



22nd May, 2023

TL2023/0522/1A

Mr. Khalid Khurshid,
Chief Minister,
Gilgit Baltistan.

**Sub: Complaint Against Allegation of Violation of PPRA Rules 2004 in Tender Titled
“Procurement of Biomedical Equipment for 50 Bedded Cardiac Hospital Gilgit”, Estimated Cost
Rs. 2 Billion and Alleged Favoritism & Corruption in Procurement Process.**

Dear Sir,

Transparency International Pakistan has received a complaint on the allegation of violation of PPRA Rules 2004 in Tender Titled “Procurement of Biomedical Equipment for 50 Bedded Cardiac Hospital Gilgit”, Estimated Cost Rs. 2 Billion and alleged favoritism and Corruption in the procurement process.

The complainant has made the following allegations that;

1. The tender for the procurement of biomedical equipment, hospital furniture, fixture, machinery, IT equipment, general store item & Misc. etc against Development Scheme namely “Establishment of 50 Bedded Cardiac Hospital Phase -I at Gilgit was issued on 17th March 2022. Total no of Lots in the tender included 12 (**Annex-A**).
2. The tender was retendered again on 5th Jan 2023 as in the previous tender, the government was able to successfully procure only 4 to 5 lots (**Annex-B**).
3. In the revised tender, changes are made to the specifications on LOT-7, Diagnostic Ultrasounds, LOT-1, Anesthesia & Ventilation and LOT on Gamma Camera. As per the amended specifications, office of the Project Director 50 Bedded Hospital Phase-1 Gilgit in violation of PPRA Rule 13 requires the country of origin for Anesthesia Ventilator to be USA, Europe, Japan (**Annex-C**).
4. Similarly, for the size of the screen of patient monitors and anesthesia machines, the procuring agency has facilitated the bidder with 12” screen, and has not set weightage for financial and technical.
5. These changes to the specifications in the retender are done to facilitate the pre-selected bidders who did not meet the higher standard specifications, and as a result major companies are out of the competition.

Transparency International Pakistan Comments

Transparency International Pakistan has reviewed the allegations of the complaint, prima facie the allegations seem correct. Following are TI Pakistan comments;

1. PPRA Rule 10 Specification requires that the procuring agency makes the specifications as wider as possible that shall allow widest possible competition and not favour any particular bidder or supplier. PPRA Rule 10, is quoted below for your reference;

PPRA Rule 10: Specifications:- (1) *The procuring agency shall allow the widest possible competition by defining such specifications that shall not favour any single contractor or supplier nor put others at a disadvantage.*

(2) *Any terms, specifications, standards, features, characteristics and requirements prescribing the technical or quality characteristics shall be generic in nature and shall not include reference to brand name, model number, catalogue number, name or origin of the country or similar classification.*



3) In case, the procuring agency is convinced that the use of or a reference to a brand name or a catalogue number is essential to complete, an otherwise incomplete specification, and no other sufficiently precise or understandable way of describing the characteristics of the goods, works or services to be procured is provided, the words "or equivalent" shall be used, after recording specific justifications in writing therein. The procuring agency shall be responsible to define the parameters of "equivalence" for all participants to procurement process, to ensure transparency.

2. The procuring agency has formulated discriminatory and difficult conditions in the specification which results in unfair bidding, and is in violation of PPRA Rule 32, quoted below for your reference;

PPRA Rule 32: Discriminatory and difficult conditions.- Save as otherwise provided, no procuring agency shall introduce any condition, which discriminates between bidders or that is considered to be met with difficulty. In ascertaining the discriminatory or difficult nature of any condition reference shall be made to the ordinary practices of that trade, manufacturing, construction business or service to which that particular procurement is related.

Transparency International Pakistan Recommendations

Transparency International Pakistan requests the Chief Secretary, Gilgit Baltistan to examine the complaint in light of PPRA Rules 2004 and if found correct, direct the concerned department to re-advertise the tender in compliance with PPRA Rules 2004.

TI Pakistan is striving for across the board application of **Rule of Law**, which is the only way to stop corruption and achieve zero tolerance against Corruption.

