**University of the Philippines Manila**
*The Health Sciences Center*
**BIDS & AWARDS COMMITTEE 1 (BAC 1)**

Proj. Ref. No.: **PUR22-05-0475** Opening of Bids: **01 JULY, 2021**
End-User: **CCU-MAT** ABC: **Php37,500,000.00**
Project: **SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF FIFTEEN (15) UNITS BRAND-NEW MECHANICAL VENTILATORS WITH HIGH FLOW NASAL CANNULA FOR ADULT AND PEDIATRIC PATIENTS FOR THE NEWLY RENOVATED CENTRAL ADULT AND PEDIATRIC ICU, PHILIPPINE GENERAL HOSPITAL**
Contract: **Single Bid**

| Item No. | Qty. | UOM | Item Description | Unit Price | Quotations (all taxes included) | |
|---|---|---|---|---|---|---|
| | | | | | in figures | in words |
| 1 | 15 | Unit | **BRAND-NEW MECHANICAL VENTILATORS WITH HIGH FLOW NASAL CANNULA FOR ADULT AND PEDIATRIC PATIENTS FOR THE NEWLY RENOVATED CENTRAL ADULT AND PEDIATRIC ICU** | 2,500,000.00 | | |
| | | | | | | |
| | | | **Technical Specifications for Mechanical Ventilator** | | | |
| | | | 1. The ventilator should be suitable for adult, pediatric and neonatal patients. | | | |
| | | | 2. Must be capable of handling patients weighing lower than 5kgs. | | | |
| | | | 3. Must be capable of the following types of ventilation:<br>a. Invasive<br>b. Non-invasive<br>c. High Flow Nasal Canula | | | |
| | | | 4. The offered unit must allow centralized remote monitoring and control of ventilator settings outside of a patient's room | | | |
| | | | 5. Must have the following user interface:<br>a. At least 15-inch screen<br>b. Able to rotate at least 170 degree<br>c. Tilts to at least 45 degrees from vertical | | | |
| | | | 6. Power supply:<br>a. Power input: 220 to 240 VAC, 50 to 60 Hz | | | |
| | | | 7. Pneumatic specifications:<br>a. Oxygen and air-inlet supplies<br>i. Pressure: 241 to 600kPa (35 psi to 87 psi)<br>ii. Flow: Maximum of 200 LPM | | | |

Approved by:

*~Original Signed~*

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*Chairperson*

*(Signature over Printed Name of President / Gen. Manager)*

*(Name & Address of Company)*

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| | | | | | | |
|---|---|---|---|---|---|---|
| | | | b. Gas Mixing System<br>i. Up to 30 L/min for neonatal circuit type<br>ii. Up to 80 L/min for pediatric circuit type<br>iii. Up to 200 L/min for adult circuit type | | | |
| | | | 8. Must have the following filtration capabilities:<br>a. Internal and external inspiratory filter bacterial/viral filtration efficiency: ≥ 99.999%<br>b. Internal and external inspiratory filter particle filtration efficiency:> 99.97% retention of particles 0.3 µm nominal at 100 L/min flow<br>c. Expiratory filter resistance (Adult/pediatric, disposable)<br>i. <2.5 cmH2O at 10 0 L/min<br>ii. <1.7 cmH2O at 15 L/min<br>d. Expiratory filter bacterial/viral filtration efficiency:> 99.999%<br>e. Expiratory filter particle filtration efficiency:> 99.97% retention of particles 0.3 µm nominal at 100 L/min flow. | | | |
| | | | 9. Must have the following invasive ventilation modes:<br>a. Controlled Ventilation<br>i. Volume Controlled Ventilation (VCV)<br>ii. Pressured Controlled Ventilation (PCV)<br>b. Supported Ventilation<br>i. Pressure Support Ventilation or Continuous Positive Airway pressure (CPAP)<br>c. Combined Ventilation | | | |

