RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT

ADDENDUM NO. 1

Bid #1428

Purchase of Medical Equipment for new Health Science Bldg. at Santa Ana College

August 26, 2022

Owner:
Rancho Santiago Community College District
2323 North Broadway Room 109
Santa Ana, California 92706
The following changes, additions, deletions or corrections shall become a part of the Contract Documents for the project named on the previous page and all other conditions shall remain the same. The Bidders shall be responsible for transmitting this information to all affected prior to the closing of Bids. Prospective Bidders shall acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

**Item No. AD-1-1**  The following is a clarification to the Submittal of Bids (Due Date Extension)

The due date for the submittal of Bids has been extended to September 20, 2022 by 2:00 P.M.

**Item No. AD-1-2**

*Question:*
I am the rep for the Afinion (A1c) analyzer, Cholestech LDX analyzers and FreeStyle Libre Pro. Was this email meant for me?

*Answer: It is intended for vendors than can provide medical equipment.*

**Item No. AD-1-3**

*Question:*
I received the email from my manager but I’m not sure what it pertains to. I have worked with Kris Ross in the Stress Lab at Santa Ana College before but haven’t been asked to submit any bids as Rancho Santiago usually orders Welch Allyn products through McKesson. Please let me know if this is for something specific and I will do whatever I need to.

*Answer: Please refer to the bid documents at [https://rsccd.edu/Departments/Purchasing/Pages/Bidding-Opportunities.aspx](https://rsccd.edu/Departments/Purchasing/Pages/Bidding-Opportunities.aspx)*

**Item No. AD-1-4**

*Question:*
Item #6 on the bid form is a Philipps HeartStart MRX. Are you aware that this device is no longer manufactured because it is not an FDA approved device?

*Answer: Phillips no longer manufactures the HeartStart MRX. Item #6 has been revised to the Stryker LIFEPAK 15 v4.*
**Item No. AD-1-5**

*Question:* Will I need to submit a substitution form to bid Stryker’s defibrillator (LP15) in replacement of the Phillips HeartStart MRX? If so what configurations/capabilities should be added to the LP15? *Please see attached brochure outlining the different capabilities.*

*Answer:* Phillips no longer manufactures the HeartStart MRX. Item #6 has been revised to the Stryker LIFEPAK 15 v4 with required configurations.

**Item No. AD-1-6**

*Question:* Will the defibrillator and Lucas Chest Compression device be utilized clinically or only for training purposes? We have trainer models for each that are less expensive, but are not to be used on humans or animals.

*Answer:* Devices will be utilized clinically.

**Item No. AD-1-7**

*Question:* For the evacuation chair: Would you like me to include wall mount and chair cover or just the chair itself?

*Answer:* For the evacuation chair, price only the chair and cover. The wall mount is not required.

**Item No. AD-1-8**

*Question:* Re: Line Item 7 - BD Pyxis MedStation ES
Medical Shipment has a sole source contract with BD and is the exclusive distributor of the Pyxis MedStation ES. Please see attached

*Answer:* All vendors are to provide a bid.

**Item No. AD-1-9**

*Question:* Do all items need to be considered New? Will Refurbished Equipment (w/ 1-year Parts & Labor Warranty) be acceptable?

*Answer:* All equipment must be new with the exception of the BD Alaris equipment line items #15, #16, #17, and #19 and must include a minimum 2-year Parts & Labor Warranty.
**Item No. AD-1-10**

**Question:**
Re: Line Items 15, 16, 17, 19 (BD Alaris)
Before the 2020-2021 FDA recall on BD Alaris Infusion Pump Module 8100 - Medical Shipment LLC was one of only two, (BD) authorized distributors of the BD Alaris products for nursing schools. Becton Dickinson (BD) has filed a new 510(k) submission for its Alaris infusion pump Refurbished BD Alaris Infusion Pumps. If Refurbished Equipment is allowed – would we need to submit a substitution form for the Refurbished Equipment, if they are the exact models as requested in the bid?

**Answer:** Refurbished equipment is acceptable for line items #15, #16, #17, and #19 with a minimum 2-year Parts & Labor Warranty.

**Item No. AD-1-11**

**Question:**
Line Item 3 - DiaMedical #FR013201 has the incorrect manufacturer listed. GF Health Products, Inc. (Graham-Field) is the manufacturer of the bedside cabinet under SKU # A30-22BQS. Do we need to include this item in the substitution form, if we are sourcing it directly from the manufacturer (Graham-Field)?

