पिंपरी चिंचवड महानगरपालिका
ब क्षेत्रीय कार्यालय, विद्युत विभाग

कामाचे नाव :- **क्रांतिज्योती सावित्रीबाई फुले हॉस्पिटलमधील बर्न वार्ड करिता आवश्यक बाबींचे दर पृथ्थकरण करणेकामी महानगरपालिका वेबसाईटवर कोटेशन प्रसिद्ध करणेबाबत...**

कोटेशन नोटीस क्रमांक :- BZONE/ELECT/ 13 /2025 **दिनांक-11.03.2025**

क्रांतीज्योती सावित्रीबाई फुले हॉस्पिटलमधील बर्न वार्ड करिता आवश्यक बाबींचे दर पृथ्थकरण करणे या कामाच्या खालील मागविलेल्या तपशिलाप्रमाणे अंदाजपत्रकीय दर (Estimate Cost) प्रकाशित करणेकामी अशा प्रकारचे काम करणाऱ्या उत्पादक कंपनी यांचेकडून दिनांक:- ११/०३/२०२५ ते दिनांक १५/०३/२०२५ चे कालावधी कोटेशन द्वारे सीलबंद दरपत्रक/कोटेशन मागविण्यात येत आहे.

SR. No.	ITEM	UNIT	Qty	Rate
1	**<u>SITC of PPGI Wall and ceiling Panel</u>** The operation theatre wall system should be impact resistant, show resistance to solvents & chemicals prevent colonizing of micro-organisms or neutralize micro-organisms that come into contact with the wall surface. The surfaces should be stable – prevent cracking and movement, scrub-able – amenable to cleaning and have a completely sealed finish, biological attack resistance & hygienic finish & lastly have hydrothermal performance. • All wall-mounted equipment should be flush-mounted and sealed into the room wall by means of a durable sterile jointing system. • The wall panel design and construction should allow the installation and support of all equipment with the provision of openings required for repair and maintenance without affecting rigidity and strength. • The walls were constructed should be 0.6mm PPGI sandwich (backside side 0.6mm PPGI sheet) panel with core consisting of rigid polyurethane foam, which has been injected under high pressure, with a minimum density of 40 kg/m3. Total Panel thickness should be 50 mm. • The individual wall panels should be bolted/ tag welded together. • Welding sections should be done in accordance with BS 5135. • The gaps between panels should be filled with metal filler and sanded flush. • These panels should withstand strong impacts, such as from the bombardment of trolleys, etc. • Using these panels, one should be able to achieve any shape for the operating suite, normally octagonal, which scientifically has been proven to give even distribution of light & air within the room. • The inner surface to be seamless, free from visible joints and sharp edges. All internal corners and panel joints should be filled with a proprietary filler and sanded flush, or radiuses (for corners) on-site. • The cavity between the inner and outer walls should be left with minimum obstructions for the possible addition of equipment at a later date and to enable services, pipes, conduits, etc, to be run within the cavity. All internal corners and panel joints should be filled with a proprietary filler and sanded flush, or radiuses (for corners) on-site, ready to receive a sterile plastic finish. The internal surfaces of the theatre walls should be sprayed with water-based, non-reflective liquid plastic, to a color approved by the architect, to adequate dry film thickness as per international standards. This plastic coating will overlap the floor covering, ceiling system, and doorframes by 25mm to provide a continuous sealed surface. The sprayed surface will have a smooth finish & void of any cracks on its surface.	Sq Feet	1	

