

THE NEXT GENERATION ENERGY PLATFORM IS HERE.

Valleylab™ FT10 Energy Platform Specification Guide

The Valleylab™ FT10
energy platform is here with:

- Improved LigaSure™ vessel-sealing technology.
- Expanded electrosurgical features.

FAST SEALING

Seals vessels
in one to four
seconds*¹

TISSUEEFFECT™ TECHNOLOGY

Consistently responds to
changes in tissue — at a speed
of 434,000 times per second
— as the device seals

INTUITIVE CONTROL PANEL

- Four-quadrant touch screen with enhanced ease of use
- Quick settings for surgeon preferences
- Easy to understand error alerts

LIGASURE™ TECHNOLOGY

Improved and enhanced
LigaSure™ vessel-sealing
performance:

- Faster vessel sealing than ForceTriad™ energy platform²
- Minimizes lateral thermal spread to surrounding tissue³

SMART CONNECTORS

Recognizes the type of instrument used
and automatically configures energy
output for consistent results



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 reader on the LigaSure™/Bipolar receptacle
Enclosure	Magnesium
Mounting	<ul style="list-style-type: none">Valleylab™ universal generator cart (VLFTCRT)OR boom systemsAny 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 - minimum after 75 mAh
Storage capacity	8 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	0 Ω to 150 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. It also operates within specification when switched over to a supplied-line power by hospital backup systems.

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.

Output Characteristics

Mode	Rated Load (Ω)	Rated Output Power (W)	Peak Voltage	Current RMS Max	Crest Factor*	Duty Cycle
Monopolar CUT						
PURE	300	300	1287	1.25	1.42	100%
BLEND	300	200	2178	1	2.5	50%
VALLEYLAB	300	200	2783	1	3.8	25%
Monopolar COAG						
FULGURATE	500	120	3449	1	5.7	6.25%
SPRAY	500	120	3933	1	6.5	4.76%
SOFT	100	120	264	1.55	1.42	100%
Bipolar						
LOW (1-15 W)	100	15	133	1	1.42	100%
MEDIUM (16-40 W)	100	40	214	2	1.42	100%
HIGH (45-95 W)	100	95	462	2	1.42	100%
LigaSure™						
LIGASURE	20	350	244	5.5	1.42	N/A
Bipolar Resection						
CUT	500	375	742	2.4	1.42	100%
COAG	100	175	318	3.2	1.42	100%

ORDERING INFORMATION

VLFT10GEN Valleylab™ FT10 Energy Platform
1 per package



1. Based on internal test report #RE00025819 Rev A, LigaSure data sources for VLFT10 white papers. September 2015.
2. Based on data from internal test report #R0064457, LigaSure™ renal bench burst pressure evaluation of the Valleylab™ FT10. May 29, 2015.
3. Based on internal test report #RE00005503, Verification – report – GLP acute animal lab – LigaSure™ preclinical evaluation of Valleylab™ FT10. May 19, 2015.
4. Based on internal test report #RE00005401 Rev A, Product validation of Valleylab™ FT10 surgeon & nurse evaluation in simulated use. May 26, 2015.

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