

REFERENCE OF TENDER	DESCRIPTION OF TENDER	TIME PERIOD OF TENDER	DEPARTMENT/DIVISION/ UNIT REQUESTING TENDER	FEES	CLOSING DATE NOT LATER THAN 2.00PM	FOCAL PERSON
KK/329/2022/HTD	SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF FOUR (4) UNITS OF ANESTHETIC MACHINE FOR OPERATING THEATRE, MINISTRY OF HEALTH	-	DEPARTMENT OF HEALTHCARE TECHNOLOGY SERVICES	\$50.00	20 <sup>th</sup> DECEMBER 2022	Muhd Amirul Fazleen bin Hj Khalidin Biomedical Engineer Department Of Healthcare Technology Ministry Of Health Negara Brunei Darussalam e-mail: <a href="mailto:fazleen.khalidin@moh.gov.bn">fazleen.khalidin@moh.gov.bn</a>

**SECTION 2**  
**SPECIFICATIONS AND REQUIREMENTS**

TENDER REFERENCE NO: KK/329/2022/HTD

INVITATION TO TENDER

**SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF FOUR (4) UNITS OF ANESTHETIC MACHINE FOR OPERATING THEATRE, MINISTRY OF HEALTH**

<b>DELIVERY PERIOD</b>	NOT MORE THAN 90 DAYS
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<b>DISTRIBUTION</b>	
RIPAS HOSPITAL	2 UNITS
SURO SERI BEGAWAN HOSPITAL	2 UNITS

<b>SECTION I USER REQUIREMENTS</b>	
REF. NO.	DESCRIPTION
1	<b>FOUR (4) UNITS OF ANESTHETIC MACHINE</b>
2	<b>MULTIPARAMETER FOR EACH ANESTHETIC MACHINE</b>
3	<b>ACCESSORIES FOR EACH MACHINE</b>
4	<b>USER TRAINING</b>
5	<b>OTHER REQUIREMENTS</b>
1	<b>FOUR (4) UNITS OF ANESTHETIC MACHINE</b>
1.1	Primary application: Operating theatre / ICU
1.2	Latest model with the latest technology
1.3	Suitable for adult, pediatric and neonatal
1.4	Comes on trolley with large work surface
1.5	Trolley have lockable castors or central braking system
1.6	Trolley must have at least one lockable drawer with additional drawer
1.7	Electronic gas mixture for three gases: Oxygen, Nitrous Oxide and Medical Air
1.8	Oxygen and Nitrous Oxide pipeline with cylinder pin index fitting
1.9	Pressure gauges (Regulators) for cylinder and pipeline pressure

<b>SECTION I USER REQUIREMENTS</b>	
<b>REF. NO.</b>	<b>DESCRIPTION</b>
1.10	Anti-hypoxia mechanism with hypoxic mixture fail-safe system
1.11	Backup mode for any emergency situation (Please specify)
1.12	Should have the capability of delivering anesthetic gases at low flow, circle and open circuit
1.13	Should have two (2) vaporizers (Desflurane and Sevoflurane)
1.14	Two (2) selectatec vaporizers with interlock system mechanism
1.15	Mechanically or automatically controlled gas mixer with electronic flow measurements, numerical gas flow indicators and virtual flowmeter
1.16	Automatic vaporizers identification
1.17	Should have a carbon dioxide (CO <sub>2</sub> ) absorber
1.18	Built-in anesthetic gas scavenging system
1.19	Should have an oxygen flush system for rapid administration to the breathing system
1.20	Must have Auxiliary Common Gas Outlet (ACGO)
1.21	Overpressure regulation for wall inlets oxygen, nitrous oxide, and medical air at 9 bars
1.22	Electronic carbon dioxide/Nitrous oxide ratio control and Nitrous oxide cut off
1.23	Integrated oxygen flowmeter (0-10L) with auxiliary tube outlet
1.24	Rechargeable batteries – backup for at least 30 minutes or better
1.25	Alarm and warning safety system that includes but is not limited to the following: main power failure, low battery alarm, oxygen fail-safe
1.26	Inclusive of automatic ventilator unit (Please specify type)
1.27	Ventilator modes must include but not be limited to:
1.27.1	Manual/Spontaneous
1.27.2	Volume control
1.27.3	Pressure control
1.27.4	Spontaneous breathing support / CPAP with pressure support
1.27.5	External fresh-gas outlet
1.28	Should be able to ventilate neonates, pediatric and adult patients on the same bellows
1.29	Tidal Volume: Min 10cc – Max 1400cc
1.30	Should be able to provide PEEP, Positive inspiratory pressure alarms, and inverse I/E ratios
1.31	APL valve for limiting peak pressure during manual ventilation

