

PURCHASING DEPARTMENT
581 Plains Road, Suite 3, Kingston, RI 02881 USA p: 401.874.2171 f: 401.874.2306 uri.edu/purchasing



BID/PROPOSAL

COMMODITY: CARDIOVASCULAR INSTRUMENTATION: DEFIBRILLATORS DATE: 2/27/2013

FORMAL BID NO. _____ PUBLIC BID NO. 2321 RFP NO. _____

BIDS ARE TO BE RECEIVED IN URI PURCHASING DEPARTMENT BY: DATE: 3/20/2013 TIME: 3:00 PM

BUYER: EILEEN CARDILLO / MSC SURETY REQUIRED: YES: _____ NO: X

PRE-BID/PROPOSAL CONFERENCE: DATE: _____ TIME: _____
MANDATORY: YES: _____ NO: _____

LOCATION: _____

BE SURE ALL INFORMATION SHOWN BELOW IS CORRECT.
FEDERAL EMPLOYER IDENTIFICATION NUMBER MUST BE INCLUDED.

COMPANY NAME: _____ FEIN: _____

STREET AND NUMBER: _____

CITY, STATE & ZIP CODE: _____

ORDERING E-MAIL ADDRESS: _____

**No offer will be considered that is not accompanied by the attached
University of Rhode Island Bidder Certification Form/Contract Offer
completed and signed by the offeror.**

Print Name and Title

Telephone Number/Facsimile Number

Signature

Date

Company F.E.I.N.

THIS BID WILL NOT BE HONORED UNLESS SIGNED

The University of Rhode Island is an equal opportunity employer committed to the principles of affirmative action.

University of Rhode Island Bidder Certification Form/Contract Offer

ALL OFFERS ARE SUBJECT TO THE REQUIREMENTS, PROVISIONS AND PROCEDURES CONTAINED IN THIS CERTIFICATION FORM/CONTRACT OFFER. Offerors are expected to read, sign and comply with all requirements. Failure to do so may be grounds for disqualification of the offer contained herein.

Rules for Submitting Offers

This Certification Form/Contract Offer must be attached in its entirety to the front of the offer and shall be considered an integral part of each offer made by a vendor to enter into a contract with the University of Rhode Island. As such, submittal of the entire Bidder Certification Form/Contract Offer, signed by a duly authorized representative of the offeror attesting that he/she (1) has read and agrees to comply with the requirements set forth herein and (2) to the accuracy of the information provided and the offer extended, is a mandatory part of any contract award.

To assure that offers are considered on time, each offer must be submitted with the specific Bid/RFP/LOI number, date and time of opening marked in the upper left hand corner of the envelope. Each bid/offer must be submitted in separate sealed envelopes.

A complete signed (in ink) offer package must be delivered to the University of Rhode Island Purchasing Office by the time and date specified for the opening of responses in a sealed envelope.

Bids must be submitted on the URI bid solicitation forms provided, indicating brand and part numbers of items offered, as appropriate. Bidders must submit detailed cuts and specs on items offered as equivalent to brands requested WITH THE OFFER. Bidders must be able to submit samples if requested.

Documents misdirected to other State locations or which are not present in the University of Rhode Island Purchasing Office at the time of opening for whatever cause will be deemed to be late and will not be considered. For the purposes of this requirement, the official time and date shall be that of the time clock in the reception area of the University of Rhode Island Purchasing Office. Postmarks shall not be considered proof of timely submission.

RIVIP SOLICITATIONS. To assure maximum access opportunities for users, public bid/RFP solicitations shall be posted on the RIVIP for a minimum of seven days and no amendments shall be made within the last five days before the date an offer is due. Except when access to the Web Site has been severely curtailed and it is determined by the Purchasing Agent that special circumstances preclude extending a solicitation due date, requests to mail or fax hard copies of solicitations will not be honored. When the result of an internet solicitation is unsuccessful, the University of Rhode Island will cancel the original solicitation and resolicit the original offer directly from vendors.

PRICING. Offers are irrevocable for sixty (60) days from the opening date (or such other extended period set forth in the solicitation), and may not be withdrawn, except with the express permission of the University Purchasing Agent. All pricing will be considered to be firm and fixed unless otherwise indicated. The University of Rhode Island is exempt from Federal excise taxes and State Sales and Use Taxes. Such taxes shall not be included in the bid price. PRICES QUOTED ARE FOB DESTINATION.