**Answer:** The correct manufacturer of the bedside cabinet under SKU #A30-22BQS is Graham-Field Health Products, Inc. This has been corrected in the bid form.

**Item No. AD-1-12**

**Question:**
Would it be of the District's interest to piggyback on our National Purchasing Cooperative (TIPS) Contract? Medical Shipment is an awarded TIPS Vendor #200804 – Medical Equipment, Supplies, Services

**Answer:** At this time, there is no interest by the District to utilize the National Purchasing Cooperative (TIPS) contract.

**Item No. AD-1-13**

Upon review, if there are bid terms and conditions Vendor may not be able to agree to, will the College allow Vendor to include clarifications or exceptions as part of its bid submission?

**Answer:** No.

**Item No. AD-1-14**

Specifically, if there are insurance requirements that Vendor may not be able to agree to will the College consider exceptions to insurance terms and conditions?

**Answer:** No.
**Item No. AD-1-15**

Are deviations to the terms and conditions allowed?

*Answer:* No.

**Item No. AD-1-16**

Ink signature required by VP and Secretary or authorized agent, corporate seal also required (page 4). Can we please ask the customer if they are willing to accept an electronic signature? Also, are you open to receiving the corporate resolution in lieu of the seal, as we are all still remote?

*Answer:* No

**Item No. AD-1-17**

What is the signature requirement for the bid and all the bid documents? Page 4 states 2 signature are needed, 1 VP and 1 authorized agent, but page 10 states it needs to be signed by authorized representative.

*Answer:* To clarify, an authorized representative is defined in Information for Bidders section 4.0 (Signature).

**Item No. AD-1-18**

Request for Substitution:
We are substituting line item #6, Philips Heartstart MRx, with the Stryker LIFEPAK 15 v4 as the Phillips MRX is no longer manufactured. The LIFEPAK 15 (LP15) provides all features required for ALS and BLS use and training. Additionally, the LP15 offers several proprietary features such as escalating enerw to 360 joules, ST trending, Glasgow algorithm, simple user interface, and best-in-class durability. Enclosed please find literature on the LP15 complete with available features and specifications.

*Answer:* Substitution is approved. Bid Form – Price Sheet Item #6 has been revised to replace the obsolete item.

**Item No. AD-1-19**

Request to substitute Item #3, 1389545, with GF A30-22BQS.

*Answer:* Substitution is not required. The correct manufacturer of the bedside cabinet under SKU #A30-22BQS is GF Health Products, Inc.
**Item No. AD-1-20**

Request to substitute Item #4, 1225305, with Drive NRS185008 500lb cap.

*Answer:* Substitution is approved. Bid Form – Price Sheet revised to reflect approved substitute.

**Item No. AD-1-21**

Request to substitute Item #11, 1409817, with Carescape B450 3.1 2095800-001 Desktop 696226

*Answer:* Substitution is not approved.

**Item No. AD-1-22**

Request to substitute Item #20, 1399994, with Amico SRA-C3UD-OM 3-Mode

*Answer:* Substitution is not approved.

**Item No. AD-1-23**

Request to substitute Item #22, 1232677, with Fluke Prosim 8 3979409

*Answer:* Substitution is not approved.

**Item No. AD-1-24**

Request to substitute Item #23, 1398811, with Blickman 0531415000

*Answer:* Item #23 has been removed from equipment list. Bid Form - Price Sheet has been revised.

**Item No. AD-1-25**

Request to substitute Item #27, 1142000, with Mac PT1001 750lb cap

*Answer:* Substitution is not approved.

**Item No. AD-1-26**

Request to substitute Item #2, Electric Birthing Bed (AF450), with Certified Refurbished Hillrom Affinity 4 Birthing Bed P3700D w/ 2-Year Warranty on Parts & Labor (medical Shipment #140103)

*Answer:* Substitution is not approved.
**Item No. AD-1-27**

Request to substitute Item #3, Bedside Cabinet (FR013201), with Avondale Door/Drawer Bedside Cabinet (Medical Shipment #140502)

*Answer:* Substitution is approved. Bid Form – Price Sheet has been corrected.