2	**SITC of Vinyl Anti- static Conductive flooring** Suitable self-levelling shall be done before PVC flooring to avoid undulation within the room. • It should be minimum 2 mm thick anti-static seamless PVC flooring. • Floor should be made smooth, non-slippery, impervious material conductive enough to dissipate static electricity but not conductive enough to endanger personnel from electric shock. • Continuous roll of PVC flooring shall be used and joints shall be welded by special PVC thermal welding units using PVC welding bars of same colour. • The sheets should be highly durable and resistant to shock, scratch and indentation. • The conductive material should be uniformly impregnated as grains. • It should be inert to body fluids, chemicals and disinfectants and should not be affected by temperature variation within the room. • Internally all flooring wall & wall to ceiling joints shall be properly coved (rounded) so that there is not any dust deposition in the joints with radius not less than 50 mm. • The three-way corner covings shall be provided wherever required. • The flooring should conform to standards DIN EN 1081, DIN EN 1815 & EN 12466. • Confirms to standards other than those mentioned above EN 425, EN 423 & EN 433.	Sq Feet	1	
3	**SITC of PCGI Flushed Door:** Door should be complete with air tight door frame made from1 mm thick PCGI sheet and shutters made from 0.8 mm thick PCGI in double skin construction duly insulated/infill with puff having density 40 Kg/m3 Hardware including Door closure, Hinges, Handle, Vision panels, Lock and door Bottom gasket seal etc	Nos	1	
4	**SITC of Room control panel:** - Room control panel should be made of Membrane type operation theater control panel flush in the room wall with all accessories etc. - The Control Panel Comprising of the Following : A) Temperature & Humidity displayed B) HVAC ON/OFF	Nos	1	
5	**SITC of PCGI Single Door:** - Door should be completed with air tight door frame made from1 mm thick PCGI sheet and shutters made from 0.8 mm thick PCGI in double skin construction duly insulated/infill with puff having density 40 Kg/m3 Hardware including Door closure, Hinges, Handle, Vision panels, Lock and door Bottom gasket seal etc.	Nos	1	
6	**SITC of PCGI Flushed Double Door:** - Door should be completed with air tight door frame made from1 mm thick PCGI sheet and shutters made from 0.8 mm thick PCGI in double skin construction duly insulated/infill with puff having density 40 Kg/m3 Hardware including Door closure, Hinges, Handle, Vision panels, Lock and door Bottom gasket seal etc.	Nos	1	
7	**SITC of Multipara Monitor:** • Patient Monitor should have high resolution 12" integrated colour, LED Colour touchscreen display with rotary Knob. • Should be able to display at least 8 wave forms. • Should be able to monitor following vital sign monitoring for Adult, Paediatric and neonatal patients such as ECG, NIBP, Spo2(Masimo technology), Respiration &Temperature. • Should be able to monitor ECG: 3/5, Cascade ECG waveform with HR measurement, arrhythmia detection, ST segment analysis. • Non-Invasive Blood Pressure (NIBP): Measurement and display of systolic, Diastolic, and mean pressure values on NIBP measurement through Oscillometric method for adult, child and neonate. Modes: Manual, STAT (Continuous 5 min. operation) and automatic selectable interval 2- 480 minutes.	Nos	1	

	• Respiration: Display of respiration waveform with respiration rate using impedance principle. • Temperature: Should be able Monitor 2 temperature simultaneously. The unit selection should be possible. • SpO2- Should have pulse rate from 20-300bpm and should be suitable for Adult, Paediatric & Neonate. • Should be able to measure & display Perfusion Index. • Should have upgradable facility for Invasive Blood pressure (upto 2 channel) with pulse pressure variation. • Should have upgradable facility for Etco2 to measure Co2, using side stream technique. • The Graphical and tabular trends of 168 hours should be available. • The monitor should have battery backup of upto 5 hours. • Should have facility to connect USB • Should have automatic pacemaker detection facility. • The Weight of monitor should not be more than 5 kgs. • Should have three priorities of alarm of all the parameters. • Should have option of recording upto 3 waveforms on paper roll. • Should have facility of reviewing waveforms for 24 hrs. • Should be able to export data through USB in excel format for future review of the same. • **Monitor should be accompanied with following accessories.** • 5 Lead ECG cable - 1 No. • Reusable Spo2 probes: 1 No. • Nasopharyngeal/rectal/ skin Temperature probes- 1 no. • Re usable adult cuff-1 No Certifications: • Supplier should be ISO9001 and ISO13485 certified. • Patient Monitor Should be EU CE approved by 4 digit notified body number • Electrical Safety conforms to standards for electrical safety EN 60601-1-6:2010/ A1:2015 , EN ISO 80601-2-55:2018 General Requirements			
8	**<u>SITC of Syringe Pump</u>** 1. Front Loading Syringe where syringe driver arm is protected by syringe pump body. 2. 4 step programming sequence. 3. Acceptable syringe sizes are 2/3ml,5ml,10ml 20ml, 30ml and 50/60ml. 4. Programmable infusion rate of 0.01 ml/hr to 2100 ml/hr and can be adjusted in increments of 0.1 ml/hr 5. Volume To be Infused (VTBI) rate should be 0.1ml to 9999ml 6. Bolus Rate upto 1200ml/hr 7. Purge option for priming the syringe. 8. Supported infusion modes Seven mode, R+V, V+T, R+T, R, Drug Library and Body Weight, Gradient 9. Wide range of audio and visual alarms: a) Battery Low, Battery Empty b) Occlusion, c) Syringe Near Empty, d) Syringe Empty, e) Syringe Error, Not Infusing 10. 3 occlusion pressure settings Maximum 130 kPa, Minimum 26 Kpa. 9 adjustable 11. Factory Calibrated for international and local brands of syringes including Romsons Junior and Unolock (Dispovan) 12. Safety features such as: a) Patient tubing holder b) Post occlusion bolus reduction c) Auto Keypad lock while infusion is ON. 13. LCD touch screen 14. UP-Down arrow key function for set programs. 15. On-pump syringe loading guidelines. 16. Weight should be less than 2.2 kg	Nos	1	

