The Valleylab Force™ 2 Generator

High performance capabilities in a multipurpose generator

BLENDED CUT MODES

provide flexibility through varying degrees of hemostasis. Choose one of three preset modes.

SIMULTANEOUS INDEPENDENT COAGULATION

permits two surgeons to fulgurate from a single generator, for added convenience and efficacy. Accessories are activated only when keyed, reducing the potential for injury caused by inadvertent activation.

LOW VOLTAGE COAGULATION

ensures controlled, precise desiccation with less destruction of peripheral tissue, making the Force™ 2 generator ideal for laparoscopic procedures.

REM™ SAFETY

is guaranteed with Valleylab's patented autoranging REM™ system, which continually monitors patient impedance levels. If a fault in the patient/return electrode contact is detected, the REM™ system automatically deactivates the generator – virtually eliminating the risk of burns under the return electrode.

Valleylab REM™ safety has been proven in more than 85 million surgical procedures worldwide.

Valleylab™
Innovations That Work

Force™ 2 Electrosurgical Generator

Technical Specifications (110-120V Force 2-20)

WEIGHT AND DIMENSIONS

Height:	8 in. (20 cm)
Width:	13 in. (33 cm)
Length:	21 in. (53 cm)
Weight:	23 lbs. (10.4 kg)

OUTPUT WAVEFORMS

Cut:	510 kHz sinusoid
Blend 1:	510 kHz sinusoidal bursts at 50% duty cycle recurring at 31 kHz
Blend 2:	510 kHz sinusoidal bursts at 37.5% duty cycle recurring at 31 kHz
Blend 3:	510 kHz sinusoidal bursts at 25% duty cycle recurring at 31 kHz
Coag:	510 kHz damped sinusoidal bursts with a repetition frequency of 31 kHz
Low Voltage Coag:	510 kHz sinusoidal bursts at 25% duty cycle recurring at 31 kHz
Bipolar:	510 kHz sinusoid

Output power changes by less than 5% or 5 watts, whichever is greater, as the line voltage varies from 85-135 volts (into a 300 ohm load).

LOW FREQUENCY LEAKAGE (50-60 Hz)

Source current, patient leads, all outputs tied together.

- Normal polarity, intact chassis ground < 10 µA
- Normal polarity, ground open <100 µA
- Reverse polarity, ground open <100 µA
- Sink current, 140V applied, all inputs <150 µA

HIGH FREQUENCY LEAKAGE

Less than 150 mA rms

INPUT POWER REQUIREMENTS

Operating range is 85 to 135 AC volts.
Current is less than 8 amperes in cut and less than 4 amperes in coag.

POWER READOUTS

Agree with actual power into rated load to within ± 15% or 5 watts, whichever is greater.

AUTORANGING REM™ SYSTEM

Measurement Frequency: 140 kHz ± 20 kHz

Measurement Current: 3 mA maximum

Acceptable Resistance Ranges:
REM™ pad — 5-135 ohms
Non-REM™ pad — less than 20 ohms

Acceptance range is 5-135 ohms after REM™ PolyHesive™ II return electrode is applied. REM™ trip is initial impedance plus 40%. For example, if the initial impedance is 30 ohms, the upper level trip is approximately 42 ohms.

COOLING

Convection, no fan

AUDIO VOLUME

The mode indicator tones are adjustable to a minimum level of 45 dB at 1 meter.

The alarm tones are not adjustable and are set at 65 dB minimum at 1 meter.

Also available in a 220-240 volt, 50-60 Hz configuration.

Designed to meet UL and CSA specifications.

OUTPUT CHARACTERISTICS

Mode	Maximum P-P Voltage	Rated Load (ohms)	Maximum Power (watts)	Crest Factor* (typical)
Pure Cut	3000	300	300	1.9
Blend 1	3500	300	250	3.3
Blend 2	3700	300	200	4.0
Blend 3	4000	300	150	4.8
Coag	7000	300	120	9.0
Low Voltage Coag	4000	300	99	4.8
Bipolar	800	100	70	2.0

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

ORDER INFORMATION

CATALOG NUMBER	DESCRIPTION	ORDER QUANTITY
Force™ 2	Microprocessor-based isolated electrosurgical generator, designed for all general surgical procedures. Unit includes the Valleylab autoranging REM™ system.	1 each

‹ Corporation

Valleylab™

An ISO 9001 certified company

Specifications subject to change without notice. Printed in U.S.A. 945600922 5/98