DELIVERY and PRODUCT QUALITY. All offers must define delivery dates for all items; if no delivery date is specified, it is assumed that immediate delivery from stock will be made. The contractor will be responsible for delivery of materials in first class condition. Rejected materials will be at the vendor's expense.

PREVAILING WAGE and OSHA SAFETY TRAINING REQUIREMENTS. The provisions of the State labor laws and OSHA Safety Training, including but not limited to Rhode Island General Laws §37-13-1 et seq. and §28-20-1 et seq. shall apply for all public works contracts. Prevailing wage rates are posted in the information section of the RIVIP. The RI Department of Labor and Training should be contacted for regulatory requirements.

Apprenticeship. Rhode Island General Laws §37-13-3.1 requires all general contractors and subcontractors who perform work on any public works contract awarded by the state/URI valued at One Million dollars (\$1,000,000) or more shall employ apprentices required for the performance of the awarded contract. The number of apprentices shall comply with the apprentice to journeyman ratio for each trade approved by the apprenticeship council of the department of labor and training.

In addition to executing this certification, the general contractor shall be responsible for requiring that all subcontractors on the awarded project certify their compliance with R.I. Gen. Laws §37-13-3.1 prior to allowing the subcontractor to commence work on the awarded project. The general contractor shall be responsible for submitting the subcontractors' compliance certification to the University of Rhode Island Purchasing Office after the contracts are finalized between the contractor and subcontractor.

PUBLIC RECORDS. Offerors are advised that all materials submitted to the University for consideration in response to this solicitation will be considered without exception to be Public Records pursuant to Title 38 Chapter 2 of the Rhode Island General Laws, and will be released for inspection immediately upon request once an award has been made. Offerors are encouraged to attend public bid/RFP openings to obtain information; however, bid/RFP response summaries may be reviewed after award(s) have been made by visiting the Rhode Island Vendor Information Program (RIVIP) at www.purchasing.ri.gov, Bidding Opportunities +, Other RI Bid Opportunities or appearing in person at the University of Rhode Island Purchasing Office Mondays through Fridays between 8:30 am – 3:30 pm. Telephone requests for results will not be honored. Written requests for results will only be honored if the information is not available on the RIVIP.

Award will be made to the responsive and responsible offeror quoting the lowest net price in accordance with specifications, for any individual item(s), for major groupings of items, or for all items listed, at the University's sole option.

BID SURETY. Where bid surety is required, bidder must furnish a bid bond or certified check for 5% of the bid total with the bid, or for such other amount as may be specified. Bids submitted without a required bid surety will not be considered.

SPECIFICATIONS. Unless specified "no substitute", product offerings equivalent in quality and performance will be considered (at the sole option of the University) on the condition that the offer is accompanied by detailed product specifications. Offers which fail to include alternate specifications may be deemed nonresponsive.

VENDOR AUTHORIZATION TO PROCEED. When a purchase order, change order, contract/agreement or contract/agreement amendment is issued by the University of Rhode Island, no claim for payment for services rendered or goods delivered contrary to or in excess of the contract terms and scope shall be considered valid unless the vendor has obtained a written change order or contract amendment issued by the University of Rhode Island Purchasing Office PRIOR to delivery.

Any offer, whether in response to a solicitation for proposals or bids, or made without a solicitation, which is accepted in the form of an order OR pricing agreement made in writing by the University of Rhode Island Purchasing Office, shall be considered a binding contract.

REGULATIONS, GENERAL TERMS AND CONDITIONS GOVERNING STATE AND BOARD OF GOVERNORS FOR HIGHER EDUCATION CONTRACTS. This solicitation and any contract or purchase order arising from it are issued in accordance with the specific requirements described herein, and the State's Purchasing Laws and Regulations and other applicable State Laws, including the Board of Governors for Higher Education General Terms and Conditions of Purchase. The regulations, General Terms and Conditions are incorporated into all University of Rhode Island contracts and can be viewed at: www.ribghe.org/procurementregs113006.pdf and www.purchasing.ri.gov.

ARRA SUPPLEMENTAL TERMS AND CONDITIONS. Contracts and sub-awards funded in whole or in part by the American Recovery and Reinvestment Act of 2009. Pub.L.No. 111-5 and any amendments thereto, such contracts and sub-awards shall be subject to the Supplemental Terms and Conditions for Contracts and Sub-awards funded in whole or in part by the American Recovery and Reinvestment Act of 2009. Pub.L.No. 111-5 and any amendments thereto located on the Division of Purchases website at www.purchasing.ri.gov.

