

Intelligent. Smart and Clinical

GEM series of advanced powerful microcontroller based surgical generators gives the surgeon a powerful tool to deliver selected power over varying tissue types. Hence, no need of high power settings and more energy which in turn reduces tissue damage

- ✓ Less thermal damage
- ✓ Less charring and sparking
- ✓ Reduces recovery time

Micro-controller design

GEM series of generators use a single advanced and powerful controller which controls, senses, and acts upon feedback by continuously monitoring voltage, current, tissue impedance, RF leakage, Power.

- ✓ Single advanced and powerful controller
- ✓ Power micro-controller with minimum reaction time and maximum processing speed
- ✓ High power efficiency
- ✓ Minimizes tissue damage
- ✓ Enhanced performance at low power settings which in turn minimizes neuro-muscular stimulation

PPREM

Pad-Patient Return Electrode Monitoring eliminates the risk of patient burns at return electrode site. Pad-patient impedance monitoring using a dual area patient return electrode.

- ✓ Audio visual alarm
- ✓ Error message on display
- ✓ Deactivates the RF to ensure safe operation

Error Indicator

- ✓ Performs a self test during switch ON to check system status and resumes in the last used program and modes
- ✓ Displays error messages on the display depending upon the faults diagnosed

Ex: Displays error message on display to indicate patient return electrode error" P ERROR"

Endo cut (Pulse cut)

Endo cut is cutting power delivered in bursts (in secs) useful in Endo surgeries like papillotomy and polypectomy

Three different burst duration in seconds (Two, Three and Four seconds)

ESU Applications

Gynecology, Urology(TURP), Laproscopic Surgeries, Endoscopy (ERCP), Oncosurgery, Heart & Chest surgery, Neurosurgery, Spine, Arthroscopy, Hysterectomy, Adrenalectomy, Appendectomy, Colectomy, Colon Resection Cystectomy, Gastrectomy, Gastric Bypass, Hemorrhoidectomy, LAVH, Lap-Cholecystectomy, Liver Resection, Nephrectomy, Nissen Fundoplication, Radical Prostatectomy, Splenectomy, Salpingo-oophorectomy, Vaginal Hysterectomy, Whipple, All other surgical procedures.

Surgical Assistance

- ✓ User – settable and pre-programmed programs to assist in easy and fast use of the system
- ✓ Select the desired program using the program key and the system is ready for use with only **one key touch**
- ✓ Separate program display to avoid confusion with power and modes

Modes

CUT - Provides uniform cutting through all types of tissues
LOW

- Provides precise cutting with lower max. voltage which ensures minimum collateral tissue damage suitable for Neuro, Plastic, ENT

PURE CUT - Provides pure, precise cutting with higher max. voltage suitable for TURP

BLEND - Provides CUT power with useful coagulation (cutting with different levels of haemostasis) to reduce bleeding

COAG - Satisfies all coagulation needs of the surgeons
SPRAY

- Non contact coagulation with minimal depth of necrosis

FULGURATE 1 - Provides coagulation with lower max. voltage

FULGURATE 2 - Provides essential coagulation with high max. voltage with high crest factor

DESICCATE - Provides low voltage contact coagulation suitable for delicate work

BIPOLAR - Provides precise bipolar coagulation effect
MICRO

- Precise performance with minimum collateral tissue damage

MACRO - Precise performance with higher maximum voltage

STANDARD - Provides precise performance, suitable for most applications

BI CUT - Provides Cutting effect in bipolar using suitable instrument

BI SEAL - Provides intelligent sealing capabilities to the user upto 7 mm using Open and Lapro attachments, Audio and output cutoff and upon Seal

Bipolar Sealing

- ✓ Optimized combination of pressure and energy creates the seal by melting the collagen & elastin in the vessel wall & reforming it in to a seal & results in no sticking or charring

- ✓ Feed back controlled response system automatically discontinues energy delivery when the seal cycle is complete

- ✓ High strength seal, Minimal collateral RF thermal effect to adjacent tissue



GEM 200

Micro-controller design, SMPS technology

Three Cut modes, Three Coag modes, Bipolar Cut and Coag

Endo cut modes, PPREM technology

Pure Cut, Two Blend, Spray, Fulgurate, Desiccate modes

10 Programs with One key touch surgical assistance

Light weight, Easy to use and Error Indication

GEM 300

Micro-controller design, SMPS technology

Three Cut, Three Coag, One Bi Cut and Two Bi Coag modes

Endo cut, Micro and Macro Bipolar, PPREM technology

Pure Cut, Two Blend, Spray, Fulgurate, Desiccate modes

10 Programs with One key touch surgical assistance

Suitable for Underwater, TURP, Lapro, Spine...etc surgeries



GEM 400B plus

Micro-controller design, SMPS technology

Four Cut , Four Coag, One Bi Cut & Three Bi Coag modes

Endo cut modes, PPREM technology

Low & Pure Cut, Two Blend, Spray, Fulgurate(2), Desiccate

10 Programs with One key touch surgical assistance

Suitable for Underwater, TURP, Lapro, Spine...etc surgeries



COMBI SEAL

Four Cut, Four Coag, Three Bipolar and One Seal mode

Vessel sealing mode, Endo cut, PPREM technology

Pure Cut, Two Blend, Spray, Fulgurate, Desiccate modes

99 Programs with One key touch surgical assistance

Sealing upto 7mm, High strength seal, Auto cutoff

Suitable for Underwater, TURP, Lapro, Vessel Sealing...etc



Technical Specifications

Monopolar Cut

Low	480Khz Sinusoid with lower max. voltage
Pure	480Khz sinusoid with high max. voltage
Blend	480Khz bursts of sine with varying duty cycle