With Regards,


(Advocate Daniyal Muzaffar)
Trustee/Legal Advisor
Transparency International Pakistan

Copies forwarded for the information with request to take action under their mandate to:

1. PSPM, PM House, Islamabad
2. Chief Secretary, Gilgit Baltistan
3. Minister Health, Health Department, Gilgit Baltistan
4. Chairman, Prime Minister Inspection Commission, PMIC, Islamabad
5. Chairman, NAB, Islamabad
6. Registrar, Supreme Appellate Court, Gilgit Baltistan,
7. MD, PPRA, Islamabad

Note:

This is to clarify that Transparency International Pakistan is not a complainant, it acts as a whistleblower and operate under Article 19-A, of the Constitution of Pakistan which gives the right to public to know how government is being run by public officers. Article 19-A makes the right to access of information pertaining to a public authority a fundamental right, Justice Syed Mansoor Ali Shah in his landmark judgment in case of Ataulah Malik v. Federation of Pakistan includes following order.

Right to information is another corrective tool which allows public access to the working and decision making of the public authorities. It opens the working of public administration to public scrutiny. This necessitates transparent and structured exercise of discretion by the public functionaries. Article 19-A empowers the civil society of this country to seek information from public institutions and hold them answerable. PLD 2010 Lahore 605.

TENDER NOTICE

GOVERNMENT OF GILGIT-BALTISTAN
OFFICE OF THE PROJECT DIRECTOR
 50 Bedded Cardiac Hospital Phase-1 Gilgit

No. CH.PMU.Dev.1 (1)/2017
 Dated: 17th March 2022

TENDER NOTICE

Ministry of Kashmir Affairs & Gilgit-Baltistan (M/o KA&GB) through Project Director has invited sealed tenders from well reputed firms or their authorized distributors for procurement of biomedical equipment, hospital furniture, fixture, machinery, IT equipment, general store items & Misc etc for Establishment of 50 Bedded Cardiac Hospital Phase-I at Gilgit (Revised). Interested bidders can submit their bids as per given schedule at the **Office of Chief Monitoring Wing, M/o KA&GB, R-Block Islamabad.**

S. #	Title of Development Scheme	Earnest Money	Date & Time for Submission of Bid	Date & time for Opening of Bid	Remarks
1	Procurement of biomedical equipment, hospital furniture, fixture, machinery, IT equipment, general store items & Misc. etc (Lots List Is Attached) against Development Scheme namely "Establishment of 50 Bedded Cardiac Hospital Phase-I at Gilgit (Revised)	2% of Total Bid Amount	19 th April 2022 11:00 AM	19 th April 2022 11:30 AM	FOR Basis

NO. OF LOTS	NAME OF LOT'S ITEM	NO. OF LOTS	REMARKS
LOT-1	ANESTHESIA & VENTILATION	LOT-13	MEDICAL GASES& MAINTENANCE
LOT-2	CARDIAC MONITORING	LOT-14	REFRIGERATION
LOT-3	ENDOSCOPY	LOT-15	MEDICAL FUNITURE
LOT-4	MODULAR OPERATION THEATRE	LOT-16	INFORMATION TECHNOLOGY
LOT-5	OPERATION THEATRES	LOT-17	HIMS
LOT-6	NUCLEAR MEDICINE	LOT-18	OFFICE EQUIPMENT
LOT-7	RADIATION EQUIPMENT	LOT-19	LINEN
LOT-8	DIAGNOSTIC ULTRASOUNDS	LOT-20	FURNITURE & FIXTURES
LOT-9	PATHOLOGY LAB	LOT-21	GENERAL ARTICLES
LOT-10	LAB ANALYZERS	LOT-22	DENTAL
LOT-11	OPD EQUIPMENT	LOT-23	DIALYSIS
LOT-12	STERILIZATION & LAUNDRY	LOT-24	FETAL & NEONATES

- i. The interested bidders can obtain complete set of bidding documents on written request on payment of non refundable fee in cash amounting to **Rs. 5,000/-** on any working day, one day prior of the above mentioned date from the following offices:-