	17. Battery backup for 7 hours at 5 ml/hr. 18. KVO Rate is 0.5ml/hr (continuous mode) 19. Drive Accuracy: +/-2 % (Linear Accuracy) 20. Company Owned Service Centre in India 21. CE Marked & ISO Certified			
9	**SITC of INFUSION PUMP** 1. Should have flow accuracy of ±4% 2. Should have infusion rate range from 1 ml/h to 2000 ml/h 3. It should have Drug library & DERS 4. Power: AC with battery back-up of at least 6 hrs. at 25ml/hr with on screen battery indicator 5. Should have a LCD touch screen display and Flow Rate, Infusions set brand, Volume, Total infused Volume and Battery Indicator displayed on the screen 6. Should have an on-screen graphical display of delivery pressure 7. Should be pre-calibrated for use with 2 brands of infusion sets with option to calibrate additional 10 brands. 8. Should have 12 different mode infusion RVT mode, Dose mode, Drug library mode, Drop mode, RTM mode, Sequence mode Loading dose mode, Intermittent mode, Micro mode, Auto programming mode , Feeding mode , Transfusion mode. 9. History log report of 2000 latest records that can be viewed on the pump and downloaded to the PC 10. Should have volume infused display from 1 ml to 9999.99 ml 11. Should have priming/bolus rate of 1 ml/h-2000 ml/hr. 12. Should have 10 levels of occlusion with lowest being30kpa and the highest being 120kpa 13. Should have adjustable KVO rate from 0.10 ml/h to 5 ml/h 14. Should have Wi-Fi connectivity & HL7 compatibility interface 15. Should be CE/IEC approved 16. I t should have IP protection Grade IP24 17. Should be light weight (≤2 kg) 18. It should have ultrasonic bubble detector sensitivity (25ul) 19. Should have the following audible and visual alarms – i. Occlusion ii. Air in line iii. Battery low iv. Battery depleted v. Infusion near complete vi. Infusion complete 17. Principal manufacturer should have company owned service center in India.	Nos	1	
10	**SITC of MOBILE RESPIRATORY SUPPORT SYSTEM OXYGEN THERAPY** - Unit should map the complete respiratory cycle and provides oxygen during the peak inspiratory flow (PIF) effectually only during inhalation but not during exhalation. - If the patient is not breathing for more than 8 seconds, there should be oxygen blast every 4 seconds. - Unit should have dry run alarm in case of no inflow of oxygen. - There should be continuous oxygen flow in case of power failure. - There should be oxygen conservation of 60%-70%. - Media input should be oxygen @ 1 LPM to 4 LPM @ 0.5 Bar. - Material of construction should be plastic enclosure with AI Meatal Plates. - Dimensions of the unit should be 234.25 x 193.52 x 212.59mm. - Req. power supply should be 24 VDC 1A. - It should have IP 23 rating. - Mode of operation should be continuous. - The Manufacturer should be ISO13485 certified. - Unit should be registered under Indian CDSCO regulatory authority (registration number to be provided).	Set	1	

11	**SITC of Blood & Fluid Warmer:-** 1. Delivers blood and intravenous fluid to the patient at normothermic temperature at wide range of flow rates from gravity flow rates to 5,000 ml/hr. 2. Dedicated disposable triple lumen tubing that eliminates patient line cool down of infusate 3. Built in over temperature test button and alarm test button. 4. Delivers blood and intravenous fluid to the patient at normothermic temperature at wide range of flow rates from gravity flow rates to 5000 ml/hr. 5. Dedicated disposable triple lumen tubing that eliminates patient line cool down of infusate 6. Single step programming of warmer 7. Displays set point of recirculating reservoir. 8. Meets AABB standards for blood warming. 9. Disposables must be latex free. 10. Built in safety audio and visual alarms for Check disposables, Add recirculating solution and Over Temperature 11. Built in over temperature test button and alarm test button. 12. US-FDA approved, CE Marked and ISO Certified 13. Company Owned Service Centre in India **Technical Specifications:**	Nos	1	