EQUAL EMPLOYMENT OPPORTUNITY. Compliance certificate and agreement procedures will apply to all awards for supplies or services valued at \$10,000 or more. Minority Business Enterprise policies and procedures, including subcontracting opportunities as described in Title 37 Chapter 14.1 of the Rhode Island General Laws also apply.

PERFORMANCE BONDS. Where indicated, successful bidder must furnish a 100% performance bond and labor and payment bond for contracts subject to Title 37 Chapters 12 and 13 of the Rhode Island General Laws. All bonds must be furnished by a surety company authorized to conduct business in the State of Rhode Island. Performance bonds must be submitted within 21 calendar days of the issuance of a tentative notice of award.

DEFAULT and NON-COMPLIANCE Default and/or non-compliance with the requirements and any other aspects of the award may result in withholding of payment(s), contract termination, debarment, suspension, or any other remedy necessary that is in the best interest of the state.

COMPLIANCE Vendor must comply with all applicable federal, state and local laws, regulations and ordinances.

Effective January 1, 2013 all *public works project* related bids or proposals exceeding FIVE HUNDRED THOUSAND (\$500,000) DOLLARS are required to include a "public copy". All agency contract solicitations, requests for proposals, invitations for bids, etc., shall state that any bid or proposal that exceeds FIVE HUNDRED THOUSAND (\$500,000) DOLLARS must include a copy to be available for public inspection upon the opening of the bids. Any bid or proposal in excess of FIVE HUNDRED THOUSAND (\$500,000) DOLLARS which does not include a copy for public inspection shall be deemed to be non-responsive. For further information, please see R.I. Gen. Laws §37-2-18(j) and State of Rhode Island Procurement Regulations at <http://purchasing.ri.gov/rulesandregulations/rulesandregulations.aspx>.

ALL CONTRACT AWARDS ARE SUBJECT TO THE FOLLOWING DISCLOSURES & CERTIFICATIONS

Offerors must respond to every disclosure statement. A person authorized to enter into contracts must sign the offer and attest to the accuracy of all statements. Incomplete certification forms are grounds for disqualification of offer.

You MUST answer 'Yes' or 'No' to the following questions:

___1 State whether your company, or any owner, stockholder, officer, director, member, partner, or principal thereof, or any subsidiary or affiliated company, has been subject to suspension or debarment by any federal, state, or municipal government agency, or the subject of criminal prosecution, or convicted of a criminal offense with the previous five (5) years. If so, then provide details below.

___2 State whether your company, or any owner, stockholder, officer, director, member, partner, or principal thereof, or any subsidiary or affiliated company, has had any contracts with a federal, state or municipal government agency terminated for any reason within the previous five (5) years. If so, then provide details below.

___3 State whether your company or any owner, stockholder, officer, director, member, partner, or principal thereof, or any subsidiary or affiliated company, has been fined more than \$5000 for violation(s) of Rhode Island environmental laws by the Rhode Island Department of Environmental Management within the previous five (5) years. If so, then provide details below.

___4 I/we certify that I/We will immediately disclose, in writing, to the University Purchasing Agent any potential conflict of interest which may occur during the course of the engagement authorized pursuant to this contract.

___5 I/we acknowledge that, in accordance with (1) Chapter §37-2-54(c) of the Rhode Island General Laws "no purchase or contract shall be binding on the state or any agency thereof unless approved by the Department [of Administration] or made under general regulations which the Chief Purchasing Officer may prescribe," and (2) RIGL section §37-2-7(16) which identifies the Board of Governors for Higher Education as a public agency and gives binding contractual authority to the University Purchasing Agent, including change orders and other types of contracts and under State Purchasing Regulation 8.2.1.1.2 any alleged oral agreement or arrangements made by a bidder or contractor with any agency or an employee of the University of Rhode Island may be disregarded and shall not be binding on the University of Rhode Island.

___6 I/we certify that I or my firm possesses all licenses required by Federal and State laws and regulations as they pertain to the requirements of the solicitation and offer made herein and shall maintain such required license(s) during the entire course of the contract resulting from the offer contained herein and, should my/our license lapse or be suspended, I/we shall immediately inform the University of Rhode Island Purchasing Agent in writing of such circumstance.