1) Office of Chief Monitoring Wing, M/o KA&GB, R-Block, Pak Secretariat Islamabad,

2) Project Management Unit (PMU) for Establishment of 50 Bedded Cardiac Hospital Phase-I at Gilgit, Amin Abad Jufial Gilgit

- ii. For complete specifications and terms & conditions, please read the instructions laid down in bidding documents carefully for bid submission. The knockout clauses are mentioned in Annexure-A.
- iii. Rates should be inclusive of all taxes as per prevailing rules of Government of Pakistan.
- iv. If the tender day is observed as National or local holiday, tender (s) will be opened on the next working day at same time and venue.

- v. In case of any dispute the decision of the purchase committee will be considered final.
- vi. As per PPRA Rules 2004 Clause 36 (b) single stage two envelope bidding procedure will be adopted for open competitive bidding. The bids shall comprise of single package containing two separate envelopes. Each envelope shall contain separately the financial proposal and the technical proposal. Envelopes shall be marked as "FINANCIAL PROPOSAL" and "TECHNICAL PROPOSAL" in bold and legible letters. Disclosure of Financial Proposal at the time of technical bid opening will lead to disqualification. The ratio for technical and financial is 70:30 respectively.
- vii. The sealed tender must reach in the **Office of Chief Monitoring Wing, M/o KA&GB 'R' Block, Pak Secretariat Islamabad** on or before **19th April, 2022 at 11:00 AM** and will be opened (Technical Proposal) on the same day at **11:30 AM** in the same office. Tender received after due date & time will not be entertained.
- viii. Pre- bid meeting will be held on **31st March , 2022 at 11:00 AM** at the **Office of the Chief Monitoring Wing Ministry of M/o KA & GB, R-Block Pak Secretariat, Islamabad**
- ix) The earnest money in the shape of Cash Deposit Receipt (CDR) from a schedule bank in Pakistan in favor of Project Director, 50 Bedded Cardiac Hospital at Gilgit-Baltistan amounting to 2% of the estimated bid price must accompany with the financial bid.
- x) In case of firm / Company / Joint Venture / Registered Power of Attorney and partnership deed in original must be produced for issuance of tender documents.
- xi) Only technical qualified bidders will be invited to participate in the opening of financial bidding.
- xii) Any tender with correction / overwriting shall be rejected.
- xiii) The Bidder shall produce valid NTN certificate where applicable
- xiv) "No Litigation / Black Listing Certificate" on original Judicial Stamp Paper worth rupees 100 (latest) shall be provided.
- xv) Each bidder shall submit only one bid either by himself, or as a partner in a joint venture for relevant lot/package.



- xvi) Bidder should clearly mention on his/her covering letter along with the technical bid regarding number of lots in which the bidder is submitting his/her bid failing to which may lead to disqualification.
- xvii) The Employer/ procuring agency reserves the right to accept or reject any Bid, and to annul the bidding process and reject all Bids with reasons thereof (if required so).
- xviii) The advertisement is also available on www.ppra.org.pk



(Engr. Shahid Masood)

Project Director

Establishment of 50 bedded Cardiac Hospital

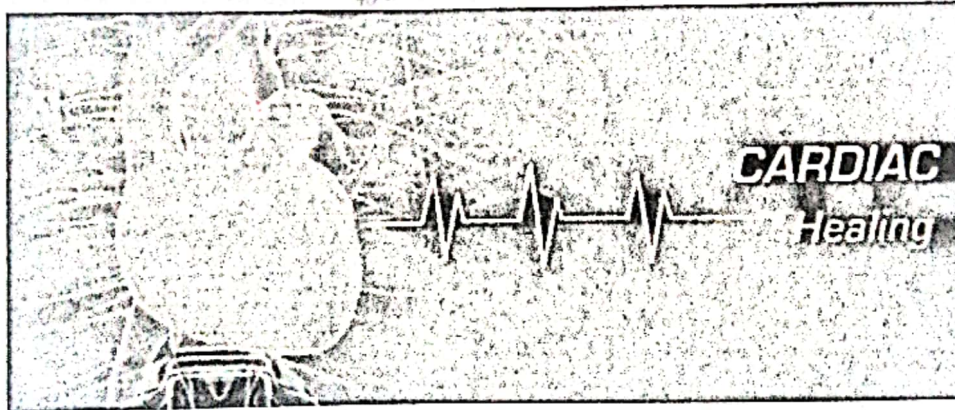
Gilgit Baltistan

(05811-922504)