Standard Compliance	**Guidelines**
Product Safety	EN 60601-1, UL 2601-1
EMC	EN 60601-1-2, FCC 47 CFR Part 15, Class B
Enclosure Protection	IEC 60529 IP Code: IPX1
Fluid Warmers	ASTM F2172-02
Physical	**Dimensions**
Height, Overall	24.1 cm (9.5 inches)
Width, Overall	21.0 cm (8.3 inches)
Depth, Overall	17.8 cm (7.0 inches)
Weight, Dry	3.5 Kg (7.6 lbs)
Weight, Wet (with recirculating solution)	5.0 Kg (11.0 lbs)
Weight, Shipping	3.6 Kg (7.95 lbs)
Recirculating Solution Capacity	1.4 L (0.37 gallons)
Maximum Height on I.V. Pole	107 cm (42 inches)
Environmental	**Temperature** **Humidity [%]**
Operation	10^{o}C to 45^{o}C 10 to 95
Transportation	-18^{o}C to 60^{o}C 5 to 90
Storage	-18^{o}C to 60^{o}C 5 to 90
Thermal	**Temperature**
Temperature Set Point	41.9oC ± 0.1oC
Over Temperature Set Point	43.1oC
Electrical	**Type**
MAINS Power Input:	
230V	230VAC, 50/60 HZ, 1.5 Amps
MAINS Auxiliary Supply Power Output:	
230V	230VAC, 50/60 HZ, 0.6 Amps
Electrical	**Type**
Protection Against Electrical	Class 1 Equipment, Type BF

	<table><tr><td>Shock</td><td></td></tr><tr><td>Mode of Operation</td><td>Continuous</td></tr><tr><td>Type of Current</td><td>Alternating</td></tr><tr><td>Ingress Protection Rating</td><td>IPX1</td></tr><tr><td></td><td></td></tr><tr><td>**Performance**</td><td></td></tr><tr><td>Recirculating Solution Temperature</td><td>Recirculating solution temperature reaches 37^{o}C from ambient in about 4 minutes</td></tr><tr><td>Normothermic Flow Rates</td><td>At gravity flow rates to 5,000 ml per hour</td></tr></table>			
12	**SITC of Examination LED Light** 1. Examination light ceiling mounted used for examination 2. Light should have LED technology 3. Light intensity should be 50,000 Lux 4. Light Field Diameter – 200mm 5. Colour temperature: 4500K 6. Colour rendering index (CRI) should be more than 90 7. LED life should be more than 50,000 hours 8. Manufacturer should have ISO 9001 and ISO 13485 through a NABCB accredited body 9. Equipment should have USFDA registration (Proper link to be provided) 10. Equipment supplier should be registered with the Indian CDSCO (Registration number to be provided) 11. The light head should be mounted on spring loaded arm for smooth up and down motion (Not on gooseneck) 12. Light should be provided with intensity control knob and ON / OFF switch ●The Operating lamp should have USFDA approval registration (Valid link should be provided by manufacturer with name of quoted model mentioned under device listed) ●Documentary evidence regarding firm registered with EEA (European Economic Area) Competent authority is required. OR European Representative registered with EEA (European Economic area) Competent authority appointed by firm is required. OR other document like certificates from notified body along with declaration of conformity is required. ●The manufacturer should be registered under Indian CDSCO regulatory authority (registration number to be provided) ●The manufacturing company should have valid ISO certifications: (issuing authority should have NABCB accredited) 1. ISO 13485-Quality management system of medical device. 2. ISO 9001- Quality management system of company.	Nos	1	
13	**SITC of BURN CAGE:** - It should be made of SS 304, 0.74 OD, 1mm thick round thick. - Size of the cage should be L 48" x W 28" X H 24”	Nos	1	
14	**SITC of Manually operated bed for treatment room** It should be a manually operated bed with backrest, knee rest, height adjustment, Trendelenburg & Reverse Trendelenburg - It should have full length polymer moulded side rails with inbuilt angle indicators - It should have Urine bag holders on both sides of the bed - It should have Four safety buffers located at the corners - It should have Removable lightweight head and foot boards - It should have Four section perforated Mild Steel top - It should have castors - Manufacturer should have ISO Certificates - ISO 9001:2015 for Management system certified, - ISO 14001:2015 for Environment management system certified, - ISO 45001:2018 for Occupational Health & Safety system certified,	Nos	1	

