COVIDIEN ENERGY.
Performance Amplified.

Valleylab™ FT10 Energy Platform

Specification Guide

Digitally signed by Gherman Irina
Date: 2024.05.24 16:23:59 EEST
Reason: MoldSign Signature
Location: Moldova

TISSUEFECT™ TECHNOLOGY

Accommodate various tissue types consistently and respond to the changes in tissue as the device seals. This is TissueFect™ technology that responds at 430,000X per second.

FAST SEALING

1-4 second seal time*[1]

INTUITIVE CONTROL PANEL

Four-quadrant touch screen with enhanced ease of use for quick settings of surgeon preferences and easy to understand error alerts.

SMART™ CONNECTORS

Recognizes which type of instrument is being used and automatically configures energy output for quick, consistent results, regardless of Electrosurgery product.

LIGASURE™ TECHNOLOGY

Improved, and enhanced LigaSure™ vessel sealing performance with

- Faster vessel sealing than ForceTriad™ energy platform[2]
- Minimizes lateral thermal spread to surrounding tissue[3]
- Intuitive use[4]

Valleylab™ FT10 energy platform — our next generation advanced energy platform with improved LigaSure™ vessel sealing technology and expanded electrosurgical features.

Be the first to see how over **2 million devices** sold annually will see performance enhancements.

COVIDIEN

Valleylab™ FT10 Energy Platform

Technical Specifications

General

Output configuration	Isolated output
Cooling	Natural convection and fan
Display	7 in. LCD touchscreen
Connector ports	LED illuminated Smart™ connector readerse on the LigaSure™/Bipolar receptacle
Enclosure	Magnesium
Mounting	• Valleylab™ Universal Generator Cart (VLFTCRT) • Operating-room boom systems • Any stable, flat surface such as a table or cart top

Dimensions and Weight

Height	6.7 in. (17.0 cm)
Width	14.5 in. (35.8 cm)
Length	18.2 in. (46.2 cm)
Weight	22.3 lb. (10.1 kg)

Operating Parameters

Ambient temperature range	50 to 104 °F (10 to 40 °C)
Relative humidity	30% to 75% non-condensing
Atmospheric pressure	700 to 1060 millibars

Transport and Storage

Ambient temperature range	14 to 149 °F (-10 to +65 °C)
Relative humidity	25% to 85% non-condensing
Atmospheric pressure	500 to 1060 millibars

Duty Cycle

The Valleylab™ FT10 energy platform is capable of operating a duty cycle of 25%, defined as 10 seconds active and 30 seconds inactive, in any mode for a period of 4 hours.

Internal Memory

Real-time clock battery	Battery type - Lithium CR1620; Battery capacity - 75 mAh
Storage capacity	4 GB

Audio Tones

Activation Tones	Tone	Duration	Volume
CUT	660 Hz ± 5%	Entire Activation Duration	User adjustable from 45 dBA to 65 dBA (-0/+6 dBA @ 1 m)
COAG	940 Hz ± 5%	Entire Activation Duration	User adjustable from 45 dBA to 65 dBA (-0/+6 dBA @ 1 m)
VALLEYLAB	800 Hz ± 5%	Entire Activation Duration	User adjustable from 45 dBA to 65 dBA (-0/+6 dBA @ 1 m)
BIPOLAR	940 Hz ± 5%	Entire Activation Duration	User adjustable from 45 dBA to 65 dBA (-0/+6 dBA @ 1 m)
LIGASURE	440 Hz ± 5%	Entire Activation Duration	User adjustable from 45 dBA to 65 dBA (-0/+6 dBA @ 1 m)

Radio Frequency Identification (RFID)

Frequency Range	13.56 MHz
RF Output Power	68.17 dBuV/m @ 3 meters
Type of Antenna	Integral Loop Antenna
Modulation	Amplitude-shift Keying (ASK)
Mode of Operation (Simplex/Duplex)	Duplex
Contains Transmitter Module FCC ID	2AAVI-JDK1901
Contains IC ID	11355A-JDK1901

Wireless Fidelity (WiFi)