<b>SECTION I USER REQUIREMENTS</b>	
<b>REF. NO.</b>	<b>DESCRIPTION</b>
1.32	Display screen size of at least 12" or better
<b>2</b>	<b>MULTIPARAMETER FOR EACH ANESTHETIC MACHINE</b>
2.1	Suitable for adult, pediatric and neonate monitoring
2.2	Display screen size of 12 inch or better
2.3	Able to display at least 6 waveforms
2.4	Touchscreen, knob or wheel and softkeys for user interface
2.5	Hemodynamic measurement: ECG 3 and 5 leads with ischemia and arrhythmias alarm
2.6	Electro-surgery protection
2.7	Should be able to monitor three agents (Isoflurane, Sevoflurane, and Desflurane) concentration and MAC value automatic and side stream spirometry
2.8	Should be able to monitor carbon monoxide, nitrous oxide, respiration rate, airway pressure, pulse rate and flow loop
2.9	Capnograph (FiO2 and ETCO2 monitoring)
2.10	Two (2) invasive blood pressure (IBP) channels
2.11	SpO2 monitoring
2.12	Entropy and/or neuromuscular transmission (NMT) monitoring or equivalent
<b>3</b>	<b>ACCESSORIES FOR EACH MACHINE</b>
3.1	Two (2) sets of Invasive Blood Pressure cables and sensors
3.2	Two (2) sets of SpO2 cable and adult finger sensor
3.3	Two (2) units of large adult blood pressure cuff
3.4	Two (2) units of adult blood pressure cuff
3.5	Two (2) units of child blood pressure cuff
3.6	Two (2) units of neonate blood pressure cuff
3.7	Two (2) units of NIBP hose for BP cuffs
3.8	Two (2) units of temperature sensor probes for oronasal and skin application for adult and pediatric
3.9	Fifty (50) pieces of temperature probe protective covers
3.10	Tenderer to include any other standard accessories required to be able to measure and display the parameters mentioned above
<b>4</b>	<b>USER TRAINING</b>
4.1	Conduct <b>user training</b> to the all end users by an application specialist or competent local engineer including but not limited to:

<b>SECTION I USER REQUIREMENTS</b>	
<b>REF. NO.</b>	<b>DESCRIPTION</b>
	<ul style="list-style-type: none"> <li>• Basic operation and troubleshooting</li> <li>• Basic user maintenance and PACS guide through</li> <li>• Operating manual (Hardcopy)</li> <li>• Operating manual (Softcopy)</li> </ul>
4.2	Refresher course after six (6) months of first training
5	<b>OTHER REQUIREMENTS</b>
5.1	Tenderer is able to deliver within three (3) months of Letter of Award/ Purchase order.

***\* In your quotation or tender document, please put the breakdown cost or itemized the price for each accessories and consumables***

**SECTION II  
PROCUREMENT**

**BRAND:**

**MODEL:**

**COUNTRY OF ORIGIN:**

**UNIT PRICE (B\$):**

**TOTAL PRICE (B\$):**

**WHERE MARKETED:**

**YEAR MANUFACTURED:**

**WARRANTY:**

**DELIVERY TIME:**

**PRICE VALIDITY:**

**SECTION III  
TECHNICAL SPECIFICATION**

<b>MAINS POWER SUPPLY:</b>	
<b>BATTERY BACKUP:</b>	
<b>INTERNATIONAL SAFETY STANDARD:</b>	
<b>TECHNICAL SUPPORT:</b>	NO OF <b>LOCAL</b> ENGINEER/TECHNICIAN: NEAREST OVERSEA SUPPORT: [State Country] NO OF <b>OVERSEA</b> ENGINEER/TECHNICIAN:
<b>DIMENSIONS:</b>	<b>MM / CM / INCH</b>
<b>WEIGHT:</b>	<b>KG / G / LBS</b>
<b>EQUIPMENT WHOLE LIFE TIME SUPPORT:</b>	Number of years, spare parts are available after the installation of the equipment: _____ years