**Item No. AD-1-28**

Request for Sole Source of Item #7, Pyxis MedStation ES. Medical Shipment is the Sole Source for the BD Pyxis MedStation ES (Medical Shipment #150120)

*Answer:* All vendors are to provide a bid.

**Item No. AD-1-29**

Request to substitute Item #15, Alaris PC Unit (8015), with Certified Refurbished Alaris PC Unit (8015) w/ 2-Year Warranty on Parts & Labor (MS #130221)

*Answer:* Substitution is approved. Bid Form – Price Sheet revised to reflect the approved substitute.

**Item No. AD-1-30**

Request to substitute Item #16, Alaris PCA Module (8120), with Certified Refurbished Alaris PCA Module (8120) w/ 2-Year Warranty on Parts & Labor (MS #130211)

*Answer:* Substitution is approved. Bid Form – Price Sheet revised to reflect the approved substitute.

**Item No. AD-1-31**

Request to substitute Item #17, Alaris Pump Module (8100), with Certified Refurbished Alaris Pump Module (8100) w/ 2-Year Warranty on Parts & Labor (MS #130210)

*Answer:* Substitution is approved. Bid Form – Price Sheet revised to reflect the approved substitute.

**Item No. AD-1-32**

Request to substitute Item #19, Alaris Syringe Module (8110), with Certified Refurbished Alaris Syringe Module (8110) w/ 2-Year Warranty on Parts & Labor (MS #130212)
Answer: Substitution is approved. Bid Form – Price Sheet revised to reflect the approved substitute.

**Item No. AD-1-33**

Request to substitute Item #26, Hillrom Stretcher Procedure/Recovery, with Certified Refurbished Hillrom Procedure/Recovery Stretcher P8000 w/ 3-Year Warranty on Parts & Labor (Medical Shipment #140405)

*Answer:* Substitution is not approved.

**Item No. AD-1-34**

Request to substitute Item #27, Hillrom Transport Stretcher P8005, with Certified Refurbished Hillrom Transport Stretcher P8005 w/ 3-Year Warranty on Parts & Labor (Medical Shipment #140423)

*Answer:* Substitution is not approved.

**Item No. AD-1-35**

Request to substitute Item #29, Care System Infant Warmer (OB025905), with Certified Refurbished Dräger Resuscitaire Infant Warmer w/ 2-Year Warranty on Parts & Labor (Medical Shipment #140323)

*Answer:* Substitution is not approved.

**Item No. AD-1-36**

See the attached revised Bid Form for a total of five (5) pages. The strikethrough texts are to be omitted and the revisions are highlighted. Utilize the revised bid form in lieu of the original.

**Item No. AD-1-37**

See the attached revised specifications related to Item #6, Automatic Advisory Defibrillator (Stryker LIFEPAK (LP15) 15 v4 for a total of six (6) pages.

*This is the end of ADDENDUM NO. 1*
### REVISED - Bid #1428 Purchase of Medical Equipment for the new Health Science Bldg. at Santa Ana College

Note: Bidders are required to refer to Attachment “A” to Bid Form for detailed requirements and descriptions