GOVERNMENT OF GILGIT BALTISTAN
Directorate of Health Services Gilgit-Baltistan

ESTABLISHMENT OF
50 BEDDED CARDIAC HOSPITAL AT GILGIT



BIDDING DOCUMENTS
FOR PROCUREMENT OF BIO-MEDICAL EQUIPMENTS



Pakistan Environmental Planning & Architectural Consultants (Pvt.) Ltd.
Head Office: 12th Floor, Shaheed-e-Millat Secretariat Building, Jinnah Avenue, Islamabad
Tel: +92-51-9204721, 9212532 Fax: +92-51-9224341 E-mail: pepacltd@gmail.com

TENDER NOTICE



GOVERNMENT OF GILGIT-BALTISTAN
OFFICE OF THE PROJECT DIRECTOR
50 Bedded Cardiac Hospital Phase-1 Gilgit

No. CH.PMU.Dev.1 (1)/2017

Dated: 5th Jan, 2023

TENDER NOTICE

Health Department Gilgit-Baltistan through Project Director has invited sealed tenders from well reputed firms or their authorized distributors for procurement of biomedical equipment, hospital furniture, fixture, machinery, IT equipment, general store items & Misc etc for Establishment of 50 Bedded Cardiac Hospital Phase-I at Gilgit (Revised). Interested bidders can submit their bids as per given schedule at the Office Project Management Unit (PMU) for Establishment of 50 Bedded Cardiac Hospital Phase-I at Gilgit, Amin Abad Jullial Gilgit.

S.#	Title of Development Scheme	Earnest Money	Date & Time for Submission of Bid	Date & time for Opening of Bid	Remarks
1.	Procurement of biomedical equipment, hospital furniture, fixture, machinery, IT equipment, general store items & Misc. etc (Lots List is Attached) against Development Scheme namely "Establishment of 50 Bedded Cardiac Hospital Phase-I at Gilgit (Revised)	2% of Total Bid Amount	9 th Feb. 2023 11:00 AM	9 th Feb. 2023 11:30 AM	FOR Basis

NO. OF LOTS	NAME OF LOT's ITEM	NO. OF LOTS	NAME OF LOT's ITEM
LOT-1	ANESTHESIA & VENTILATION	LOT-11	OFFICE EQUIPMENT
LOT-2	CARDIAC MONITORING	LOT-12	GENERAL ARTICLES
LOT-3	ENDOSCOPY	LOT-13	DENTAL
LOT-4	MODULAR OPERATION THEATRE	LOT-14	HEART LUNG MACHINE
LOT-5	OPERATION THEATRES	LOT-15	INTRA AORTIC BALLOON
LOT-6	NUCLEAR MEDICINE	LOT-16	SURGICAL INSTRUMENTS SETS
LOT-7	DIAGNOSTIC ULTRASOUNDS	LOT-17	HOSPITAL LAUNDRY
LOT-8	LAB ANALYZERS	LOT-18	INFORMATION TECHNOLOGY
LOT-9	STERILIZATION	LOT-19	HIMS
LOT-10	MEDICAL GASES& MAINTENANCE		

- i. The interested bidders can obtain complete set of bidding documents on written request on payment of non-refundable fee in cash amounting to Rs. 5,000/- on any working day, one day prior of the above-mentioned date from the following offices: -

Project Management Unit (PMU) for Establishment of 50 Bedded Cardiac Hospital Phase-I at Gilgit, Amin Abad Jutial Gilgit.

