxD= 10x10mm,
Disposable or Reusable Loop, WxD= 10x15mm,
Disposable or Reusable Loop, WxD= 15x5mm,
Disposable or Reusable Loop, WxD= 15x7mm,
Disposable or Reusable Loop, WxD= 15x8mm,
Disposable or Reusable Loop, WxD= 15x10mm,
Disposable or Reusable Loop, WxD= 15x12mm,
Disposable or Reusable Loop, WxD= 15x15mm,
Disposable or Reusable Loop, WxD= 20x8mm,
Disposable or Reusable Loop, WxD= 20x10mm,
Disposable or Reusable Loop, WxD= 20x12mm,
Disposable or Reusable Loop, WxD= 20x13mm,
Disposable or Reusable Loop, WxD= 20x15mm,
Disposable or Reusable Loop, WxD= 20x20mm,
Disposable or Reusable Square Loop, WxD= 10x4mm,
Disposable or Reusable Square Loop, WxD= 10x5mm,
Disposable or Reusable Square Loop, WxD= 10x7mm,
Disposable or Reusable Square Loop, WxD= 10x8mm,
Disposable or Reusable Square Loop, WxD= 10x10mm,

Description
Adult Return Electrode without cable, Split
Paediatric Return Electrode without cable Solid
Adult Return Electrode without cable, Solid
Paediatric Return Electrode without cable. Split
Cable for split return electrode
Cable for solid return electrode
Steel return electrode
Bipolar forceps (TIP 1mm/Size 200mm)
Foot switch





# ESB05/AR



## Optional Argon Module

ESB05/AR argon module supplies argon gas flow used in combination with high frequency current from electrosurgical generator, for cutting and coagulation for open surgery, laparoscopic or endoscopic surgery. The argon module is used together with ESU, for argon gas supply and management during surgical procedure.



Cod. **ESB05/AR**

### Applications

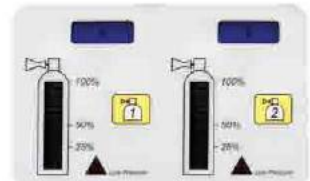
<b>General surgery</b>	Superficial bleeding during Abdominal surgery Open liver surgery Heart surgery
<b>Thoracic surgery</b>	Surface haemorrhages Benign endobronchial tumors Stent ingrowth I overgrowth
<b>ENT surgery</b>	Superficial mucosal resection Subglottic and tracheal resection Nasal Cavity
<b>Tumor surgery</b>	Advanced tumor resection Benign or pre-cancerous lesions
<b>Gastroenterology</b>	Bleeding during polypectomy resection Angiodysplastic gastrointestinal bleeding Colon carcinoma Erosions, ulcers, or oozing of blood Dieulafoy Lesion Stenosing strictures Verrucous gastritis
<b>Gynecology</b>	Myomectomy Endometriosis



Argon coagulation in gastroenterology

### Features

- Two gas tank connections
- Automatic tank switch with low pressure trigger
- Automatic hose-purge after changing tank and blockage detection
- Low argon flow (0,5-4 L/min) for endoscopic application with intra-peritoneal overpressure monitoring
- High argon flow (0,5-12 L/min) for open surgery
- Gas failure alarm with audible and visual indication
- Intuitive error code display for troubleshooting



Argon tank monitoring and switch

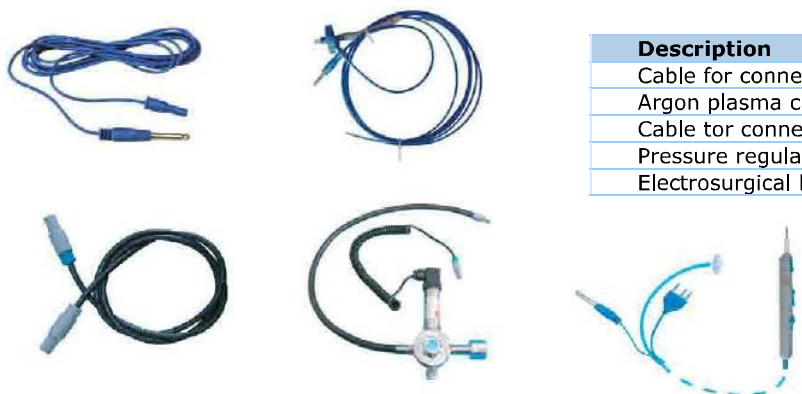
### Specifications of ESB05/AR - Argon Module

<b>Model</b>	<b>ESB05/AR</b>
<b>Dimension</b>	555x410x155 mm (LxWxH)
<b>Weight</b>	12,5 kg
<b>Input power supply</b>	220 VAC ± 10% , 50HZ±2%
<b>Low argon flow</b>	0,5~4 LPM ± 15%
<b>High argon flow</b>	0,5~12 LPM ± 15%
<b>Gas filtration</b>	0.3 µm (internal) 5 µm (external)
<b>Power supply</b>	AC 220 VAC ±1 0% , 50 HZ±2%



High/low flow control

### Standard Accessories



Description
Cable for connecting ESU and endoscope
Argon plasma catheter
Cable for connecting Argon system to ESU
Pressure regulator for Argon tank
Electrosurgical handset



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