<table>
<thead>
<tr>
<th>Item #</th>
<th>Description</th>
<th>Base Model Type (Or Equal)</th>
<th>Quantity</th>
<th>Cost</th>
<th>Quantity Discounts (Optional)</th>
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<tr>
<td>1</td>
<td>Lab Prescription Balance (with all features noted)</td>
<td>Scientific Industries – Torbal Division DX-3 Prescription Mechanical Balance Or Equal (with all features noted) Model Type: (Insert approved substitution if other than Scientific Industries)</td>
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<td>2</td>
<td>Electric Birthing Bed (with all features noted)</td>
<td>Hillrom – Bed &amp; Stretcher Group Affinity 4 w/ Comfortline Surface (AF450) Or Equal (with all features noted) Model Type: (Insert approved substitution if other than Hillrom)</td>
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<td>3</td>
<td>Patient Room Bedside Cabinet (with all features noted)</td>
<td>DiaMedical #FR013201 GF A30-22BQS Or Equal (with all features noted) Model Type: Avondale Door/Drawer Bedside Cabinet (Medical Shipment #140502) (Insert approved substitution if other than DiaMedical)</td>
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<td>4</td>
<td>Mobile Clinical Commode/Shower Chair (with all features noted)</td>
<td>Drive DeVilbiss Healthcare NRS185007 Or Equal (with all features noted) Model Type: Drive NRS185008 500lb cap. (Insert approved substitution if other than Drive DeVilbiss Healthcare)</td>
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<td>Clinical Evacuation Chair (with all features noted)</td>
<td>Stryker Stair-PRO 6252 Or Equal (with all features noted) Model Type: (Insert approved substitution if other than Stryker)</td>
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<td>6</td>
<td>Automatic Advisory Defibrillator (with all features noted)</td>
<td>Philips Healthcare – Cardiology—HeartStart-MRx— M3536A/861304 Stryker LIFEPAK (LP15) 15 v4</td>
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<td>7</td>
<td>Host (Main) Medication Dispenser (with all features noted)</td>
<td>BD – Becton, Dickinson and Company Pyxis Medstation ES (6 drwr, 5 Cubie) Or Equal (with all features noted) Model Type: (Insert approved substitution if other than BD)</td>
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<td>Item #</td>
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<td>Water Rescue Training Infant Manikin, Male</td>
<td>Simulaids Rescue Billy (149-1352) Or Equal (with all features noted) Model Type: (Insert approved substitution if other than Simulaids)</td>
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<td>Simulaids Rescue Cathy Or Equal (with all features noted) Model Type: (Insert approved substitution if other than Simulaids)</td>
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<td>10</td>
<td>Point of Care Blood Glucose Monitor</td>
<td>Nova Biomedical StatStrip Glucose Hospital Meter with Docking Station Or Equal (with all features noted) Model Type: (Insert approved substitution if other than Nova)</td>
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<td>11</td>
<td>Bedside Physiologic Monitor</td>
<td>GE Healthcare – Monitoring Systems – Carescape B450 w/PDM (PACU, ED) – 2068491-001/2042084-001 Or Equal (with all features noted) Model Type: (Insert approved substitution if other than GE)</td>
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<td>12</td>
<td>Physiologic Vital Signs Monitor w/ Stand</td>
<td>Carescape V100 Vital Signs Monitor (2038172-001/Stand) Or Equal (with all features noted) Model Type: (Insert approved substitution if other than Carescape)</td>
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<td>13</td>
<td>Chest Compression Pump</td>
<td>Stryker LUCAS 3 Chest Compression System Or Equal (with all features noted) Model Type: (Insert approved substitution if other than Stryker)</td>
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<td>14</td>
<td>Enteral Pump</td>
<td>Cardinal Health Durable Medical Equipment Kangaroo ePump (382400) Or Equal (with all features noted) Model Type: (Insert approved substitution if other than Cardinal)</td>
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<td>15</td>
<td>Modular Infusion Pump Controller (with all features noted)</td>