	- ISO 50001:2018 for Energy Management System certified and - ISO 13485:2016 for Operates Quality Management System.			
15	**SITC of Consulting room examination bed** - It should be an examination couch with plain top and a drawer and a cabinet - It should have dimensions of 1830mm L x 580 mm W x 875H - It should have mild steel tubular frame work - It should have a drawer and cabinet with lock - It should have plain mild steel CRCA sheet top - There should be a foam mattress with Rexene cover - It should have built in sliding utility board and single step stool - Legs should be fitted with rubber shoes - It should have pretreated and powder coated finish - Manufacturer should have ISO Certificates - ISO 9001:2015 for Management system certified, - ISO 14001:2015 for Environment management system certified, - ISO 45001:2018 for Occupational Health & Safety system certified, - ISO 50001:2018 for Energy Management System certified and - ISO 13485:2016 for Operates Quality Management System	Nos	1	
16	**SITC of Dressing room examination table** - It should be an examination couch with plain top and a drawer and a cabinet - It should have dimensions of 1830mm L x 580 mm W x 875H - It should have mild steel tubular frame work - It should have a drawer and cabinet with lock - It should have plain mild steel CRCA sheet top - There should be a foam mattress with Rexene cover - It should have built in sliding utility board and single step stool - Legs should be fitted with rubber shoes - It should have pretreated and powder coated finish - Manufacturer should have ISO Certificates - ISO 9001:2015 for Management system certified, - ISO 14001:2015 for Environment management system certified, - ISO 45001:2018 for Occupational Health & Safety system certified, - ISO 50001:2018 for Energy Management System certified and - ISO 13485:2016 for Operates Quality Management System.	Nos	1	
17	**SITC of Dressing trolley** - It should be made in SS tubular form - There should be two shelves with three side railing on the top shelf - There should be SS bucket with lid and SS bowl - There should be four heavy duty 100 mm dia castors two with break - Manufacturer should have ISO Certificates - ISO 9001:2015 for Management system certified, - ISO 14001:2015 for Environment management system certified, - ISO 45001:2018 for Occupational Health & Safety system certified, - ISO 50001:2018 for Energy Management System certified and - ISO 13485:2016 for Operates Quality Management System.	Nos	1	
18	**SITC of Triage room patient bed** It should be an Emergency & Recovery Trolley (Height on Screw Mechanism & Collapsible Railings) (Without Mattress) - It should have overall approx. dimension: 2110 mm L x 730 mm W. Stretcher top approx. dimension: 1835 mm L x 595 mm W. Height adjustment on screw mechanism: 660 mm to 850 mm (approx.). - It should have two section removable x-ray permeable stretcher top with sliding X-ray cassette holder. - It should have backrest raised on ratchet. - It should have trendelenburg & reverse trendelenburg adjustments on screw mechanism. - It should have Pair of Collapsible stainless steel tube railings.	Nos	1	

	- It should have Stainless steel IV pole. - It should have utility tray, Oxygen cylinder holder and Urine bag holder. - It should have Buffers at four corners. - It should have Four heavy duty castors 125 mm dia, two with brake. - It should be Pretreated and powder coated finish. - It should be supplied in SKD condition - Manufacturer should have ISO Certificates - ISO 9001:2015 for Management system certified, - ISO 14001:2015 for Environment management system certified, - ISO 45001:2018 for Occupational Health & Safety system certified, - ISO 50001:2018 for Energy Management System certified - ISO 13485:2016 for Operates Quality Management System.			
19	**SITC of Electro cautery Machine with Vessel Sealer + Saline Bi Tur** - Should Have Microprocessor Controlled Surgical Generator - The unit should comply with safety requirement of IEC60601-1 & IEC 60601-2-2 and test report for each power setting need to be present. - Machine Should Be Able To Monitor Changes In Tissue impedance continuously And Adjust Power" - Number Of Coagulation Modes Should Be 4 - Maximum Power In Coagulation Mode Should Be 150W. - Number Of Bipolar Modes Should Be 3 - Maximum Power Of Bipolar Mode Should Be 120W. - Should Have Patient Plate Monitoring Facility - Should Have 1 Hand Switch & 1 Foot Switch For Monopolar Mode & 1 Foot Switch For Bipolar Mode - Should Have Touch Screen Keyboard / Membrane Pad For Power Settings - Should Have LCD / LED Display - Should Have 4 Segments Of Display - Should Have Individual Display for Bipolar And Monopolar Cut And Monopolar Coagulation - RF Leakage Current Should Be 100ma - The Power Supply Should Be 230v (±15%) 50hz - Type CF Equipment (IEC 601 –1 & IEC 601-2-2) Defibrillator Proof. Various modes in electrosurgical Unit: a) Mono-polar Cut: 1. Pure Cut: 250-300W W 2. Low Cut: 250-300W 3. Blend: 200 -250 W b) Mono-Polar Coagulation: 1. Spray: 80W 2. Fulgurate: 120W 3. Desiccate: 150W c) Bipolar Coagulation: 1. Cut/Precise: 70-120 W 2. Micro/Macro: 70-100 W - Operating Range: 210-264 VAC Line Frequency: 50 Hz ±5% Minimum High Frequency Leakage Bipolar Less than 60mA Monopolar Less than 150mA Standard Accessories to be provided: 1. Reusable/Disposable dual pad Silicon/Polyhesive Plate with cable (Adult & Paediatric)- 2. Bipolar forceps with cable 3. Mono polar-hand switch pencil 4. Dual pedal foot switch for Mono-Polar 5. Single pedal foot switch for bipolar 6. Power cord - The offered equipment should have brand name / model name mentioned on the equipment, must be supported by Original Literature of the Original Equipment Manufacturer - Unit should have patient plate Contact Quality Monitoring System/REM System- With this at the moment the contact between Plate & Patient reduces it stops the HF delivery & gives error message with audio visual indications - Real time tissue impedance monitoring technology to deliver the selected power perfectly into a wide range of tissue types reducing thermal spread, RF interference and Neuro muscular stimulation and sparks - The system should have Return Electrode Contact Quality Monitoring (REM) System preferably with Adaptive REM facility - The system should have facility to use two monopolar coag modes simultaneously - The system should have ability to restore last power setting - Machine should be able to upgrade to a higher version - The unit should operate at local climatic conditions & upto temperature of 40 degree Celsius, throughout the year - It should have 3 vessel sealing modes - It should seal vessels upto 7mm - Unit should be quoted with 2 vessel sealer reusable instruments - It should have pulsating output	Nos	1	