- ii. For complete specifications and terms & conditions, please read the instructions laid down in bidding documents carefully for bid submission. The knockout clauses are mentioned in the bidding documents.
- iii. Rates should be inclusive of all taxes as per prevailing rules of Government of Pakistan.
- iv. If the tender day is observed as National or local holiday, tender (s) will be opened on the next working day at same time and venue.
- v. In case of any dispute the decision of the purchase committee will be considered final.
- vi. As per PPRA Rules 2004 Clause 36 (b) single stage two envelope bidding procedure will be adopted for open competitive bidding. The bids shall comprise of single package containing two separate envelopes. Each

- envelop shall contain separately the financial proposal and the technical proposal. Envelops shall be marked as "FINANCIAL PROPOSAL" and "TECHNICAL PROPOSAL" in bold and legible letters. Disclosure of Financial Proposal at the time of technical bid opening will lead to disqualification.
- vii) The sealed tender must be reached in the office of Project Management Unit (PMU) for Establishment of 50 Bedded Cardiac Hospital Phase-I at Gilgit, Amin Abad Jutial Gilgit, on or before 9th Feb, 2023 at 11:00 Hrs and will be opened (Technical Proposal) on the same day at 11:30 Hrs in the same office. Tender received after due date & time will not be entertained.
- viii) Pre-bid meeting will be held on 26th Jan, 2023 at 11:30 Hrs in the Office Project Management Unit (PMU) for Establishment of 50 Bedded Cardiac Hospital Phase-I at Gilgit, Amin Abad Jutial Gilgit. (Video link facility will also be available)
- ix) The earnest money in the shape of Cash Deposit Receipt (CDR)/Bank Guarantee from a schedule bank in Pakistan in favour of Project Director, 50 Bedded Cardiac Hospital at Gilgit-Baltistan amounting to 2% of the estimated bid price must accompany with the financial bid.
- x) In case of firm / Company / Joint Venture / Registered Power of Attorney and partnership deed in original must be produced for issuance of tender documents.
- xi) Only technical qualified bidders will be invited to participate in the opening of financial bidding.
- xii) Any tender with correction / overwriting shall be rejected.
- xiii) The Bidder shall produce valid NTN certificate where applicable
- xiv) "No Litigation / Black Listing Certificate" on original Judicial Stamp Paper worth rupees 100(latest) shall be provided.
- xv) Each bidder shall submit only one bid either by himself, or as a partner in a joint venture for relevant lot.
- xvi) Bidder should clearly mention on his/her covering letter along with the technical bid regarding number of lots in which the bidder is submitting his/her bid failing to which may lead to disqualification.

- xvii) The Employer/ procuring agency reserves the right to accept or reject any Bid, and to annul the bidding process and reject all Bids with reasons thereof (if required so).
- xviii) The advertisement is also available on www.ppra.org.pk

(Engr. Shahid Masood)
Project Director
Establishment of 50 Bedded Cardiac Hospital
Gilgit Baltistan





GOVERNMENT OF GILGIT BALTISTAN
Directorate of Health Services Gilgit-Baltistan

ESTABLISHMENT OF
50 BEDDED CARDIAC HOSPITAL AT GILGIT



BIDDING DOCUMENTS
FOR PROCUREMENT OF BIO-MEDICAL EQUIPMENTS



Pakistan Environmental Planning & Architectural Consultants (Pvt.) Ltd.

Head Office: 12th Floor, Shaheed-e-Millat Secretariat Building, Jinnah Avenue, Islamabad

Tel: +92-51-9204721, 9212532 Fax: +92-51-9224341 E-mail: pepacltd@gmail.com

TECHNICAL SPECIFICATION



ESTABLISHMENT OF 50-BEDDED CARDIAC HOSPITAL ATGILGIT

(LOTS & SPECIFICATIONS OF MEDICAL EQUIPMENT& Others)