<td>BD – Becton Dickinson and Company Alaris PC Unit (8015) Or Equal (with all features noted) Model Type: Refurbished Alaris PC Unit (8015) w/ 2-Year Warranty on Parts &amp; Labor (MS130221) (Insert approved substitution if other than BD)</td>
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<td>16</td>
<td>PCA Infusion Pump (with all features noted)</td>
<td>BD – Becton, Dickinson and Company – Alaris PCA Module (8120) Or Equal (with all features noted) Model Type: Refurbished Alaris PC Unit (8120) w/ 2-Year Warranty on Parts &amp; Labor (MS130211) (Insert approved substitution if other than BD)</td>
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<td>17</td>
<td>Single Infusion Pump (with all features noted)</td>
<td>BD – Becton Dickinson and Company – Alaris Pump Module (8100) Or Equal (with all features noted) Model Type: Refurbished Alaris PC Unit (8100) w/ 2-Year Warranty on Parts &amp; Labor (MS130210) (Insert approved substitution if other than BD)</td>
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<td>18</td>
<td>Single Infusion Pump (with all features noted)</td>
<td>Baxter Healthcare SIGMA Spectrum (w/ Standard Battery) - 35700BAX/35724 Or Equal (with all features noted) Model Type: (Insert approved substitution if other than Baxter)</td>
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<td>19</td>
<td>Syringe Infusion Pump (with all features noted)</td>
<td>BD – Becton Dickinson and Company – Alaris Syringe Module (8110) Or Equal (with all features noted) Model Type: Refurbished Alaris Syringe Module (8110) w/ 2-Year Warranty on Parts &amp; Labor (MS130212) (Insert approved substitution if other than BD)</td>
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<td>3 Mode Continuous Suction Regulator (with all features noted)</td>
<td>Amico Corporation SRA-C3UD-DH Scout Analog (DISS Handtight) (SRA-C3UD-DH) Or Equal (with all features noted) Model Type: (Insert approved substitution if other than Amico)</td>
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<td>21</td>
<td>Digital Display Benchtop Scale (with all features noted)</td>
<td>Tanita Corporation of America KD-200-110 Or Equal (with all features noted) Model Type: (Insert approved substitution if other than Tanita)</td>
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<td>Patient Physiologic Handheld Simulator</td>
<td>Fluke Biomedical ProSim 4 Vital Signs Or Equal (with all features noted) Model Type: ___________________________ (Insert approved substitution if other than Fluke)</td>
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<td>Chrome IV Stand</td>
<td>Medline Industries Inc. – Deluxe IV (MDS80494) Or Equal (with all features noted) Model Type: ___________________________ (Insert approved substitution if other than Medline)</td>
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<td>24</td>
<td>EMT Stretcher</td>
<td>Stryker Medical MX-PRO R3 (6082-000-000) Or Equal (with all features noted) Model Type: ___________________________ (Insert approved substitution if other than Stryker)</td>
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<td>25</td>
<td>EMT Stretcher</td>
<td>Stryker Medical Power-PRO XT (6506-000-000) Or Equal (with all features noted) Model Type: ___________________________ (Insert approved substitution if other than Stryker)</td>
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<td>26</td>
<td>Procedure/Recovery Stretcher</td>
<td>Hillrom – Bed &amp; Stretcher Group Or Equal (with all features noted) Model Type: ___________________________ (Insert approved substitution if other than Hillrom)</td>
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<td>27</td>
<td>Transport Stretcher</td>
<td>Hillrom Bed &amp; Stretcher Group – Transport Stretcher P8005 Or Equal (with all features noted) Model Type: ___________________________ (Insert approved substitution if other than Hillrom)</td>
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<td>28</td>
<td>Adult/Pediatric Ventilator</td>
<td>Vyaire Medical – AVEA Standard w/ Standard Cart Or Equal (with all features noted) Model Type: ___________________________ (Insert approved substitution if other than Vyaire)</td>
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### REVISED - BID FORM – PRICE SHEET (To Be Submitted with Bid)