Monopolar Coag

Spray	480Khz damped sinusoid bursts, centred at 28Khz
Fulgurate	480Khz damped sine wave bursts
Desiccate	480Khz sinusoid with very low max. voltage

Bipolar

Micro	460Khz sinusoid
Macro	460Khz sinusoid
Std.	460Khz sinusoid
Cut	460Khz sinusoid with medium max. voltage
Seal	460Khz sinusoid with high max. voltage

PARAMETERS	MODES	GEM 200	GEM 300	GEM 400B+	VESSEL SEALING
CUT	LOW	-	-	300W @300E	-
	PURE CUT	200W @ 300E	300W @ 300E	400W @ 300E	300W @ 300E
	BLEND1	150W @ 300E	250W @ 300E	250W @ 300E	250W @ 300E
COAG	BLEND2	120W @ 300E	200W @ 300E	200W @ 300E	200W @ 300E
	SPRAY	120W @ 500E	120W @ 500E	120W @ 500E	120W @ 500E
	FULGURATE 1	150W @ 500E	150W @ 500E	150W @ 500E	150W @ 500E
BIPOLAR	FULGURATE 2	-	-	150W @ 500E	-
	DESICCATE	80W @ 500E	80W @ 500E	80W @ 500E	80W @ 500E
	MICRO	-	80W @ 100E	80W @ 100E	80W @ 100E
PROGRAMS	MACRO	-	80W @ 100E	80W @ 100E	-
	STANDARD	80W @ 100E	-	80W @ 100E	AUTO, 80W @ 100E
	CUT	150W @ 100E	150W @ 100E	150W @ 100E	80W @ 100E
PPREM	SEAL	-	-	-	150W @ 100E
	PPREM	YES	YES	YES	YES
	DIMENSIONS		350 X 310 X 130 mm	400 X 310 X 120 mm	400 X 310 X 120 mm
WEIGHT		<6 Kgs	<6 Kgs	<6 Kgs	<6 Kgs
POWER SUPPLY		160-270 VAC, 50/60 Hz	160-270 VAC, 50/60 Hz	160-270 VAC, 50/60 Hz	160-270 VAC, 50/60 Hz
LEAKAGE	HIGH FREQUENCY	Less than 150mA	Less than 150mA	Less than 150mA	Less than 150mA
	LOW FREQUENCY	Less than 50 uA	Less than 50 uA	Less than 50 uA	Less than 50 uA
DEVIATION	IN OUTPUTPOWER	Less than 15% or15W	Less than 15% or15W	Less than 15% or15W	Less than 15% or15W

Standard Accessories

- # Monopolar handle with silicon cable with electrode set
- # Bipolar forcep with silicon bipolar cable
- # Patient Plate with cable
- # Double Pedal Footswitch
- # Disposable Hand switch
- # Mains cord
- # Unit Cover

Optional Accessories

- # Silicon Patient plate
- # Reusable Hand switch
- # Bionet Bipolar forcep
- # Long 9" Bipolar forcep
- # Small 4" Bipolar forcep
- # Angled tip Bipolar forcep
- # Monopolar forcep with cable
- # Bi Clamp for Vessel sealing
- # Lap. instrument for Vessel Sealing



SOLIDSTATE SURGICAL GENERATORS

MODEL SSEG 302

- Separate generator for Unipolar and Bipolar
- Monopolar generator provides Cut, Blend1, Blend2 and Spray, Fulgurate, Desiccate facilities
- Patient plate monitoring circuit, Audio-visual indication for modes
- Bipolar generator provides Micro, Macro and Bipolar Cut modes
- Suitable for all major surgeries including underwater cutting, TUR, Laproscopy, Hysterectomy etc...