Transmit/Receive Frequency Range	2.4000 ~ 2.4835 GHz (Industrial Scientific Medical Band)
Standards	IEEE 802.11b, 802.11g, 802.11n
RF Output Power	11b: 17 ± 1.5 dBm 11g: 15 ± 1.5 dBm 11n: 14 ± 1.5 dBm
Data Rate	11b: 1/2/5.5/11 Mbps 11g: 6/9/12/24/36/48/54 Mbps 11n: (20 MHz): MCSO-7 (Up to 72 Mbps) 11n: (40 MHz): MCSO-7 (Up to 150 Mbps)
Securities	WEP 64/128, WPA, WPA2, and IEEE 802.1x
Type of Antenna	Internal Antenna (1T1R)
Contains Module FCC ID	NDD9578111008
Contains IC ID	4701A-78111306

Leakage

Leakage Currents and Patient Auxiliary Currents (IEC 60601-1:2012)

Touch Current	< 100 µA NC, < 500 µA SFC
Earth Leakage Current	< 500 µA NC, < 1000 µA SFC
Patient Auxiliary Current (< 1kHz)	< 10 µA NC, < 50 µA SFC
Patient Auxiliary Current (> 1kHz)	Scaled with frequency per IEC 60601-1:2012, but does not exceed 10mA NC/SFC
Patient Leakage Current	< 10 µA NC, < 50 µA SFC
Total Patient Leakage Current	< 50 µA NC, < 100 µA SFC

NC – Normal Condition

SFC – Single Fault Condition (as defined in IEC 60601-1:2012)

Total Patient Leakage Current – Measurement of patient leakage current with all patient outputs connected together

High Frequency Leakage (IEC 60601-2-2)

Bipolar	< 68.9 mARMS
Monopolar measured directly at the ESU terminals	< 100 mARMS
LigaSure™/BPR measured directly at the ESU terminals	< 100 mARMS

REM Contact Quality Monitoring System

Interrogation frequency	68–75 kHz
Interrogation current	< 100 µA RMS
Interrogation Voltage	< 12 VRMS
Impedance Sense Range	5 Ω to 135 Ω
Impedance Accuracy (RF not activated)	± 7 Ω
Impedance Accuracy (RF Activated)	Greater of ± 14 Ω or 20%

Backup Power

The Valleylab™ FT10 energy platform retains all user programmed features, calibration, and statistical data when switched off and unplugged. The Valleylab™ FT10 energy platform operates within specification when switched over to a supplied-line power by hospital backup systems.

Output Characteristics

Mode	Rated Load (Ω)	Rated Output Power (W)	Peak Voltage	Current RMS Max	Crest Factor*	Duty Cycle
Monopolar CUT						
PURE	300	300	910	1.25	1.42	100%
BLEND	300	200	1100	1	2.5	50%
VALLEYLAB	300	200	1549	1	3.8	25%
Monopolar COAG						
FULGURATE	500	120	3135	1	5.7	6.25%
SPRAY	500	120	3575	1	6.5	4.76%
SOFT	100	120	240	1.55	1.42	100%
Bipolar						
LOW (1-15 W)	100	15	88	1	1.42	100%
MEDIUM (16-40 W)	100	40	143	2	1.42	100%
HIGH (45-95 W)	100	95	310	2	1.42	100%
LigaSure™						
LIGASURE	20	350	163	5.5	1.42	N/A
Bipolar Resection						
CUT	500	375	495	2.4	1.42	100%
COAG	100	175	212	3.2	1.42	100%

Output Waveforms

TissueFect™ Tissue Sensing Technology, an automatic adjustment, controls all modes. As tissue resistance increases from zero, the energy platform outputs constant current followed by constant power followed by constant voltage. The maximum output voltage is controlled to reduce capacitive coupling and video interference and to minimize sparking.

1. Based on Covidien memo: "LigaSure Data Sources for VLFT10 White Papers." September 2015 RE00025819 Rev A
2. Data from product validation testing. Covidien report, "R0064457, LigaSure™ Renal Bench Burst Pressure Evaluation of the Valleylab™ FT10." May 29, 2015
3. Based on Covidien In-vivo GLP Acute report: "Verification – Report – GLP Acute Animal Lab – LigaSure™ Preclinical Evaluation of Valleylab™ FT10." May 19, 2015: RE00005503; Report page 4, Attachment pg. 33-39
4. Based on product validation testing. Covidien report, "Product Validation of Valleylab™ FT10 Surgeon & Nurse Evaluation in Simulated Use." May 26, 2015; RE00005401 Rev A; pg. 11

COVIDIEN

5920 Longbow Drive
Boulder, Colorado
80301

303-530-6100
800-255-8522

Covidien.com/Surgical