Bid #1428 Purchase of Medical Equipment for the new Health Science Bldg. at Santa Ana College

Note: Bidders are required to refer to Attachment “A” to Bid Form for detailed requirements and descriptions

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<tr>
<td>29</td>
<td>Care System Infant Warmer (with all features noted)</td>
<td>Dia Medical SimLabSolutions 7013 Radiant Infant Warmer (OB025905) Or Equal (with all features noted) Model Type: (Insert approved substitution if other than Dia Medical)</td>
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</table>

We (I) hereby agree to furnish the above equipment, calibration, training and demonstrations to the reasonable satisfaction of the District at the prices and terms stated in this bid. Pricing includes shipping, delivery, unpacking, set-up and all other costs in the “Pricing Requirements” section of the Bid Form above. The undersigned hereby declares that all of the representations of this bid are accurate and complete and made under penalty of perjury under the laws of the State of California.

Company Name: ________________________________________________

Address/city/State/Zip: _____________________________________________________

Phone Number: ___________________________________________________________

Email: __________________________________________________________________

Authorized Signature: _______________________________________________________

Printed Name: _____________________________________________________________

Title: ___________________________________________________________________

Date: ____________________________________________


6. **Automatic Advisory Defibrillator**
   Department: EMT
   Room: HS304

- **Battery Type:** 6.0 Ah, 14.8V, rechargeable lithium ion
- **Battery Dimensions:** 6.5” H x 3.8” W x 1.6” D
- **Battery Weight:** 1.6 lb.
- **Charge Time:** approximately 3 hours to 100%, 2 hours to 80%
- **Capacity:** Shocks: At least 50 200J charge/shocks or disarm cycles
  Monitoring only: 9 hours of continuous ECG monitoring.
  Monitoring and Shocks: At least 5 hours of monitoring ECG, SpO2, CO2, temperature and 2 invasive pressures monitored continuously, NBP measured every 15 minutes, and 20 200J discharges.
  Monitoring and Pacing: At least 3.5 hours while pacing at 180rpm at 160 mA and monitoring as described above.
- **Battery Indicators:** Battery gauge on battery, capacity indicator on display; flashing RFU indicator, chirp, and “low battery” message appears on display for low battery condition, when 10 minutes of monitoring time and 6 maximum energy discharges remain (with a new battery at room temperature, 25 degrees C.)
- **Weight:** 13.2 lbs. – base unit w/ 1 battery pads, and pads cable.
  Carrying case adds 4.1 lbs.
  Paddle tray and external standard paddles add less than 2.5 lbs
- **Environmental**
  - **Water Resistance:** Meets IEC 60601-2-4
  - **Solids Resistance:** Solids/Water Resistance—IP24
  - **Operating Temp:** 32 – 113 degrees F (0 – 45 degrees C)
  - **Storage Temp:** 4 – 158 degrees F (-20–70 degrees C)
  - **Humidity:** Operating 0% to 95% relative
  - **Safety:** Meets EN 60601-1, UL 2601-1, CSA C22.2 No. 601-1 M90 CSA, EN 60601-2-4
- **Display**
  - **Dimensions:** 8.4” diagonal
  - **Type:** TFT color LCD
  - **Resolution:** 640 x 480 pixels (VGA)
  - **Wave Viewing Time:** 5 seconds (ECG)
- **Defibrillator**
  - **Waveform:** Biphasic Truncated Exponential Waveform parameters adjusted as a function of patient impedance
  - **Output Energy:** Manual (Selected): 1, 10, 15, 20, 30, 50, 70, 100, 120, 150, 170, 200 Joules—maximum energy, limited to 50 Joules for internal defibrillation. AED Mode (single energy output): 150 Joules into a 50 ohm load.
  - **Charge Time:** Less than 5 seconds to 200 Joules with a new, fully charged lithium ion battery at 25 degrees C.
- Shock delivery: Via multifunction defib electrode pads or paddles
- Quick Shock: Less than 10 seconds from cessation of CPR to shock delivery
- Patient Impedance Range: Minimum: 15 ohm (internal defibrillation), 25 ohm (external defibrillation), Maximum: 180 ohm
- AED Mode: Shock advisory sensitivity and specificity meet AAMI DF-39 guidelines

**Strip Chart Printer**
- Printer: Standard 50 mm (paper width) thermal array printer; Optional: 75mm (paper width) thermal array printer
- Continuous ECG Strip: Prints primary ECG lead with event annotations and measurements in real-time or with 10-second delay.
- Auto Printing: Printer can be configured to print marked events, charge, shock and alarms.
- Reports: Event summary, 12-lead, Vital Signs Trending, Operational Check, Configuration, Status Log and Device Information.
- Paper size: 1.97” W x 100 ft. L

**Data Storage**
- Internal: 12 hours of continuous ECG waveforms and events, maximum capacity of 55 event summaries.
- Data Card: 60 event summary reports or 240 megabytes of patient data

**ECG and arrhythmia monitoring**
- Input: Up to 4 ECG waves displayed and up to 2 ECG waves print simultaneously. Lead I, II or III obtained through 3-lead ECG cable and separate monitoring electrodes. With 5-lead cable, obtain leads aVR, aVL, aVF, or V. Pads ECG obtained through 2 multifunction defibrillation electrode pads.
- Lead & Pads Fault: Automatically switches to a valid ECG source in wave sector 1 if existing signal becomes unavailable in Monitor or Manual Defibrillation Mode for software version R.02 or above.
- Heart Rate Display: Digital readout on display 15 to 300 bpm, accuracy ± 10%
- Heart Rate/Arrhythmia Alarms: HR, Asystole, VFIB/VTACH, VTACH, extreme tachycardia, extreme bradycardia, PVC rate, Pacer not capture, Pacer not pacing.
- ECG Size: 2.5, 5, 10, 20, 40 mm/mV, autogain
### Battery specifications
- **Battery type:** Lithium-ion
- **Weight:** ≤ 1.3 lb (0.6 kg)
- **Charge time (with fully depleted battery):** < 190 minutes (typical)
- **Battery indicators:** Each battery has a fuel gauge that indicates its approximate charge. A fuel gauge that shows two or fewer LEDs after a charge cycle indicates that the battery should be replaced.
- **Charging temperature range:** 41° to 113°F (5° to 45°C)
- **Operating temperature range:** 32° to 113°F (0° to 45°C)
- **Short term (1 week) storage temperature range:** 68° to 77°F (20° to 25°C)
- **Operating and storage humidity range:** 5 to 95% relative humidity, non-condensing

