

PROCUREMENT OF ONE (1) UNIT ANESTHESIA MACHINE FOR OBGYNE DEPARTMENT

ABC: PHP 3,350,000.00



ANESTHESIA MACHINE	
DESCRIPTION	
Patient Category	An anesthesia machine is a pneumatic device that supplies a mixture of oxygen, gas, and anesthetic agent to a patient, allowing them to remain unconscious, but breathing, during surgery. Can ventilate Adult, Pediatrics and Neonates
PURPOSE OF USE	
Clinical department/ward	Delivery Room- OR
TECHNICAL SPECIFICATIONS	
Measuring Systems and Displays	<ul style="list-style-type: none"> • Screen size of 15" touch screen, configurable screen contents smart alarm management with extensive support system.
Gas Supply	<ul style="list-style-type: none"> • Must have 3 gas configuration (O2, Air and N2O)
Fresh Gas Delivery	<ul style="list-style-type: none"> • Must have mechanically controlled gas mixer with electronic flow measurement, numeric gas flow indicators and virtual flow meters. • Fresh gas flow of 0 to at least 12L/min (O2, Air, N2O) • O2 concentration of 21 to 100 Vol% • O2 flush of 25 of 75 L/min at 2.7 to 6.9 kPa x 100 (39 to 100 psi: 0.27 to 0.69 MPa) supply pressure
Ventilator and Setting Parameters	<ul style="list-style-type: none"> • Must be electronically driven piston ventilator (E-Vent plus), fresh-gas decoupled, ventilation without drive gas, i.e. no medical gases are

		<p>consumed in operating the ventilator (regardless of gas supply).</p> <ul style="list-style-type: none"> • All patient-gas leading components are autoclavable. • Must have the following ventilation mode of: <ul style="list-style-type: none"> • Manual/Spontaneous (Man/Spon) • Volume Controlled (VC-CMV) • Pressure Controlled(PC-CMV) • Autoflow time Controlled(VC-CMV/AF) • Volume-controlled, synchronized (VC-SIMV) • Pressure-controlled, synchronized (PC-SIMV) • AutoFlow, synchronized(VC-SIMV/AF) • CPAP/PSV • External Fresh Gas Outlet <ul style="list-style-type: none"> • Standard Tidal Volume of 10 to 1500ml with an option for “Advanced neonatal support” that is capable of 5ml minimum. • Respiratory rate (RR) : 3 to 100 /min • Inspiratory time (Ti) : 0.2 to 10 s • Ratio of inspiratory time to expiratory time (I:E) : 1:50 to 50:1 • Trigger threshold (Trigger) : 0.3 to 15 L/min • Inspiratory flow(Flow) : Minimum 0.1 L/min, max ≥160 L/min • Inspiratory pressure(P_{insp}) : PEEP +5 to 80 hPa (cmH₂O) • Pressure limitation(P_{max}) : PEEP +10 to 80 hPa (cmH₂O) • Pressure support above PEEP (Δp_{supp}) : Off, 3 to (80-PEEP) hPa (cmH₂O)
	Breathing System	<ul style="list-style-type: none"> • Must have integrated heated breathing system capable of low flow and minimum flow application.

	<ul style="list-style-type: none"> • Must now need any tools for disassembly and assembly. • Breathing system can be reprocess/autoclavable, replaceable without tools and must have less than 11 individual components. • Volume of breathing system is approximately 3.6L including CO2 Absorber when applying maximum Tidal Volume of 1500ml.
Gas Monitoring	<ul style="list-style-type: none"> • Integrated patient Gas module Auto ID for different anesthetic gases.
Operating Characteristics	<ul style="list-style-type: none"> • Power consumption must be <95 W, during mechanical ventilation, maximum 400 W • Must have available active or passive anesthetic gas scavenging system for operation with and without adequate scavenging system infrastructure; detection of excessive suction flows, with connector for sample gas disposal when using third-party patient gas measurement modules. With Anesthesia Gas Scavenging System (AGSS) safety relief valve if passive system. Supplier must install necessary infrastructure retrofitting works to accommodate the scavenging system requirement of the unit being supplied. • Main voltage 100 to 240 V AC (Line-Neutral) at 60 Hz, single phase with grounding. • Internal Battery backup time At least 45 min, typically 120 min (with new and fully charged battery).
Operating Characteristics (UPS)	<ul style="list-style-type: none"> • 1500VA/ 900W capacity • EcoStruxure™ Ready Smart-UPS Portal included (formerly SmartConnect) • LCD interface for easy configuration • Line interactive topology