Pos. No.	ITEMS & SPECIFICATIONS	Qty
LOT-1	ANESTHESIA& VENTILATION	
1	<p>ANESTHESIA MACHINE WITH VENTILATOR</p> <p>Comprehensive latest anaesthesia machine for children and adults' applications to administer anaesthetic agents in precise control and flow manner. Mobile 3-gases O₂/N₂O/AIR. It must comprise of the following component</p> <ul style="list-style-type: none"> - Non-interchangeable pipeline inlets - Pipeline & cylinder gauges for O₂, N₂O and AIR - Central gas/ electronically driven unit. - The machine will be run on the central medical gases and require the hose for connection. A 10m hose pair both for Oxygen and Nitrous Oxide will be the part of the machine. For emergency, Pin indexed cylinder yokes for Oxygen (One) & N₂O (One) will be installed in the machine. - Cylinders will be provided (1xO₂ and 1xN₂O: Pin Indexed BS standard) - Gas outlet and O₂ flush control - One auxiliary O₂ outlet - Lockable castors (front) - Impact resistant & easy to clean frame - Stainless steel/fiber work surface - Absorber bag support arm - Three gas digital flow meters for precise control and monitoring of gases. 	3

Pos. No.	ITEMS & SPECIFICATIONS	Qty
	<ul style="list-style-type: none"> - Pre calibrated two Vaporizers of Isoflurane & Sevoflurane; temperature and flow compensated. - 2xDrawer units not less than 6" high - Power outlet with 4 socket outlets to connect the auxiliary equipment. - CO₂ absorber, around 1kg. Complete with valve for bag/ventilator, manometer, breathing bags, breathing tube, mounts and Y-piece. Additional breathing hose and connector. - Scavenging system passive type - Automatic air-oxygen blending mechanism for precise delivery. - Machine should be capable of holding two vaporizers at least - Automatic shut down the gas hose in case of machine failure. <p>ANESTHESIA VENTILATOR:</p> <p>Anesthesia Ventilator with minimum 10.4" or more color LCD TFT Screen. The ventilator shall also be capable of ventilating pediatric patients. The ventilator shall have following features as a minimum requirement:</p> <ul style="list-style-type: none"> - Volume Preset Time Cycled Ventilator (IPPV Mode) - Pressure Controlled and pressure support Modes - Breathing Mode Selection (Standby / Volume / Spontaneous and Pressure) - Built in Oxygen Monitor - Inverse I:E ratio Capability - Gas Specific Input Connectors (Air or Oxygen ISO or ANSI Standards) - Tidal Volume from 20ml to 1500ml - Rate or Frequency 4 to 60 bpm or better - PEEP 	

Pos. No.	ITEMS & SPECIFICATIONS	Qty
	<ul style="list-style-type: none"> - Inspiratory Pressure Limit - Pressure and Volume Loops - Power Supply 220 VAC, 50 Hz - Battery Backup (30 Minutes or more) - Low / High FiO₂ Alarm - Incorrect Rate or Ratio alarm - Mains Failure alarm - Low battery alarm. <p>The ventilator shall be supplied with complete drive hose and power cable.</p> <ul style="list-style-type: none"> - 220V, 50 Hz operated. - Country of origin, USA, Europe, Japan 	
2	<p>BI-PAP UNIT</p> <p>Automatic BIPAP unit for pre & post operative treatment to assist breathing mechanism & gasexchange for pediatrics & adult patients and also sleep apnea.</p> <p>Mode of ventilation will be Bi-level Ventilation.</p> <p>Digital display for pressure and time parameters.</p> <p>Adjustable pressure range upto 30 cm H₂O.</p> <p>Pressure Bar Graph for patient breaths and pressure. Display of patient parameters.</p> <p>Alarms on adjustable values.</p> <p>Backup Battery for one hour</p> <p>Temperature control ventilation system.</p> <p>Complete with filters, carrying case and temperature-controlled</p>	3