### Weight:
- Basic monitor/defibrillator with new roll paper and two batteries installed: 17.5 lb (7.9 kg)
- Fully featured monitor/defibrillator with new roll paper and two batteries installed: 18.5 lb (8.4 kg)
- **Weight:** 13.2 lbs. – base unit w/ 1 battery pads, and pads cable.

### Environmental
- **Unit meets functional requirements during exposure to the following environments unless otherwise stated.**
  - **Operating temperature:** 32° to 113°F (0° to 45°C); -4°F (-20°C) for 1 hour after storage at room temperature; 140°F (60°C) for 1 hour after storage at room temperature
  - **Storage temperature:** -4° to 149°F (-20° to 65°C) except therapy electrodes and batteries
  - **Relative humidity, operating:** 5 to 95%, non-condensing.
  - **NIBP:** 15 to 95%, non-condensing
  - **Relative humidity, storage:** 10 to 95%, non-condensing
  - **Atmospheric pressure,** operating: -1,253 to 15,000 ft (-382 to 4,572 m). NIBP: -500 to 10,000 ft (-152 to 3,048 m)
  - **Water resistance,** operating: IP44 (dust and splash resistance) per IEC 529 and EN 1789 (without accessories except for 12-lead ECG cable, hard paddles, and battery pack)
  - **Vibration:** MIL-STD-810E Method 514.4, Propeller Aircraft - category 4 (figure 514.4-7 spectrum a), Helicopter - category 6 (3.75 Grms), Ground Mobile - category 8 (3.14 Grms), EN 1789: Sinusoidal Sweep, 1 octave/min, 10-150 Hz, ±0.15 mm/2 g Shock (drop): 5 drops on each side from 18 inches onto a steel surface EN 1789: 30-inch drop onto each of 6 surfaces
  - **Shock (functional):** Meets IEC 60068-2-27 and MIL-STD-810E shock requirements 3 shocks per face at 40 g, 6 ms half-sine pulses
  - **Bump:** 1000 bumps at 15 g with pulse duration of 6 msec
  - **Impact, non-operating:** EN 60601-1 0.5 + 0.05 joule impact UL 60601-1 6.78 Nm impact with 2-inch diameter steel ball.
  - **Meets IEC62262 protection level IK 04.**
EMC: EN 60601-1-2:2006 Medical Equipment - General Requirements for Safety - Collateral

**ECG**

ECG is monitored via several cable arrangements: A 3-wire cable is used for 3-lead ECG monitoring. A 5-wire cable is used for 7-lead ECG monitoring. A 10-wire cable is used for 12-lead ECG acquisition. When the chest electrodes are removed, the 10-wire cable functions as a 4-wire cable. Standard paddles or QUIK-COMBO pacing/defibrillation/ECG electrodes are used for paddles lead monitoring.

**Frequency response:**
- **Monitor:** 0.5 to 40 Hz or 1 to 30 Hz
- **Paddles:** 2.5 to 30 Hz
- **12-lead ECG diagnostic:** 0.05 to 150 Hz

**Lead selection:**
- Leads I, II, III, (3-wire ECG cable)
- Leads I, II, III, AVR, AVL, and AVF acquired simultaneously (4-wire ECG cable)
- Leads I, II, III, AVR, AVL, AVF, and C lead acquired simultaneously (5-wire ECG cable)
- Leads I, II, III, AVR, AVL, AVF, V1, V2, V3, V4, V5, and V6 acquired simultaneously (10-wire ECG cable)

**ECG size:** 4, 3, 2.5, 2, 1.5, 1, 0.5, 0.25 cm/mV (fixed at 1 cm/mV for 12-lead)

**Durability**
- LIFEPAK TOUGH™
- Dual-layer screen protector
- Large, shock absorbing handle
- Upgradeable platform
- Daily, 3AM diagnostic self-test