___7 I/we certify that I/we will maintain required insurance during the entire course of the contract resulting from the offer contained herein and, should my/our insurance lapse or be suspended, I/we shall immediately inform the University of Rhode Island Purchasing Agent in writing of such circumstance.

___8 I/we certify that I/we understand that falsification of any information herein or failure to notify the University of Rhode Island Purchasing Agent as certified herein may be grounds for suspension, debarment and/or prosecution for fraud.

___9 I/we acknowledge that the provisions and procedures set forth in this form apply to any contract arising from this offer.

___10 I/we acknowledge that I/we understand the State's Purchasing Laws (§37-2 of the General Laws of Rhode Island) and Purchasing Regulations and General Terms and Conditions available at the Rhode Island Division of Purchases Website (<http://www.purchasing.ri.gov>) and the Board of Governors Website (www.righe.org/procurementregs113006.pdf) apply as the governing conditions for any contract or purchase order I/we may receive from the University of Rhode Island, including the offer contained herein.

___11 NEW REVISED REQUIREMENT*-IMPORTANT!! I/we hereby acknowledge that I/we understand that effective January 1, 2013 all public works project related bids or proposals exceeding FIVE HUNDRED THOUSAND (\$500,000) dollars, inclusive of all proposed alternates, must include a "public copy" as required by R.I. Gen. Laws §37-2-18(j) and the State Procurement Regulations. It is further understood that any bid or proposal in excess of FIVE HUNDRED THOUSAND (\$500,000) dollars which does not include a copy for public inspection shall be deemed to be non-responsive.

___12 I/we certify that the above information is correct and complete.

IF YOU HAVE ANSWERED "YES" TO QUESTIONS #1 – 3 OR IF YOU ARE UNABLE TO CERTIFY YES TO QUESTIONS #4 – 12 OF THE FOREGOING, PROVIDE DETAILS/EXPLANATION IN AN ATTACHED STATEMENT. INCOMPLETE CERTIFICATION FORMS SHALL BE GROUNDS FOR DISQUALIFICATION OF OFFER.

Signature below commits vendor to the attached offer and certifies (1) that the offer reflects all solicitation amendments (2) that the above statements and information are accurate and that vendor understands and has complied with the requirements set forth herein.

Vendor's Signature: _____ Bid Number: _____ Date: _____
(Person Authorized to enter into contracts; signature must be in ink) (if applicable)

Print Name and Title of Company official signing offer Telephone Number

COMMODITY: CARDIOVASCULAR INSTRUMENTATION: DEFIBRILLATORS
 OPENING DATE & TIME: 3/20/13 3:00 PM

SHIP TO:
 University of Rhode Island
 Nursing
 2 Heathman Road
 Kingston, RI 02881

BIDDER (NAME OF FIRM)

BIDDER (NAME OF FIRM)

BID NO: 2321

BID NO: 2321

BID NO: 2321

ITEM NO.	DESCRIPTION	QUANTITY	UOM	UNIT PRICE	EXTENDED PRICE	UNIT PRICE	EXTENDED PRICE	ITEM NO.
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INSTRUCTIONS:
 IF BIDDING ON ANY ITEM, THE ENTIRE BID MUST BE RETURNED. THE PRICE COLUMN ON THE RIGHT WILL BE DETACHED TO CREATE A BID TABULATION SPREAD SHEET FOR THE "OFFICIAL BID ANALYSIS", THEREFORE:

- A. VENDOR NAME MUST APPEAR IN BOTH COLUMNS ON "EVERY" PAGE UNDER THE WORDS "BIDDER"
- B. PRICE COLUMNS MUST CONTAIN "EXACTLY" THE SAME INFORMATION.
- C. ANY SUPPLEMENTARY INFORMATION MUST BE REPEATED IN "BOTH" COLUMNS.
- D. TO ASSURE THAT OFFERS ARE CONSIDERED ON TIME, EACH OFFER MUST BE SUBMITTED WITH SPECIFIC BID/REP NUMBER (PROVIDED ABOVE), DATE AND TIME OF OPENING MARKED IN THE UPPER LEFT HAND CORNER OF ENVELOPE. EACH BID/OFFER MUST BE SUBMITTED IN SEPARATE SEALED ENVELOPES:

MAIL TO: COURIER:
 UNIVERSITY OF RHODE ISLAND UNIVERSITY OF RHODE ISLAND
 P.O. BOX 1773 PURCHASING DEPARTMENT
 PURCHASING DEPARTMENT DINING SERVICES DISTRIBUTION CENTER
 PLAINS ROAD 581 PLAINS ROAD
 KINGSTON, RI 02881 KINGSTON, RI 02881-2010