		<ul style="list-style-type: none"> • 220V UPS for server, router or switch • 8 outlets • Monitoring flexibility; Cloud monitoring via secure web portal or EcoStruxure IT • AVR corrects utility voltage • Stand-alone tower
	<p>Safety and Comfort Functions</p>	<ul style="list-style-type: none"> • Must have integrated device checklist and illustrated step-by-step instructions for daily machine preparation. • Must support the safe and efficient application of low-and minimal-flow anesthesia by using its Econometer to make the user aware of fresh-gas flow deficits and surpluses. • Can ventilate and give anesthetic gas even the machine is switched off. • Mechanical ventilation with ambient air in case of complete failure of the gas supply. • Automatic start-up and self-test of machine including calibration of all sensors and testing of all control valves; normally no user action necessary after start of test. • Auto set function for adjusting all limits, CBM mode (cardiac bypass mode). • Breathing bag as an indicator of fresh-gas deficiency and leaks • Pause mode for short-term interruptions of ventilations. • Data storage on USB storage device (alarm history, self-test results, screen shots, trends and machine configurations). • Time-saving transfer of device default setting and configurations to other devices (export and import of configuration data via USB storage device).

		<ul style="list-style-type: none"> • Integrated, dimmable illumination of working and documentation surfaces. • The machine has at least two (2) built in drawers to organize supplies before, during, and after cases. • Central brake, smooth running castors.
	Patient Monitor	<ul style="list-style-type: none"> • Monitor for adult, pediatric or neonatal patient populations with one device without difficult or time-consuming modifications when moved from one patient group to another. • Can support stand-by mode. • Can support demo mode. • Can support night mode. • The monitoring solution is as finless design to reduce hygienic risk of cross infection. • The monitor can used as a transport monitor with a bed hook. • The monitoring solution can provide an anti-theft lock to better manage hospital assets. • High resolution display 800x600 and 12" screen size. • Can store 1200 NIBP measurement and alarm events. • The monitoring solution can display up to 11 waveforms and provide 120 hours of trend and patient information at the patient's bedside. • The monitoring solution can offer bed to bed view function. • The color and position of waveforms or parameters should be adjustable based on user's preferences. • Basic Parameters: NIBP, 3/5lead ECG, Temperature, SPO2 and respiration. • The monitoring solution can support up to at least 16 arrhythmia classifications for paced or non-paced patients, which includes ASYSTOLE, VFIB/VTAC, VT>2, couplet, BIGEMINY, TRIGEMINY, R ON T, PVC, TACHY, BRADY, MISSED BEATS, IRR, PNC PNP, VBRADY, VENT.

		<ul style="list-style-type: none"> • The monitoring solution can perform drug dosage calculations for a total of 15 drugs (5 of which can be user defined) • The monitor can be connected with same brand designated anesthesia machine or ventilator to build a workstation for the OR or ICU with data and waveform flow. • The monitor can show PAW, FLOW related waveforms and parameters transmitted from connected anesthesia machines and ventilators via Medibus/X protocol. • Defibrillation protection capable • The monitoring solution's battery shall support a minimum of 350 minutes of continuous monitoring • The monitoring's battery can be exchanged by customers without the need of a tool • The monitoring solution will provide a standard built-in thermal recorder. • The monitor can be connected with the central station via wireless. • The monitor can meet wireless standards of IEEE 802.11 b/g/n • Weights not more than 5kg. • Power supply must be 100V to 240V 50/60hz
TECHNICAL SERVICES AS FOLLOWS:		
		<ul style="list-style-type: none"> • System Warranty must be two (2) years • Calibration of the unit must be performed after installation with certificate • SERVICE CALL within 24 hours maximum and must have repair facility in Mindanao Area. • PREVENTIVE MAINTENANCE for every quarter until warranty expires. • SERVICE KITS and consumables to be included for one year use. • Supplier must deliver and install the unit without cost to the owner

