

The Power house...

OUTPUT CHARACTERISTICS-ELECTROSURGICAL UNIT

ELECTRO SURGICAL UNIT	MODE	*PER	MAXIMUM P-P VOLTAGE	RATED LOAD (ohms)	MAX. POWER (WATTS)	**CREST FACTOR	DUTY CYCLE
BIPOLAR/SALINE	Plasma Cut	98	700	50	300	2.5	N/A
	Plasma Coag		900	50	250	4.5	N/A
BIPOLAR 475 KHz	Micro/Coag	98	480	100	250	2.5	N/A
	Macro/Cut		480	100	250	1.5	N/A
	Plasma Bipolar		295	100	250	1.5	N/A
	Auto		290	100	250	1.5	N/A
MONOPOLAR CUT 520KHz	Pure/Cut 1	98	1800	300	400	1.5	N/A
	Blend 1		2500	500	200	2.4	75%
	Blend 2		2600	500	200	3.4	60
	Endo/Gastro Cut		1500	200	250	1.8	50%
MONOPOLAR COAG 450 KHz	Soft/Contact	97	2500	150	150	4.6	25%
	Desiccate		2300	150	150	4.4	6.5%
	Spray/Fulgurate		6000	500	150	7.2	4.6%
	Spray		9500	500	150	10.0	

* PER (Power Efficiency Rating): A measure of an electrosurgical generators ability to deliver the selected power into a wide range of impedance.

** Crest Factor is an indicator of a waveforms' ability to coagulate bleeders without cutting effect.

OUTPUT CHARACTERISTICS - RF VESSEL SEALER & RF SCALPEL™

Ligasealer Modes (At 2MHz-475 KHz)	Maximum Open Circuit Voltage $V_{pp}(V_p)$	Maximum Short Circuit Current (Amperes)	Maximum Power Setting (Watts)	**Crest Factor
Low (Seal)	340 (170)	2.1	95	1.5
Medium (Fusion)	770 (400)	2.1	125	1.5
High (RF)	580 (295)	4.2	300	1.5
RF (scalpel)	480 (300)	3.0	300	1.5

CERTIFIED TO IEC-60601-2-2, IEC 60601-1-2 & IEC 60601-1

Weight and Dimensions Height : 25 cm Width : 33.5 cm Length : 47.0 cm Weight : 10 Kg.	Input Power Requirements Volts : 100-270 VAC Amps : 3-6A Input : 800 VA, 50/60 Hz
Low Frequency Leakage (50-60Hz) Patient leakage < 10 uArms	Audio Volume The mode indicator tones are adjustable to a minimum level of 45 dba at 1 meter.
High Frequency Leakage Less than 10 mA rms., all output	Operating Mode int 10s/30s

DIVLABS HEALTHCARE PVT. LTD.

AN ISO 9001:2000 & ISO: 13485 COMPANY

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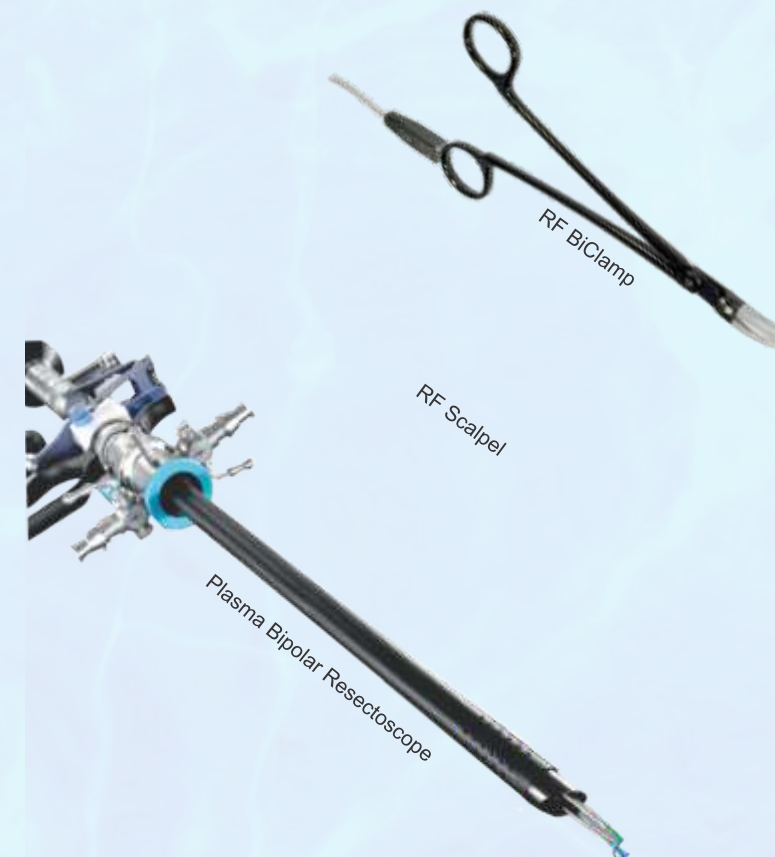
DIVLABS
INTUITIVE ENERGY

DIVLABS "TRINITY-9RF"