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| | | | | | | |
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| | | | i. Synchronized intermittent mandatory Ventilation (VC) + PS<br>ii. Synchronized intermittent mandatory Ventilation (PC) + PS<br>d. With Advanced Modes of Ventilation<br>i. Airway Pressure Release Ventilation or its equivalent<br>ii. Proportional Assist Ventilation or Adaptive Support Ventilation | | | |
| | | | 10. Must have CPAP and BIPAP Ventilation | | | |
| | | | 11. Must be able to alter flow patterns into a square or decelerating pattern. | | | |
| | | | 12. Should ba able for synchronize inspiratory and expiratory breath phases of patients to resolve asynchrony. | | | |
| | | | 13. Breathing circuitry must be a dual limb ventilation. | | | |
| | | | 14. Range of respiratory rate at least between 1 to 100 breaths per minute. Rates above 100 bpm may be included. | | | |
| | | | 15. Range of Tidal Volume: 2.0 ml to 2500 ml | | | |
| | | | 16. Peak Inspiratory Flow (VMAX)<br>a. 3L/min to 150 L/min | | | |
| | | | 17. Plateau Time (TPL): 0.0 to 2.0 seconds | | | |
| | | | 18. Inspiratory Pressure (PI): 5 to 90 cm H2O | | | |
| | | | 19. Inspiratory Time (TI): 0.2 to 8.0 seconds | | | |
| | | | 20. I:E Ratio: 1:299 to 4:1 | | | |
| | | | 21. Expiratory Time (TE): >/= 0.2 seconds | | | |

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| | | | 22. Must be able to provide both pressure and flow triggering and sensitivity with the following ranges:<br>a. Flow triggering (or sensitivity)- 0.2 to 20 LPM<br>b. Pressure triggering (or sensitivity) – 0.1 to 20 cmH2O | | | |
| | | | 23. Must be able to provide the following ranges of pressures<br>a. PEEP/CPAP/EPAP: 0-45 cmH2O (minimum range)<br>b. IPAP/Pressure Control/Pressure Support: 0 -40 cmH2O (minimum range) | | | |
| | | | 24. FiO2 delivered must be between 21% - 100% | | | |
| | | | 25. Must be able to alter any of the following flow parameters:<br>a. Inspiratory time with ranges from 0.2 to 8 seconds<br>b. Inspiratory flow rates between 3 to 150 LPM<br>c. IE ratio between 1:299 to 149:1 | | | |
| | | | 26. Must be able to generate waveforms that include all of the following: airway pressure, flow, volume and capable of at least 2 wave forms at a time. | | | |
| | | | 27. Must be able to provide loops for monitoring: PV, V-flow, P-flow loops. | | | |
| | | | 28. Provide continuous capnography or ETCO2 measurements. | | | |
| | | | 29. Must be able to provide the following numeric monitoring variables: respiratory frequency, inhaled and exhaled tidal volume; minute ventilation; PEEP and auto-PEEP; Mean Ciruit Pressure, Peak Circuit Pressure and Plateau Pressures; dynamic and static compliance. | | | |

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| | | | | | | |
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| | | | 30. Able to perform the following maneuvers for monitoring:<br>a. Inspiratory pause or inspiratory Hold Maneuver<br>b. Expiratory pause or Expiratory Hold Maneuver or an assessment of negative inspiratory force or Negative inspiratory pressure or a P0.1 max | | | |
| | | | 31. Able to display the following advanced patient data:<br>a. Proximal exhaled tidal volume: 0 mL to 500 mL<br>b. Proximal inspired tidal volume : 0 mL to 500 mL<br>c. % Leak: 0% to 100%<br>d. Inspiratory leak volume (VLeak): 0 mL to 9,000 mL<br>e. Leak: 0 L/min to 200 L/min<br>f. Spontaneous rapid shallow breathing index: 0.1 1/min-L to 600 1/min-L<br>g. Dynamic resistance (RDYN): 0 cmH2O/L/s to 100 cmH2O/L/s<br>h. Dynamic compliance (CDYN): 0 mL/cmH2O to 200 mL/cmH2O<br>i. Inspiratory compliance (C20/C): 0 to 1.00 | | | |
| | | | 32. Monitoring and trending of events recorded up to 1000 alarm logs events at least | | | |
| | | | 33. Graphic trends recorded for at least 36 hours | | | |
| | | | 34. Must have leak compensation and tube compensation capability | | | |
| | | | 35. Must have apnea back up ventilation | | | |
| | | | 36. Must have flow-by features | | | |