Pos. No.	ITEMS & SPECIFICATIONS	Qty
	Humidifier. Power of 220 V, 50 Hz	
3	CEREBRAL OXIMETER NIRS, Near Infra-Red Spectroscopy unit for Cerebral Pulse Oximetry for patients. Complete with Main unit with monitor and sensors including disposable head sensor/probe (Qty 20 Nos. with each unit) Country of Origin: USA, Europe, Japan	2
4	CPAP A device for delivery of continuous positive airway pressure (CPAP) through servo control mechanism for constant flow of oxygen/air to the patient at a preselected pressure. Airway pressure range to be user settable Controls to be easy to operate, numbers and displays to be clearly visible. Alarms to alert user to " not in connection, Overpressure, Supply pressure of O2 and Air, O2concentration, upper and lower CPAP Pressure. CPAP range: 2-10 mbar FiO2 : 21-100% Provision of overpressure safety valve, Humidifier with patient circuit (reuse able). Trolley with lockable wheels Accessories: Continuous flow with breathing circuits Continues flow breathing kits	4

Pos. No.	ITEMS & SPECIFICATIONS	Qty
	<p>Flow masks</p> <p>Country of origin, USA, Europe, Japan</p>	
5	<p>DOCKING STATION</p> <p>Dedicated Syringe Pump Docking station for 5 syringe pumps, Mobile type. Additional quote for 3 pump stations as well as optional.</p> <p>Country of Origin, USA, Europe, Japan or Equivalent</p> <p>CE Certified</p>	5
6	<p>ICU VENTILATOR</p> <p>Ventilation:</p> <p>Microprocessor controlled powerful ventilation system mounted on trolley. LCD TFT color screen 8" or more.</p> <p>Patient Range:</p> <p>Pediatrics and Adult</p> <p>Breathing classification:</p> <p>Pressure control, Volume control and pressure control with set Volume Breath. Disposable patient tubing circuit for peds and adult (01 each)</p> <p>Modes of Ventilation:</p> <p>Volume control Assisted CMV Pressure control PS Assist Pressure support CPAP SIMV+ Pressure</p>	13

Pos. No.	ITEMS & SPECIFICATIONS	Qty
	<p>support Non invasive ventilation Bi-level Ventilation</p> <p>Integrated ETCO2 module and NHFO should be quote as optional</p> <p>Control:</p> <p>Set & measured parameters simultaneously.</p> <p>Measurement range/ specification:</p> <p>Inspiratory tidal volume : 20 to 2000ml.</p> <p>Respiratory frequency :10-120 bpm SIMV</p> <p>breath frequency :1-50 bpm</p> <p>Inspiratory pressure :10-80 cm H₂O</p> <p>Inspiratory flow :80 cm H₂O</p> <p>I : E ratio :1:4/4:1</p> <p>PEEP :0 -40 cm H₂O</p> <p>FiO₂/ O₂ delivery :21 – 100%</p> <p>Monitoring Parameters for set and measured value simultaneously:</p> <p>Total breath rate.</p> <p>Oxygen concentration FIO₂ Expired minute volume</p> <p>Peak expiratory flow</p> <p>I : E ratio</p> <p>Peak Pressur e</p> <p>Mean pressure</p> <p>Lung Mechanics with pressure and volume loops.</p>	

Pos. No.	ITEMS & SPECIFICATIONS	Qty
	<p>Others control and functions:</p> <p>Back up ventilation</p> <p>Pause time INSP</p> <p>Microprocessor gas delivery system</p> <p>Breath circuit Compliance</p> <p>Compensation Expiratory hold/ Inspiratory hold</p> <p>Panel lock for safety</p> <p>Pressure and flow trigger sensitivity Trigger sensitivity indication Alarms:</p> <p>Apnea</p> <p>AC power failure</p> <p>High and low Expired minute volume</p> <p>High and low peak air way pressure</p> <p>High and low breath rate</p> <p>FiO2 variation</p> <p>Low and high base line pressure</p> <p>Gas supply source failure</p> <p>Low battery</p> <p>Humidifier (F&P):</p> <p>Automatic compensation (Servo) controlled heated humidifier with temperature monitoring at air way and humidification chamber with alarm for low/ high limits with water trap in the patient circuit.</p>	