TECHINCAL DATA :
 # Operating frequency : 500 khz # Monopolar : Hand and Foot operated # Bipolar : Foot Operated
 # Monopolar # Cut : 400 W # Blend1 : 250 W # Blend2 : 200 W
 # Spray : 120 W # Fulgurate : 150 W # Desiccate: 80 W
 # Bipolar # Micro Coag : 80 W # Macro Coag : 80 W # Bipolar Cut : 100 W
 # Deviation : <15% or 15 W # Power supply: 220-240VAC,50/60Hz # Patient plate monitoring circuit

MODEL SSEG 300B

- Monopolar Generator provides both Hand as well as foot control
- Patient plate monitoring circuit
- Three Cut, Coag and Bipolar Modes
- Audio-visual indication for patient plate faults and Operating mode
- Suitable for Orthopaedic, Gynaecology, General Surgery Procedures



TECHINCAL DATA :
 # Operating frequency : 500 khz # Monopolar : Hand and Foot operated # Bipolar : Foot Operated
 # Monopolar # Cut : 400 W # Blend1 : 250 W # Blend2 : 200 W
 # Spray : 120 W # Fulgurate : 120 W # Desiccate: 80 W
 # Bipolar # Micro Coag : 80 W # Macro Coag : 80 W # Bipolar Cut : 80 W
 # Deviation : <15% or 15 W # Power supply: 220-240VAC,50/60Hz

MODEL SSEG 402

- Very Compact and Light Weight
- Monopolar Generator provides both Hand as well as foot control
- Patient plate monitoring circuit
- Cut as well as Coag in Bipolar
- Selection switch for Unipolar and Bipolar
- Audio indication for patient plate lead faults and Operating mode
- Suitable for ENT, Ortho, Gynaec, General and Plastic Surgery and Dental Procedures



TECHINCAL DATA :
 # Operating frequency : 500 khz # Monopolar : Hand and Foot operated # Bipolar : Foot Operated
 # Monopolar Cut : 200 W # Monopolar Coag : 120 W # Bipolar Cut : 100 W # Bipolar Coag : 80 W
 # Deviation : <15% or 15 W # Power supply: 220-240VAC,50/60Hz # Patient plate monitoring circuit

FOGGERRedefining fumigation



Fogger unit generates high density fog with droplets size in submicron range , also provide maximum thrust , deeper penetration & wide spread of aerosols ensuring effective & uniform treatment of ULV chemical being fogged , be it aerial fumigation / fogging or surface treatment. Sterile areas ready for within 1-1/2hr maximum , Speed of the application gives great saving in time and permits the treatment to be made when convenient. No flooding of disinfectant on the floor /surface, Compatible with wide range of disinfectants. Special air filter prevents entry of dust, dirt & chemical. Fast, highly effective, safe non toxic fumigation. It can be used for more than 9000 cu.ft area. Suitable for Hospitals, Nursing Homes, Clinics, Pharmaceutical & Food processing industries

TECHINCAL DATA:
 # Motor Speed : 24000 RPM # Tank Capacity : 7.5ltrs # Liquid Discharge rate : 0-100ml/m
 # Reach : 25-35 ft distance & 18-20 ft height # Digital Timer 0-90min
 # For treatment of 100sq.ft of area, 400ml of disinfectant solution is required
 # Tank : Made up of Engg. Plastic # Aerosols : Sub micron size
 # Machine handle, Strainer, Washers, Hardware made up of Stainless steel



FETAL DOPPLERS

Unique equipment for the early detection and diagnosis of pregnancies. It can meet the routine examination requirements of obstetricians, midwives and pregnant woman themselves. Extremely sensitive equipment is designed to be free from the external noise. Use of advanced technology ensures the reliability and long life of equipment. Rugged design makes it compact, portable, durable, convenient to use. Suitable for Routine monitoring of foetal health

- # Handy, Light weight and Easy to use
- # Accurate FHR detection with clear sound
- # Detection of foetal heart at 10 to 12 weeks
- # Built-in Speaker
- # High sensitivity interchangeable probe
- # Real time FHR detection

Accessories:

- # Transducer probe with cable
- # Mains adaptor
- # Gel
- # Carrying case

MODEL	GFM101	GFM11	DFM-001
Body	Shockproof, Plastic	Shockproof, Plastic	Shockproof, Plastic
Type	Handy, Non-Digital	Table top, Non-Digital	Table top, Digital
Display Type	NA	NA	Bright LED Display
Operation	Battery, Mains	Battery, Mains	Battery, Mains
Frequency	2 Mhz	2 Mhz	2 Mhz
Battery	9 v	6 x 1.5 v D size	6 x 1.5 v D size
Alarms	NA	NA	Preset, High and Low (160 and 100bpm)
Weight	Less than 1 kg	Less than 2 kg	Less than 2 kg



OUR OTHER RANGE OF PRODUCTS

- Suction Apparatus • Autoclaves • Fogger • Aerosol Disinfectant • Baby Warmer • Phototherapy unit • Oxygen hood
- Halogen Spot Light • Shortwave Diathermy • Ultrasound Therapy • Traction • Interferential Therapy • Stimulators
- CPM • Tense • Laser Therapy • Wax Bath • IR/UV Lamp • Combo units • Skin Cautery • Woods Lamp
- Radio Frequency Cautery • Body Slimming Units • Hydrocollator Therapy • Slow suction • Cryo Therapy



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INTELLIGENT

SMART

SAFE

HIGH PRECISION

HIGH PERFORMANCE

SURGICAL GENERATORS



years

EMPOWERING HEALTHCARE WITH EXCELLANCE

SINCE 1976

ISO 13485 : 2003