**LIFEPAK 15 monitor/defibrillator**

**Heart rate display:**
- 20–300 bpm digital display
- Accuracy: ±4% or ±3 bpm, whichever is greater
- QRS Detection Range Duration: 40 to 120 msec
- Amplitude: 0.5 to 5.0 mV
- Common mode rejection (CMRR): ECG Leads: 90 dB at 50/60 Hz

**Sp02**
- Displayed saturation range: “< -3db)
- Zero drift: 1 mmHg/hr without transducer drift
- Zero adjustment: ±150 mmHg including transducer offset
- Numeric accuracy: ±1 mmHg or 2% of reading, whichever is greater, plus transducer error

**Pressure range:** -30 to 300 mmHg, in six user selectable ranges

**Display:** IP waveform and numerics

**Units:** mmHg

**Labels:** P1 or P2, ART, PA, CVP, ICP, LAP (user selectable)

**Temperature Range:** 76.6° to 113.4°F (24.8° to 45.2°C)
Resolution: 0.1°C Accuracy: ±0.2°C including sensor Reusable temperature cable: 5 foot or 10 foot

Disposable sensor types: Surface–Skin; Esophageal/Rectal Trend Time scale: Auto, 30 minutes, 1, 2, 4, or 8 hours

Duration: Up to 8 hours ST segment: After initial 12-lead ECG analysis, automatically selects and trends ECG lead with the greatest ST displacement

Display choice of: HR, PR (SpO2), PR (NIBP), SpO2 (%), SpCO (%), SpMet (%), CO2 (EtCO2/FiCO2), RR (CO2), NIBP, IP1, IP2, ST

- Display
  - Display Size (active viewing area): 8.4 in (212 mm) diagonal; 6.7 in (171 mm) wide x 5.0 in (128 mm) high
  - Resolution: display type 640 dot x 480 dot color backlit
  - LCD User selectable display mode: full color or SunVue™ display high contrast
  - Display: a minimum of 5 seconds of ECG and alphanumerics for values, device instructions, or prompts
  - Display: up to three waveforms Waveform display sweep speed: 25 mm/sec for ECG, Sp02, IP, and 12.5 mm/sec for CO2

- Defibrillator
  - Biphasic 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 joules or 15% of setting, whichever is greater, into 25-175 ohms.
    - Voltage compensation: Active when disposable therapy electrodes are attached. Energy output within ±5% or ±1 joule, whichever is greater, of 50 ohms value, limited to the available energy which results in the delivery of 360 joules into 50 ohms.
  - Paddle options: QUIK-COMBO® pacing/defibrillation/ECG electrodes (standard). Cable Length 8 foot long (2.4 m) QUIK-COMBO cable (not including electrode assembly). Standard paddles (optional)
  - Manual mode
    - 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
    - Charge time: Charge time to 360 joules in less than 10 seconds, typical
    - Synchronous cardioversion: Energy transfer begins within 60 msec of the QRS peak
    - Paddles: Leads off sensing: When using QUIK-COMBO electrodes, the device indicates Paddles Leads Off if the resistive part of the patient impedance is greater than 300 ±15% ohms, or if the magnitude of the patient impedance is greater than 440 ±15% ohms.
    - AED Mode Shock Advisory System™ (SAS): an ECG analysis system that advises the operator if the algorithm detects a shockable or non-shockable 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 20 seconds if the initial rhythm finding is “SHOCK ADVISED”.

**Biphasic output:** Energy Shock levels ranging from 150–360 joules with same or greater energy level for each successive shock.

**cprMAX™ Technology:** In AED mode, cprMAX™ technology provides a method of maximizing the CPR time that a patient receives, with the overall goal of improving the rate of survival of patients treated with AEDs.

**Setup options:**
- **Auto Analyze:** Allows for auto analysis. Options are OFF, AFTER 1ST SHOCK.
- **Initial CPR:** Allows the user to be prompted for CPR for a period of time prior to other activity. Options are OFF, ANALYZE FIRST, CPR FIRST.
- **Initial CPR Time:** Time interval for Initial CPR. Options are 15, 30, 45, 60, 90, 120, and 180 seconds.
- **Pre-Shock CPR:** Allows the user to be prompted for CPR while the device is charging. Options are OFF, 15, 30 seconds.
- **Pulse Check:** Allows the user to be prompted for a pulse check at various times. Options are ALWAYS, AFTER EVERY SECOND NSA, AFTER EVERY NSA, NEVER.