<table>
<tr><td></td><td>- It should have separate footswitch for Monopolar, Bipolar & Vessel Sealer
- Machine Should have bipolar resection saline mode.(Bi-TUR)
- Maximum Power In Saline Bipolar cut Mode Should Be 300W
- Maximum Power In Saline Bipolar Coag Mode Should Be 150W
- Instrument port should be compatible with all types of handled accessories.
- Many different types of surgeries should be performed using single ESU unit.
- Should have separate instrument port for different types of modes.
- Should have digital display for easy visualization of maximum power levels in
- Number of cut mode should be 4
- should be compatible with dual and single patient plates
- should facilitate the usage by two surgeons at same time.
- Should have endomode for endoscopy surgeries.
- should be user programmable.
- The manufacturer should be registered under Indian CDSCO regulatory authority (registration number to be provided).
- The manufacturing company should have valid ISO certifications: (issuing authority should have NABCB accredited) 1. ISO 13485-Quality management system of Medical device & 2. ISO 9001- Quality management system of Company.</td><td></td><td></td><td></td></tr>
<tr><td>20</td><td><u>SITC of Anaesthesia workstation</u>
The Machine Workstation should be of perfect workmanship with ABS structure of rust-free material.
The machine should have dual tube twin cascading type 4 tube rotameter with color coded knobs for Oxygen & Nitrous Oxide and single rotameter tube for Air.
Minimum flow rate of gases (O_2, N_2O) should be as follows:
<table><tr><td>Oxygen</td><td>Low Flow Tube</td><td>50 ml-1000 ml/min</td></tr><tr><td>Oxygen</td><td>High Flow Tube</td><td>1000 ml-10 L/min</td></tr><tr><td>N_2O</td><td>Low flow Tube</td><td>50 ml-1000 ml/min</td></tr><tr><td>N_2O</td><td>High Flow Tube</td><td>1000 ml-12 L/min</td></tr><tr><td>Air</td><td>Single Tube</td><td>200 ml -15 L/min</td></tr></table>Should have NIST Inlets for piped medical gases for O_2, N_2O and Air
Should have color coded, Gas specific, Pin Indexed yokes for Oxygen 1 Nos. and Nitrous Oxide 1 No.
Semi-open, semi-closed- or closed-circuit system
Should have Emergency oxygen flush switch at table level to give 25-75 Liters/min for emergencies.
Should have at least two spacious drawers.
Should have large roller bearing anti-static castors with front brakes & footrest
Tabletop for writing, keeping syringes, drugs, instruments etc.
Wide Monitor shelf at eye level with securing provision for extra monitor (Optional).
Twin selectatec manifold for mounting at least two agent specific vaporizers with interlocking facility.
Facility to connect Bain Circuit with appropriate connector to anesthesia machine at CGO.
Should have port for AGSS.
Should have Waveforms: F-T, V-T, P-T & Spirometry Loops: F-V, V-P, P-F (Displays 2 waveforms & 2 loops, simultaneously)
<u>Safety Features / Mechanisms</u>
Machine flow meters should have Hypoxic Guard; ORC to prevent delivery of a gas mixture having O_2 below 25%, irrespective of any flow rate of N_2O.</td><td>Nos</td><td>1</td><td></td></tr>
</table>