<b>BROCHURE:</b>	Detailed brochure submitted?
<b>USER MANUALS:</b>	Tenderers acknowledge that they must supply during commissioning, three sets of user manuals, one set must be in the form of soft copy. (PDF Format)
<b>SERVICE MANUALS:</b>	Tenderers acknowledge that they must supply during commissioning, three sets of service manuals, one set must be in the form of soft copy. (PDF Format).
<b>WARRANTY PLANNED PREVENTIVE MAINTENANCE:</b>	Two time planned preventive maintenance per year during the equipment warranty, starting six months after the date of commissioning.
<b>USER TRAINING</b>	<p>Tenderer to conduct <b>user training</b> to the all end users by an application specialist or competent local engineer including but not limited to:</p> <ul style="list-style-type: none"> <li>• Basic operation and troubleshooting</li> <li>• Basic user maintenance and PACS guide through</li> <li>• Operating manual (Hardcopy)</li> <li>• Operating manual (Softcopy)</li> </ul>
<b>TECHNICAL TRAINING</b>	<p>Tenderers to conduct <b>technical training</b> to Biomedical Engineers and Technicians. Training must include but not limited to:</p> <ul style="list-style-type: none"> <li>• Troubleshooting and basic corrective maintenance</li> </ul>
<b>ON-SITE:</b>	<ul style="list-style-type: none"> <li>• Training to be conducted locally, tenderers are required to : <ul style="list-style-type: none"> <li>• Provide training materials, test equipment, demo equipments, etc.</li> <li>• Provide training to two groups of technical staffs.</li> <li>• Provide 2 days (minimum)_of training for each group.</li> <li>• Training to be conducted at the equipment site.</li> </ul> </li> </ul>



**SECTION 3**  
**TENDER FORM**

To:

TENDER REFERENCE NO: KK/329/2022/HTD

**INVITATION TO TENDER**

**SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF FOUR (4) UNITS OF ANESTHETIC MACHINE FOR OPERATING THEATRE, MINISTRY OF HEALTH**

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**TENDER OF (*name of tenderer*)** : \_\_\_\_\_

Company/Business Registration No. : \_\_\_\_\_

Tender Closing Date : \_\_\_\_\_

<b>DELIVERY PERIOD</b>	
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**SECTION I  
USER REQUIREMENTS**

REF. NO.	DESCRIPTION	Tick (✓)		STATE OR SPECIFY	
		YES	NO	REMARKS	BROCHURE PAGE
1	<b>FOUR (4) UNITS OF ANESTHETIC MACHINE</b>				
2	<b>MULTIPARAMETER FOR EACH ANESTHETIC MACHINE</b>				
3	<b>ACCESSORIES FOR EACH MACHINE</b>				
4	<b>USER TRAINING</b>				
5	<b>OTHER REQUIREMENTS</b>				
<b>1</b>	<b>FOUR (4) UNITS OF ANESTHETIC MACHINE</b>				
1.1	Primary application: Operating theatre / ICU				
1.2	Latest model with the latest technology				
1.3	Suitable for adult, pediatric and neonatal				
1.4	Comes on trolley with large work surface				

**SECTION I  
USER REQUIREMENTS**

REF. NO.	DESCRIPTION	Tick (✓)		STATE OR SPECIFY	
		YES	NO	REMARKS	BROCHURE PAGE
1.5	Trolley have lockable castors or central braking system				
1.6	Trolley must have at least one lockable drawer with additional drawer				
1.7	Electronic gas mixture for three gases: Oxygen, Nitrous Oxide and Medical Air				
1.8	Oxygen and Nitrous Oxide pipeline with cylinder pin index fitting				
1.9	Pressure gauges (Regulators) for cylinder and pipeline pressure				
1.10	Anti-hypoxia mechanism with hypoxic mixture fail-safe system				
1.11	Backup mode for any emergency situation (Please specify)				
1.12	Should have the capability of delivering anesthetic gases at low flow, circle and open circuit				
1.13	Should have two (2) vaporizers (Desflurane and Sevoflurane)				
1.14	Two (2) selectatec vaporizers with interlock system mechanism				

