



The **Medtronic Covidien Valleylab Force FX** is a high-power digital electrosurgical unit. The Force FX features computer controlled instant response technology that ensures a consistent clinical effect through all tissue types. This instant response technology recognizes changes in tissue 200 times per second and adjusts voltage and current accordingly to maintain the proper power. The Valleylab Force FX enables the use of handset or footswitch controls to active the generator. It provides surgeons with the advantage of accurately delivering the selected power setting, even through resistant tissues.

Features

- Instant Response technology that ensures the power delivered remains virtually constant, regardless of the tissue type.
- Three internal microcontrollers that reduce system reaction time and increase the system's processing speed.
- Spray coagulation voltage of no more than 9000 volts for broad, but superficial coagulation with limited capacitive coupling.
- Compatible with the exclusive Computer Motion Hermes Voice Command System.



Specifications

Dimensions

Height: 4.38" (11.1 cm)
Width: 14" (35.6 cm)
Depth: 17" (43.9 cm)
Weight: < 18 lbs. (< 8.1 kg)

Power

PER: 98
Input Power Requirements: Operating range is 85 to 132 AC volts. Maximum current is 7 amperes in Cut and 4 amperes in Coag.
High Frequency Leakage
Bipolar: Less than 60 mArms
Monopolar: Less than 150 mArms

Output Waveforms

Bipolar
Precise: 470 kHz sinusoid
Standard: 470 kHz sinusoid
Macro: 470 kHz sinusoid
Monopolar Cut
Low: 390 kHz sinusoid. Similar to the Pure Cut mode except the maximum voltage is limited to a lower value.
Pure: 390 kHz sinusoid
Blend: 390 kHz bursts of sinusoid, recurring at 27 kHz intervals. 50% duty cycle envelope.
Monopolar Coag
Desiccate: 240 kHz sinusoid repeated at 39 kHz. 8% duty cycle.
Fulgurate: 390 kHz damped sinusoidal bursts with a repetition frequency of 30 or 57 kHz into 500 ohms
Spray: 390 kHz damped sinusoidal bursts with a randomized repetition centered at 28 kHz. Frequencies include $21\text{kHz} < f < 35\text{kHz}$. Output is further modulated by a random 250 Hz envelope with a variable duty cycle. Output power changes by less than 15% or 5 watts, whichever is greater, as the line voltage varies from 104-132 volts and 208-264 volts (at rated load)

REM Contact Quality Monitoring System

Measurement Frequency: 80 kHz \pm 10 kHz
Measurement Current: Less than 10 μ A
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.
Adaptive REM: REM trip is baseline impedance plus 40%. For example, if the baseline impedance is 30 ohms, the upper level trip is approximately 42 ohms. If the pad-patient impedance falls below the baseline impedance, a new baseline is established.