Intuitive Energy Source with RF Scalpel™ Technology



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- Advance, Computerised Monopolar "ESU" with tissue impedance feedback technology and can measure 30 million measurement per second for better performance.
- Large intuitive Touch Screen Human Interface Energy Source with 6 Universal multi-functional sockets which can accommodate any instruments.
- Rapid cutting and reliable 7mm vessel sealing from a single surgical instrument (RF Scalpel) for open and laparoscopic procedure.
- Seal can withstand maximum blood pressure of 400mm of Hg.
- Advanced Dual Microprocessor feedback controlled ESU with output power of 400 W having 20 digital signal processors for High Frequency Cutting & Coagulation of biological tissue.
- High End RF Electrosurgical Generator with Monopolar, Bipolar, Vessel Sealer and Plasma Saline Bipolar Resection and compatible with Argon Plasma Coagulation System, Smoke evacuation system and Da Vinci Robotics Platform.
- User settable autostart and auto stop facility in bipolar coagulation with auto start delay facility of 0, 1 and 2 sec.
- Plug and Play feature automatically adjusts the specific parameters as soon as instrument connected and program is selected.
- Ten preset programs. Additional storage for upto 2000 user set programs.

www.divlabsindia.com

DIVLABS
INTUITIVE ENERGY

Intuitive User Interface...

PROGRAM 2
Laparoscopic
Surgery -
RF Scalpel

PROGRAM 1
Open Surgery
(Default Program)

PROGRAM 3
Cancer &
Ablative Surgery

PROGRAM 4
TURP/TCRE
Monopolar

PROGRAM 5
Plasma Saline
Bipolar TURP/
TCRE+COBLATION



Audio Patient
Plate Alarm
with visual
pop-up



Audio HF Leak
Alarm with
visual pop-up

PROGRAM 6
CTVS-General

PROGRAM 7
CTVS - IMA
Harvesting

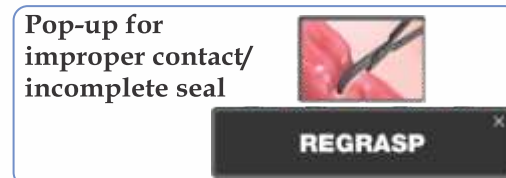
PROGRAM 8
Pump Generator
/Irrigator-
Nuero + Spinal

PROGRAM 10
"Argon Beam"
+ "Liver
Resection"

PROGRAM 9
LLETZ/LEEP
with "Smoke
evacuation "



Pop-up for seal
completion



Pop-up for
improper contact/
incomplete seal

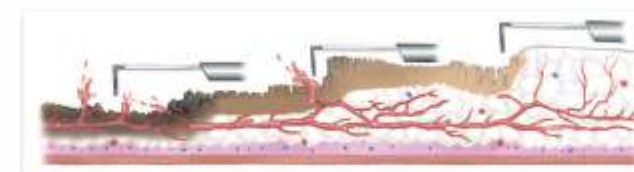
Different Foot switch Configurations



ADVANCE FEATURES

- ▶ The system has 10 Pre set & 2000 sub programmes which can be accessed remotely by user.
- ▶ The System inbuilt feature for accessory assignment & on screen display of Active instruments.
- ▶ Advanced Dual Microprocessor feedback controlled "Intuitive" technology for high frequency cutting and coagulation/hemostasis of biological tissue by concentrating this energy at electrode tip to achieve different surgical effects like cutting, multiple blend levels, dessication, fulguration, Spray and vapourisation etc.
- ▶ Activation is both by footswitch and handswitch for all the different modalities - monopolar, bipolar and Ligasealer (Vessel sealer).
- ▶ Different dedicated programs and accessories/instruments for Laparoscopic monopolar, bipolar, vessel sealer and RF Scalpel™ (Program 1 and Program 2)
- ▶ All the vessel sealing, monopolar, RF Scalpel™ and bipolar accessories of both open and laparoscopic surgeries are of Divlabs make.
- ▶ Intuitive "Pop Up" and audio signals for foll. events:
 - 1) Patient/neutral plate contact quality and connection for utmost patient safety.
 - 2) HF Leak - for monitoring and control of Leakage current.
 - 3) Re grasp - for incorrect application of Vessel sealing instrument.
 - 4) Seal complete - Signal for the user to safely proceed with the cutter after successful sealing.
- ▶ RF Scalpel™ Technology ensures Bipolar cut and coagulation at various levels.
- ▶ Bipolar controls are both automatic and by footswitch.
- ▶ Advanced Electro surgical system which provides consistent performance by using latest and reproducible technology used to command the functionality as the need of surgical application. It comes with 100 programs for different specialities. On site program facility possible. Three different modes of cut, coag and bipolar can be stored individually in each program. True digital power readout with dossage error control. Self diagnostic mode with error display. (25 error messages) Spark sensor technology, and RS-232 and Wifi.
- ▶ Multi-feature Monopolar - With uro-cut, gastro-cut and spray coagulation for all demanding open and underwater procedures.
- ▶ PPCQM - Patient to Patient plate Contact Quality Monitoring technology - monitors the quality and quantity of contact between the patient and the patient plate. If this contact is not proper the unit deactivates & alarms, thus eliminating any risk of Passive electrode site burns.
- ▶ Support NESSY/REM Neutral Electrodes.

TRADITIONAL MONOPOLAR RESECTION



DIVLABS APC SYSTEM OPTIONAL



General advantages of the bipolar Divlabs system against monopolar resection: Optional

- ▶ No TURP Syndrome
- ▶ No Pulmonary edema and hyponatraemia as Saline is not toxic as compared to glycine
- ▶ Less conductive trauma, as the flow of the current between active and neutral electrode is strictly limited to the target area.
- ▶ Lower risk of capsular lesion.
- ▶ Less thermal damage to neighbouring tissues.

BIPOLAR PLASMA RESECTION