**SECTION I  
USER REQUIREMENTS**

REF. NO.	DESCRIPTION	Tick (✓)		STATE OR SPECIFY	
		YES	NO	REMARKS	BROCHURE PAGE
1.15	Mechanically or automatically controlled gas mixer with electronic flow measurements, numerical gas flow indicators and virtual flowmeter				
1.16	Automatic vaporizers identification				
1.17	Should have a carbon dioxide (CO2) absorber				
1.18	Built-in anesthetic gas scavenging system				
1.19	Should have an oxygen flush system for rapid administration to the breathing system				
1.20	Must have Auxiliary Common Gas Outlet (ACGO)				
1.21	Overpressure regulation for wall inlets oxygen, nitrous oxide, and medical air at 9 bars				
1.22	Electronic carbon dioxide/Nitrous oxide ratio control and Nitrous oxide cut off				
1.23	Integrated oxygen flowmeter (0-10L) with auxiliary tube outlet				
1.24	Rechargeable batteries – backup for at least 30 minutes or better				

**SECTION I  
USER REQUIREMENTS**

REF. NO.	DESCRIPTION	Tick (✓)		STATE OR SPECIFY	
		YES	NO	REMARKS	BROCHURE PAGE
1.25	Alarm and warning safety system that includes but is not limited to the following: main power failure, low battery alarm, oxygen fail-safe				
1.26	Inclusive of automatic ventilator unit (Please specify type)				
1.27	Ventilator modes must include but not be limited to:				
1.27.1	Manual/Spontaneous				
1.27.2	Volume control				
1.27.3	Pressure control				
1.27.4	Spontaneous breathing support / CPAP with pressure support				
1.27.5	External fresh-gas outlet				
1.28	Should be able to ventilate neonates, pediatric and adult patients on the same bellows				
1.29	Tidal Volume: Min 10cc – Max 1400cc				

**SECTION I  
USER REQUIREMENTS**

REF. NO.	DESCRIPTION	Tick (✓)		STATE OR SPECIFY	
		YES	NO	REMARKS	BROCHURE PAGE
1.30	Should be able to provide PEEP, Positive inspiratory pressure alarms, and inverse I/E ratios				
1.31	APL valve for limiting peak pressure during manual ventilation				
1.32	Display screen size of at least 12" or better				
<b>2</b>	<b>MULTIPARAMETER FOR EACH ANESTHETIC MACHINE</b>				
2.1	Suitable for adult, pediatric and neonate monitoring				
2.2	Display screen size of 12 inch or better				
2.3	Able to display at least 6 waveforms				
2.4	Touchscreen, knob or wheel and softkeys for user interface				
2.5	Hemodynamic measurement: ECG 3 and 5 leads with ischemia and arrhythmias alarm				
2.6	Electro-surgery protection				

**SECTION I  
USER REQUIREMENTS**

REF. NO.	DESCRIPTION	Tick (✓)		STATE OR SPECIFY	
		YES	NO	REMARKS	BROCHURE PAGE
2.7	Should be able to monitor three agents (Isoflurane, Sevoflurane, and Desflurane) concentration and MAC value automatic and side stream spirometry				
2.8	Should be able to monitor carbon monoxide, nitrous oxide, respiration rate, airway pressure, pulse rate and flow loop				
2.9	Capnograph (FiO2 and ETCO2 monitoring)				
2.10	Two (2) invasive blood pressure (IBP) channels				
2.11	SpO2 monitoring				
2.12	Entropy and/or neuromuscular transmission (NMT) monitoring or equivalent				
<b>3</b>	<b>ACCESSORIES FOR EACH MACHINE</b>				
3.1	Two (2) sets of Invasive Blood Pressure cables and sensors				
3.2	Two (2) sets of SpO2 cable and adult finger sensor				
3.3	Two (2) units of large adult blood pressure cuff				

**SECTION I  
USER REQUIREMENTS**

REF. NO.	DESCRIPTION	Tick (✓)		STATE OR SPECIFY	
		YES	NO	REMARKS	BROCHURE PAGE
3.4	Two (2) units of adult blood pressure cuff				
3.5	Two (2) units of child blood pressure cuff				
3.6	Two (2) units of neonate blood pressure cuff				
3.7	Two (2) units of NIBP hose for BP cuffs				
3.8	Two (2) units of temperature sensor probes for oronasal and skin application for adult and pediatric				
3.9	Fifty (50) pieces of temperature probe protective covers				
3.10	Tenderer to include any other standard accessories required to be able to measure and display the parameters mentioned above				
4	<b>USER TRAINING</b>				
4.1	Conduct <b>user training</b> to the all end users by an application specialist or competent local engineer including but not limited to: <ul style="list-style-type: none"> <li>• Basic operation and troubleshooting</li> <li>• Basic user maintenance and PACS guide through</li> <li>• Operating manual (Hardcopy)</li> <li>• Operating manual (Softcopy)</li> </ul>				



SECTION I USER REQUIREMENTS					
REF. NO.	DESCRIPTION	Tick (✓)		STATE OR SPECIFY	
		YES	NO	REMARKS	BROCHURE PAGE
4.2	Refresher course after six (6) months of first training				
5	<b>OTHER REQUIREMENTS</b>				
5.1	Tenderer is able to deliver within three (3) months of Letter of Award/ Purchase order.				