	<ul style="list-style-type: none"> • Training of end-users and Biomed Engineer must be done on-site with minimum of 7 days period.
PHYSICAL/CHEMICAL CHARACTERISTICS	
	The machine must have at least one oxygen cylinder attached. The hanger yoke must be pin-indexed, have a clamping device that resists leaks, and contain a filter. It must have a check valve to prevent trans filling, and a cylinder pressure gauge. There must be cylinder pressure regulators.
ACCESSORIES, CONSUMABLES, SPARE PARTS, OTHER COMPONENTS	
A. Medline Adult Expandable Anesthesia Circuits Reusable, 20 Each per Case	Quantity : 20 Each per Case 2. Bacterial / Viral Protection 3. Breathing Bag Size : 3 Liter 4. Cap : Tethered 5. Gas Sampling Line : MM 10' 6. Gas Sampling Port : Elbow 7. Mask Included : Yes 8. Mask Size : 5 9. Bacterial/Viral Filters : 1.00 10. Tubing Length Inches : 90" 11. Tubing Type : Expandable 12. Wye: Parallel & Bi-WYE
B. Medline Pediatric Expandable Anesthesia Circuits Reusable, 20 Each per Case	. BACTERIAL / VIRAL PROTECTION : Yes 2. BACTERIAL/VIRAL FILTERS : 2 3. BREATHING BAG SIZE : 1 Liter : 2 Liter 3. CAP : Tethered 4. GAS SAMPLING LINE : MM 10' 5. GAS SAMPLING PORT : Elbow 6. HME INCLUDED : Yes 7. LATEX FREE : Yes 8. MASK INCLUDED : Yes 9. MASK SIZE : 3 10. TUBING LENGTH INCHES : 90" 11. TUBING TYPE : Expandable 12. WYE : Bi-Wye

	: Parallel
C. WASTE GAS SCAVENGING	
D. PULSE OXIMETRY (SPO2)	
E. AIRBAG PEDIARIC	
F. WATER LOCK	
G. PLUS MECHANICAL FILTER	
H. CATHETER MOUNT TUBE EXTENSION	
I. SODA LIME	
J. AGSS TERMINAL UNIT	
K. BRONCHIAL SUCTION	
SPARE PARTS:	A. FLOW-SENSOR B. OXYGEN SENSOR
TRAINING, INSTALLATION AND UTILISATION	
Pre-installation requirements	Supplier to perform installation, safety and operation checks before handover.
Requirements for commissioning	Local clinical staff to affirm completion of installation
Training of user/s	Training of users and BIOMED Engineer & staff in operation and basic maintenance shall be provided
User care	To demonstrate the proper cleaning and disinfection with provision of printed cards or tags beside the unit.
WARRANTY AND MAINTENANCE / TECHNICAL SERVICES	
Warranty	3 years for parts and labor
Preventive Maintenance	Every quarter until warranty expires
Calibration	The unit must be performed after installation with certificate.

	Installation	Supplier must deliver and install the unit without cost to the owner.
DOCUMENTATION		
	Documentation requirements	User, technical and maintenance manuals to be supplied in English language. Service manual in English. List to be provided of important spares and accessories, with their part numbers and cost. Certificate of calibration and inspection to be provided.
SAFETY AND STANDARDS		
	International Standards	IEC 60601-1:2012 Medical electrical equipment - Part 1: General requirements for basic safety and essential performance
	DELIVERY PERIOD	ITEM SHALL BE DELIVERED WITHIN 45 CALENDAR DAYS FROM RECEIPT OF NOTICE TO PROCEED INCLUDING ITS INSTALLATION
	TERMS OF PAYMENT	Payment shall be processed right after complete delivery, commissioning and compliance with all necessary documents in according to audit rules and regulations.