DOCUMENTS MISDIRECTED TO OTHER STATE LOCATIONS OR WHICH ARE NOT PRESENT IN THE UNIVERSITY OF RHODE ISLAND PURCHASING DEPARTMENT AT THE TIME OF OPENING FOR WHATEVER CAUSE WILL BE DEEMED TO BE LATE AND WILL NOT BE CONSIDERED. FOR THE PURPOSE OF THIS REQUIREMENT, THE OFFICIAL TIME AND DATE SHALL BE THAT OF THE TIME CLOCK IN THE UNIVERSITY OF RHODE ISLAND PURCHASING DEPARTMENT. POSTMARKS SHALL NOT BE CONSIDERED PROOF OF TIMELY SUBMISSION.

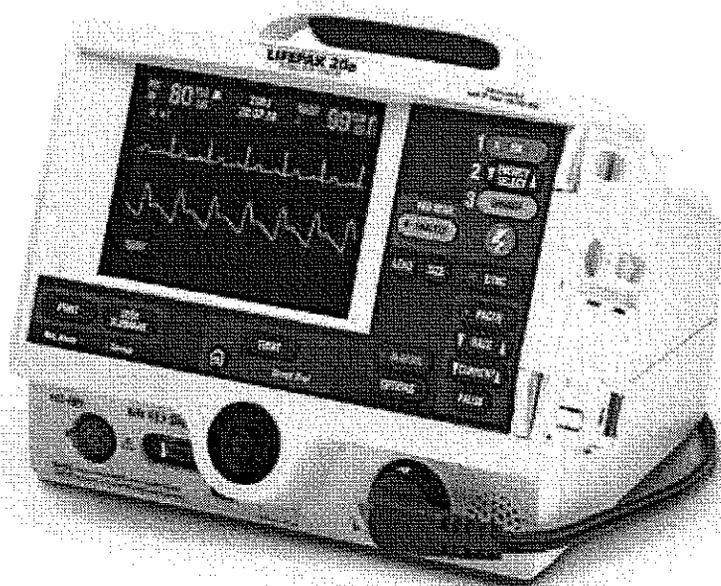
FAILURE TO COMPLETE FORM AS INSTRUCTED MAY BE GROUNDS FOR "DISQUALIFICATION".

GROUP PURCHASING ORGANIZATIONS (GPO):

THE UNIVERSITY OF RHODE ISLAND IS A MEMBER OF THE FOLLOWING:

- 1) Educational & Institutional Cooperative Purchasing (E&I)
- 2) Provista

1	REFURBISHED Physio-Control Lipeak 20e Defibrillator/Monitor (NO BRAND SUBSTITUTE)	1	EA	\$	\$	\$	\$	1
Per specifications to follow. Unit to be configured without SpO2 monitoring parameter.								
Paddle Option: Standard adult paddles with embedded pediatric paddles.								
Device should be labeled for "non-clinical" use and registered with the FDA as an ACLS training unit.								
Warranty: Minimum 90 days.								



LIFEPAK[®] 20e DEFIBRILLATOR/MONITOR

Specifications

GENERAL

The LIFEPAK 20e defibrillator/monitor has seven main operating modes:

Manual Mode: Provides a normal operating capability for ALS users. Allows access to manual mode energy selections up to 360J, synchronized cardioversion and pacing. ECG waveform is displayed.

AED Mode: Provides a normal operating capability for BLS users. All user features are available except manual defibrillation, synchronized cardioversion, pacing, and access to archived patient records. Provides shock energy defaults up to 360J. User selectable option to display ECG waveforms and/or visual AED prompts.

Setup Mode: Allows the operator to configure the device settings

Service Mode: Allows the operator to execute diagnostic tests and calibrations, to display device module software and hardware versions, and to display and print the diagnostic code log

Inservice Mode: Simulated waveforms are available for demonstration purposes. The waveforms consist of short segments of realistic data, which are repeated to form a continuous waveform.

Archive Mode: Provides operator the opportunity to access records of previous patients for review, transmission, printing, editing or deletion

Auto Test Mode: Performs daily self tests

POWER

The device is an AC line operated device with an internal battery as backup.

AC Powered: 90–132 VAC 50/60Hz, 198–264 VAC 50/60 Hz, total power draw less than 120 Volt-Amperes (VA)

Internal Battery Backup: Lithium-Ion. Battery charges while device operates from AC Power.