	N_2O lock / N_2O cut off system – It should be impossible to start N_2O in absence of O_2 at the yoke and the N_2O falls immediately to zero once the pressure of oxygen falls Self-activated electro-pneumatic audio visual OFWD to activate an alarm when supply pressure of oxygen falls to 150 kPa-250 kPa. <u>Circle Absorber</u> Single canister circle absorber of approx. 1 kg with online changing of circle system with quick release mechanism. Inbuilt bag vent switch, APL Valve, Moisture drains valve Manometer for measuring circuit pressure. Bag-Vent Switch with automatic changeover from Bag-Ventilator with single switch control.			
21	**<u>SITC of Integrated Anesthesia Ventilator</u>** The ventilator should be integrated in the machine & should be advanced, microprocessor controlled. Should have at least 7" TFT with high luminance & color display Should be suitable for Adult, Pediatric & Neonatal patients. The ventilator should have Ventilation Modes - VCV, PCV, V-SIMV+PSV, P-SIMV+PSV, PSV and Manual mode Should have Electronic PEEP The ventilator should have FiO_2 monitoring. Should have the following specifications: Tidal Volume 20 to 1500 ml Rate (BPM) 1 to 100 bpm I : E Ratio 1:8 to 4:1 Pinsp 5–70cmH_2O Logs 400 Events Minute Volume 0–20 lpm Inspiratory Pause 0–50% of Ti Supply Pressure 45–100 PSI (310–700 kPa) Electronic PEEP Settable, 3–30cmH_2O Waveforms Pressure, Flow and Volume Loops Pressure vs Volume, Flow vs Volume Compensation Fresh Gas and Compliance Should have facility for audio visual alarms: - Airway Pressure (High & Low), Low supply gas Pressure, VT(High & Low), MV(High & Low), Apnea, Battery Low, Disconnection, Sustained Pressure, Power Failure alarm Battery Backup of minimum 120 minutes. <u>Vaporizers:</u> Should be Selecta Tec type with interlocking facility. Agent specific Isoflurane & Sevoflurane Vaporizer. Should have agent capacity of 250+/- 25ml. Supplier should have service backup & calibration facility for vaporizer. <u>Anesthesia Monitor</u> Patient Monitor should have high resolution 12" integrated color, LED Color touch screen display. Should be able to display at least 8 wave forms. Should be able to monitor following vital sign monitoring for Adult, Pediatric and neonatal patients such as ECG, NIBP, Spo2, Respiration, Temperature, Dual IBP & Etco2. Should be able to monitor ECG: 3/5, Cascade ECG waveform with HR measurement, arrhythmia detection, ST segment analysis. Non-Invasive Blood Pressure (NIBP): Measurement and display of systolic, Diastolic, and mean pressure values on NIBP measurement through Oscillometric method for adult, child, and neonate. Modes: Manual, STAT (Continuous 5 min. operation) and automatic selectable interval 2- 480 minutes. Respiration: Display of respiration waveform with respiration rate using impedance principle. Temperature: Should be able Monitor 2 temperature simultaneously. The unit selection should be possible. SpO2- Should have pulse rate from 20-300bpm and should be suitable for Adult, Pediatric & Neonate. Should be able to measure & display Perfusion Index.	Nos	1	