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|---|---|---|---|---|---|---|
| | | | 37. With built-in nebulizer or external ultrasonic nebulizer. | | | |
| | | | 38. Must be able to adjust volume of alarm settings. | | | |
| | | | 39. Back up battery of at least 4 hours. | | | |
| | | | 40. With Built in or back up compressor or (non-turbine) | | | |
| | | | 41. Able to provide ventilation support during close loop suctioning | | | |
| | | | 42. Must be able to use universal breathing circuitry or tubing. | | | |
| | | | 43. Display must be colored LCD touchscreen with at least 15inches dimension. | | | |
| | | | 44. Must provide per ventilator supplied: mobile trolley, 2 pieces air/O2 hose, 2 pieces air/O2 wall adapter, support arm, 2 pieces appropriate disposable circuit | | | |
| | | | 45. Must be usable on a 2-prong convenience output. Must provide automatic voltage regulator (AVR) compatible with machine | | | |
| | | | 46. Must be able to provide operating hour reading of mechanical Ventilator usage. | | | |

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|---|---|---|---|---|---|---|
| | | | 47. The supplied equipment must be turnkey. Bidder must provide the following consumable per ventilator per unit:<br>a. 2pcs. Humidifier base with 3 pcs. Chamber<br>b. 3pcs. of flow sensor if not built-in; if Built-in, replace when worn out during warranty<br>c. 3 pcs. of oxygen cell if not built-in; if built-in replace when worn out during warranty<br>d. 3pcs. of inspiratory bacterial filter<br>e. 3 pcs. of bacterial filter<br>f. 3 pcs. of expiratory filter<br>g. 3pcs. of exhalation valve assembly if not built in, if built in, replace when worn out during warranty.<br>h. 3 pcs. of expiratory flow sensor if not built in. if built in, replace when worn out during warranty<br>i. 1 pc. of test bag 2.0L<br>j. 1 pc. of test hose<br>k. 1 pc. of test lung<br>l. 1 pc. of adult test lung | | | |
| **Approved Budget for the Contract (ABC) :** | | | | **Php37,500,000.00** | | |

## TERMS & CONDITIONS:

**A. Requirement/s if declared as Lowest/Single Calculated Bids:**

1. Presentation of Technical data sheet/or presentation of a prototype equipment within seven (7) calendar days after receipt of Notice of Lowest/ Single Calculated Bid.

**B. Requirement/s if awarded the contract:**

1. Delivery Period: Within Ninety (90) calendar days after receipt of Notice to Proceed (NTP)
2. Delivery Place: Equipment Section, Property & Supply Division, Philippine General Hospital, Taft Avenue, Manila

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3. Warranty Period / Coverage of Warranty: One (1) year on parts and two (2) years on service. Free quarterly preventive maintenance during the warranty period. Warranty Period shall commence from the date of acceptance by the end user after installation, testing and commissioning.
4. Signed service level agreement with the Philippine General Hospital.
5. Original hard copy (not photocopy) or soft copy of operators and service manuals in English Language.
6. Training: product orientation for end users and troubleshooting training for at least two (2) biomedical engineers for one (1) day.
7. Quotation of the Annual Preventive Maintenance Cost after the warranty period expires
8. Acceptance Procedures and Parameters: Visual and functional testing on adult, pediatric/neonatal test lung.

**C. Documents Required of the Bidder to be submitted during Post-Qualification:**

1. Brochures/ Technical data sheet
2. SEC registration to prove that the supplier is in the business of importing and supplying medical equipment
3. Certified true copy of the Certificate of Distributorship for the last three (3) years. The principal and the local distributor must have been in business partnership for at least three (3) years.
4. Certificate that the Brand must have been in the local market for at least five (5) years. Proof required: Invoices
5. The Brand must have been installed in at least five (5) government and/or private hospitals. A list of the hospital and contact no must be submitted.
6. Certification by the supplier that at least one service engineer is available locally to provide quick on-site support
7. Certificate of Performance Evaluation from the Single Largest Contract.
8. List of local Service Center/s
9. License to Operate (LTO) from the Philippine FDA

**D. Documents Required of the Principal to be Submitted During Post-Qualification**

1. Certification that the manufacturer has been in the business of manufacturing Hospital Equipment for at least Ten (10) years.
2. Guarantee Letter from the manufacturer to ensure availability of supplies, parts and accessories for at least five (5) years after expiration of the warranty period
3. Certification by the principal that service engineers are factory trained on service and repair.
4. ISO compliance Certificate of the manufacturer.
5. List of the manufacturer's office and contact details in the following territories: Western Europe, US/Canada and Japan.

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