Pos. No.	ITEMS & SPECIFICATIONS	Qty
	<p>Nebulizer:</p> <p>For nebulization of the patient during ventilation</p> <p>Supply requirements:</p> <p>Electric</p> <p>220 V 50 Hz with internal chargeable battery backup min for 1.0 hr.</p> <p>Compressed Air Supply:</p> <p>The ventilator should be driven on external own compressor or built in turbine.</p> <p>Country of Origin: USA, Europe, Japan</p> <p>Note:</p> <p>The warranty of equipment will be including batteries, oxygen sensor.</p>	
7	<p>NEONATAL VENTILATOR</p> <p>Ventilation:</p> <p>Microprocessor controlled powerful ventilation system mounted on trolley. LCD TFT color screen 8" or more</p> <p>Breathing classification:</p> <p>Pressure control, Volume control and pressure control with set Volume Breath.</p> <p>Autoclavable reusable patient tubing circuit for neonates</p> <p>Modes of Ventilation:</p> <p>Volume control Assisted CMV Pressure control PS Assist Pressure</p>	2

Pos. No.	ITEMS & SPECIFICATIONS	Qty
	<p>support CPAP</p> <p>SIMV+ Pressure</p> <p>support Non invasive</p> <p>ventilation Bi-level</p> <p>Ventilation</p> <p>Integrated ETCO2 module and NHFO should be quote as optional</p> <p>Control:</p> <p>Set & measured parameters</p> <p>simultaneously. Measurement range/ specification:</p> <p>Inspiratory tidal volume: down to 05mL.</p> <p>Respiratory frequency :10-120 bpm</p> <p>SIMV breath frequency :1-50 bpm</p> <p>Inspiratory pressure :10-80 cm H₂O</p> <p>Inspiratory flow :80 cm H₂O</p> <p>I : E ratio :1:4/4:1</p> <p>PEEP :0 -40 cm H₂O</p> <p>FiO₂/ O₂ delivery :21 – 100%</p> <p>Monitoring Parameters for set and measured value simultaneously:</p> <p>Total breath rate.</p> <p>Oxygen concentration FIO₂ with paramagnetic sensor</p> <p>Expired minute volume</p> <p>Peak expiratory</p> <p>flow I : E ratio</p>	

Pos. No.	ITEMS & SPECIFICATIONS	Qty
	<p>Peak Pressure</p> <p>Mean pressure</p> <p>Lung Mechanics with pressure and volume loops.</p> <p>Others control and functions:</p> <p>Back up ventilation</p> <p>Pause time INSP</p> <p>Microprocessor gas delivery system</p> <p>Breath circuit Compliance</p> <p>Compensation Expiratory hold/ Inspiratory hold</p> <p>Panel lock for safety</p> <p>Pressure and flow trigger sensitivity Trigger sensitivity indication Alarms:</p> <p>Apnea</p> <p>AC power failure</p> <p>High and low Expired minute volume</p> <p>High and low peak air way pressure</p> <p>High and low breath rate</p> <p>FiO2 variation</p> <p>Low and high base line pressure</p> <p>Gas supply source failure</p> <p>Low battery</p> <p>Humidifier (F&P):</p>	

Pos. No.	ITEMS & SPECIFICATIONS	Qty
	<p>Automatic compensation (Servo) controlled heated humidifier with temperature monitoring at air way and humidification chamber with alarm for low/ high limits with water trap in the patient circuit.</p> <p>Nebulizer:</p> <p>For nebulization of the patient during ventilation CO2 monitoring / analyzer</p> <p>Supply requirements:</p> <p>Electric 220 V 50 Hz with internal chargeable battery backup min for 1.0 hr.</p> <p>Compressed Air Supply:</p> <p>The ventilator should be driven on external own compressor or Built in Turbine.</p> <p>Note:</p> <p>The warranty of equipment will be including batteries, oxygen sensor. Country of Origin: USA, Western Europe, Japan</p>	
8	<p>INFUSION PUMP</p> <p>Linear peristaltic infusion pump for fluid administration</p> <p>Automatic control of infusion rate independent of venous or arterial pressure, solution container height, and solution viscosity.</p> <p>Automatic switchover to keep vein open (KVO) rate of 1.0 ml/hr (or previous rate, whichever is less)</p> <p>Flow Sensor: Detects a "no flow" situation i.e. empty container.</p>	2