*\* In your quotation or tender document, please put the breakdown cost or itemized the price for each accessories and consumables*

**SECTION II  
PROCUREMENT (TO FILL IN)**

<b>BRAND:</b>	
<b>MODEL:</b>	
<b>COUNTRY OF ORIGIN:</b>	
<b>UNIT PRICE (B\$):</b>	
<b>TOTAL PRICE (B\$):</b>	
<b>WHERE MARKETED:</b>	
<b>YEAR MANUFACTURED:</b>	
<b>WARRANTY:</b>	
<b>DELIVERY TIME:</b>	
<b>PRICE VALIDITY:</b>	

**SECTION III  
TECHNICAL SPECIFICATION (TO FILL IN)**

<b>SECTION III TECHNICAL SPECIFICATION (TO FILL IN)</b>	
<b>MAINS POWER SUPPLY:</b>	
<b>BATTERY BACKUP:</b>	
<b>INTERNATIONAL SAFETY STANDARD:</b>	
<b>TECHNICAL SUPPORT:</b>	NO OF <b>LOCAL</b> ENGINEER/TECHNICIAN: NEAREST OVERSEA SUPPORT: [State Country] NO OF <b>OVERSEA</b> ENGINEER/TECHNICIAN:
<b>DIMENSIONS:</b>	<b>MM / CM / INCH</b>
<b>WEIGHT:</b>	<b>KG / G / LBS</b>
<b>EQUIPMENT WHOLE LIFE TIME SUPPORT:</b>	Number of years, spare parts are available after the installation of the equipment:_____ years

		YES	NO
<b>BROCHURE:</b>	Detailed brochure submitted?		
<b>USER MANUALS:</b>	Tenderers acknowledge that they must supply during commissioning, three sets of user manuals, one set must be in the form of soft copy. (PDF Format)		
<b>SERVICE MANUALS:</b>	Tenderers acknowledge that they must supply during commissioning, three sets of service manuals, one set must be in the form of soft copy. (PDF Format).		
<b>WARRANTY PLANNED PREVENTIVE MAINTENANCE:</b>	Two time planned preventive maintenance per year during the equipment warranty, starting six months after the date of commissioning.		
<b>USER TRAINING</b>	Tenderer to conduct <b>user training</b> to the all end users by an application specialist or competent local engineer including but not limited to: <ul style="list-style-type: none"> <li>• Basic operation and troubleshooting</li> <li>• Basic user maintenance and PACS guide through</li> <li>• Operating manual (Hardcopy)</li> <li>• Operating manual (Softcopy)</li> </ul>		
<b>TECHNICAL TRAINING</b>	Tenderers to conduct <b>technical training</b> to Biomedical Engineers and Technicians. Training must include but not limited to: <ul style="list-style-type: none"> <li>• Troubleshooting and basic corrective maintenance</li> </ul>		
<b>ON-SITE:</b>	<ul style="list-style-type: none"> <li>• Training to be conducted locally, tenderers are required to : <ul style="list-style-type: none"> <li>• Provide training materials, test equipment, demo equipments, etc.</li> <li>• Provide training to two groups of technical staffs.</li> <li>• Provide 2 days (minimum)_of training for each group.</li> <li>• Training to be conducted at the equipment site.</li> </ul> </li> </ul>		

1. We offer and undertake on your acceptance of our Tender to provide the above mentioned services in accordance with your Invitation To Tender.
2. Our Tender is fully consistent with and does no contradict or derogate from anything in your Invitation To Tender. We have not qualified or changed any of the provisions of your Invitation To Tender.
3. OUR OFFER IS VALID FOR **TWELVE (12)** CALENDAR MONTHS FROM THE TENDER CLOSING DATE.
4. When requested by you, we shall extend the validity of this offer.
5. We further undertake to give you any further information which you may require.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_  
**Signature of authorised officer of Tenderer**

Name:

Designation:

Tenderer's official stamp