Operating Time: A new fully-charged internal backup battery will provide the following prior to shutdown:

	TOTAL	AFTER LOW BATTERY
Monitoring plus SpO ₂ (minutes):	210	5
Monitoring, plus pacing (at 100 ma, 60 ppm), plus SpO ₂ (minutes):	110	2
Defibrillation (360J discharges):	140	3

Battery Charge Time: <4 hours when device is powered off and AC power is applied

Low Battery Indication and Message: When the device is unplugged from AC power, it switches to battery. When the battery gets low, the battery status indicator displays one yellow segment and a "low battery" message and warning tone occurs. Shortly thereafter the status indicator displays one flashing red segment, the "low battery; connect to AC power" message appears, and a warning tone occurs.

Service Indicator: LED illuminates when service is required

PHYSICAL CHARACTERISTICS

Weight:

- Fully featured defibrillator/monitor (pacing, SpO₂ and door, without paper or cables) 5.58 kg (12.3 lbs)
- QUIK-COMBO® cable: 0.20 kg (.43 lbs)
- Standard (hard) paddles: 0.88 kg (1.95 lbs)

Height: 21.3 cm (8.4 in)

Width: 26.2 cm (10.3 in)

Depth: 26.2 cm (10.3 in)

DISPLAY

Size (active viewing area): 115.18 mm (4.53 in) wide x 86.38 mm (3.4 in) high

Resolution: 320 x 240 dot color active LCD

Displays a minimum of 4 seconds of ECG and alpha numerics for values, device instructions or prompts

Option to display one additional waveform

Waveform display sweep speed: 25 mm/sec for ECG

DATA MANAGEMENT

The device can easily print a CODE SUMMARY™ report, including an introduction with patient information and critical event record. The summary report also includes event and vital signs log, and waveforms associated with certain events. The device can print archived patient records and has two data communication ports—infrared (IrDA) and a direct serial port, which supports a serial data cable.

COMMUNICATIONS

The device is capable of transferring data records by IrDA version 1.0

MONITOR

ECG

ECG can be monitored through 3-wire or 5-wire ECG cables. Standard paddles or therapy electrodes (QUIK-COMBO pacing/defibrillation/ECG electrodes or FAST-PATCH® disposable defibrillation/ECG electrodes) are used for paddles lead monitoring

Compatible with LIFEPAK 12 ECG and therapy cables

Lead Selection:

Leads I, II and III, (3-wire ECG cable)

Leads I, II, III, AVR, AVL, and AVF, V (c) acquired simultaneously, (5-wire ECG cable)

ECG size: 4, 3, 2.5, 2, 1.5, 1, 0.5, 0.25 cm/mV

Heart Rate Display: 20–300 bpm digital display

Out of Range Indication: Display symbol "—"

Heart symbol flash for each QRS detection

Continuous Patient Surveillance System (CPSS): In AED mode, while Shock Advisory System is not active, CPSS monitors the patient via QUIK-COMBO paddles or Lead II ECG for potentially shockable rhythms.

Voice Prompts: Used for selected warnings and alarms (Configurable On/Off)

Analog ECG Output: 1V/mV x 1.0 gain < 35 ms delay

Common Mode Rejection: 90 db at 50/60 Hz

ALARMS

Quick Set: Activates alarms for all parameters

VF/VT Alarm: Activates continuous CPSS monitoring in Manual Mode

PRINTER

Prints continuous strips of the displayed patient information

Paper size: 50 mm (2.0 in)

Print speed: Continuous ECG 25 mm/sec +/- 5% (measured in accordance with AAMI EC-11, 4.2.5.2)

Delay: 8 seconds

Autoprint: Waveform events print automatically (user configurable)

Print Speed for CODE SUMMARY Reports: 25 mm/sec

FREQUENCY RESPONSE

Diagnostic: 0.05 to 150 Hz or 0.05 to 40 Hz (user configurable)

Monitor: 0.67 to 40 Hz or 1 to 30 Hz (user configurable)

Paddles: 2.5 to 30 Hz

Analog ECG Output: 0.67 to 32 Hz (except 2.5 to 30 Hz for paddles ECG)

DEFIBRILLATOR

Waveform: Biphasic Truncated Exponential. The following specifications apply from 25 to 200 ohms, unless otherwise specified.

Energy Accuracy: ±1 joule or 10% of setting, whichever is greater, into 50 ohms ±2 joule or 15% of setting, whichever is greater, into any impedance from 25–100 ohms

Voltage Compensation: Active when disposable therapy electrodes are attached. Energy output within ± 5% or ± 1 joule, whichever is greater, of 50 ohm value, limited to the available energy which results in the delivery of 360 joules into 50 ohms.

PATIENT IMPEDANCE	PHASE 1 DURATION (MS)		PHASE 2 DURATION (MS)	
	MIN.	MAX.	MIN.	MAX.
25	5.1	6.0	3.4	4.0
50	6.8	7.9	4.5	5.3
100	8.7	10.6	5.8	7.1
125	9.5	11.2	6.3	7.4

Paddle Options:

- Standard adult paddles with embedded pediatric paddles (optional)

Cable length: 2.4 meter (8-foot) long QUIK-COMBO cable (not including electrode assembly)

MANUAL

Energy Select: 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 30, 50, 70, 100, 125, 150, 175, 200, 225, 250, 275, 300, 325, and 360 joules and user configurable sequence of 100–360, 100–360, 100–360 joules

Charge time:

- Charge time to 200J <5 seconds with fully charged battery
- Charge time to 360J <7 seconds with fully charged battery
- Charge time to 360J <10 seconds while not in low battery operations

Synchronized Cardioversion:

- Energy transfer begins within 60 ms of the QRS peak
- Energy transfer begins within 25 ms of the External Sync Pulse
- External Sync Pulse; 0–5V (TTL Level) Pulse, active High, > 5 ms in duration, no closer than 200 ms apart and no further than 1 second apart

AED

Shock Advisory System is an ECG analysis system that advises the operator if the algorithm detects a shockable or nonshockable ECG rhythm. SAS acquires ECG via therapy electrodes only.

Shock Ready Time: Using a fully charged battery at normal room temperature, the device is ready to shock within 16 seconds of power on, if initial rhythm finding is "Shock Advised"

The AED mode of the LIFEPAK 20e defibrillator/monitor is not intended for use on children less than 8 years of age.

cprMAX™ technology Setup Options (items marked with * are default settings)

- Stacked Shocks: Off*, On
- Initial CPR: Off*, Analyze First, CPR First
- Preshock CPR: Off*, 15, 30 seconds
- Pulse Check: Never*, After Second No Shock Advised, After Every No Shock Advised, Always
- CPR Time 1 & 2: 15, 30, 45, 60, 90, 120*, 180 seconds, 30 minutes

Users should refer to the LIFEPAK 20e defibrillator/monitor operating instructions for details on how to customize the configuration of their devices to hospital protocols.

PACER

Pacing Mode: Demand or nondemand rate and current defaults (user configurable)

Pacing Rate: 40 to 170 ppm

Rate Accuracy: +/- 1.5% over entire range

Output Waveform: Monophasic, amplitude stable to +/- 5% relative to leading edge for currents greater than or equal to 40 mA, Duration 20 +/- 1 ms, Rise/Fall times <= 1 ms [10–90% levels]

Output Current: 0 to 200 mA

Pause: Pacing pulse frequency reduced by a factor of 4 when activated

Refractory Period: 200 to 300 ms +/- 3% (function of rate)

ENVIRONMENTAL

Temperature, Operating: 5 to 40° C (41 to 104°F)

Temperature, Nonoperating: -20 to +60° C (-4 to +140° F) except therapy electrodes

Relative Humidity, Operating: 5 to 95%, noncondensing
Atmospheric Pressure, Operating: Ambient to 522 mmHg (0 to 3,048 meters) (0 to 10,000 feet)

Water Resistance, Operating (without accessories except for ECG Cable and hard paddles): IPX1 (spillage) per IEC 60601-1 clause 44.6

Vibration: MIL-STD-810E Method 514.4, Cat 1

Shock (Drop): 1 drop on each side from 45.7 cm (18 in.) onto a steel surface

EMC

IEC 60601-1-2: 2001/EN 60601-1-2:2001, Medical Equipment- General Requirements for Safety-Collateral Standard: Electromagnetic Compatibility-Requirements and Tests

IEC 60601-2-4:2002; Clause 36/EN 60601-2-4:2003; Clause 36, Particular Requirements for the Safety of Cardiac Defibrillators and Cardiac Defibrillator Monitors

All specifications are at 20° C (68° F) unless otherwise stated.