	Should have Invasive Blood pressure (up to 2 channel) with pulse pressure variation. Etco2 using side stream technique. The Graphical and tabular trends of 168 hours should be available. The monitor should have battery backup of upto 5 hours. Should have facility to connect USB. Should have automatic pacemaker detection facility. The Weight of monitor should not be more than 5 kgs. Should have three priorities of alarm of all the parameters. Should have the option of recording up to 3 waveforms on paper roll. Should have facility of reviewing waveforms for 24 hrs. Should be able to export data through USB in excel format for future review of the same. The Anesthesia Workstation should be accompanied with following accessories. Disposable Close Circuit:1No. Transparent re-usable silicon face mask-1 No Bain Circuit –1 No. Breathing bag 500 ml. – 1 No Soda lime (indicator type: white to violet) 4.5 kg Spo2 Probe -1 No NIBP Cuff -1 No Temperature Probe -1 No <u>Certifications:</u> Supplier should be ISO9001 and ISO13485 certified. The Anaesthesia workstation & vaporizers should be BIS approved as per IS11378 standards; Certificate should be enclosed with valid offered model no. mentioned on the same. Patient Monitor Should be EU CE approved by 4 digit notified body number Electrical Safety conforms to standards for electrical safety IEC 60601-1:2005, & IEC 60601-1-2 Monitor, Anaesthesia Machine, Vaporizers should be CDSCO Certified & Certificate must be submitted			
22	**<u>SITC of ECG Machine</u>** Description of Function: ECG Machine is a primary equipment to record ECG Signal in various configurations.12 channels with interpretation is required for recording and analyzing the waveforms with an inbuilt software. Operational Requirements The ECG Machine should be able to acquire all 12 Leads simultaneously and interpret them. Technical Specifications Should acquire simultaneous 12 lead ECG for both adult and paediatric patients. Should display ECG on multicolor 8.4” LCD Touchscreen Display of High resolution. Should have Real time LCD display of ECG waveforms with signal quality indication for each lead. Should have Artefact, AC, and low and high pass frequency filters. Should have a storage memory of at least 300 ECGs. Should have full screen preview of ECG report for quality assessment checks prior to print. Should have interpretation facility of the amplitudes, durations and morphologies of ECG waveforms and associated rhythm for adult and paediatric patients Should have alphanumeric Keyboard for patient data Entry. (Virtual & hard keys). Should have High Quality Printer Head on A4 size Paper or Z fold paper Should have report formats of 3 x4; 6 x2, Rhythm for up to 12 selected leads; 12 Lead Extended measurements, 1 minute of continuous waveform data for 1 selected lead printing on to A4 size paper. Should have battery capacity of at least 30 ECGs or More than 2 hrs. continuous working on single charge. USB Support for Storage on external portable memories. Earth Connection Terminal Should be Available	Nos	1	

	Should be portable, having weight less than 6kg (with battery) Should have Input Circuit Current <0.05mA. Should have Frequency Response of range between 0.05–150Hz. Should have facility for PC Viewer (as optional). Should have RS232, USB Socket & Network Interface for Communication Interface. Power Supply: Power input to be 220 - 240VAC, 50Hz fitted with Indian plug System Configuration Accessories, spares and consumables: ECG Machine 12 Leads with Interpretation Patient Cable Chest Electrodes Adult (set of six) -01 set. Limb Electrodes (set of 4) Adult Thermal Paper A4/ Z fold Size for 500 patients Environmental factors: The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15 -90% The unit shall be capable of operating continuously in ambient temperature of 10 -50deg C and relative humidity of 15 - 90%. Quality Certificates: Supplier should be ISO9001 and ISO13485 certified Should be European CE approved by notified body			
23	**SITC of Defibrillator with AED, Pacer, CPR and upgradable to SpO2, NIBP & EtCO2** 1. Capability parameter of defibrillator: ECG monitoring, external defibrillation, Pacing and CPR. 2. Technology of defibrillator: Biphasic technology 3. Modes in defibrillator: Automated External Defibrillation and manual 4. Maximum energy selection: 360 joules 5. Capability of ECG Monitoring through: ECG leads, multifunction electrodes, paddles. 6. Number of wave-forms: 3 or more 7. Patient compatibility to defibrillate: Adult and pediatric patients 8. Type of display: TFT or LCD 9. Size of display screen: 8 inch or more 10. Facility to have synchronized cardio version. 11. Provision of in built rechargeable battery. 12. Battery backup to deliver 140 shocks at 360 Joule 13. Weight of defibrillator with battery and paddles must be 7 Kg or less 14. Provision of in built thermal recorder 15: Provision of printing ECG trace & stored information 16: Facility of external non-invasive pacing 17. Pulse width of external non-invasive pacing 20 milli seconds. 18. ECG monitoring: using 3 lead/5 Lead and 10 Leads as optional. 19. Provision of user selectable alarm settings 20. The Machine should have option for AC and DC power input. 21: The machine should work on mains as well as on rechargeable battery. 22. Ability to charge and discharge through paddles as well as from main unit. 23. Charging time must be less than 6 seconds for maximum energy. 24. Mechanism of self test of unit: Automatic and manual 25. Unit should do self test with facility to give printout of defibrillator testing report. 26. Defibrillator should display selected energy. 27. Defibrillator should display delivered energy. 28. CPR Port must be enabled in the machine for connecting CPR sensor. 29. Availability Ingress protection class of IP44 suitable protection for dust and water. 30. The machine should have Sudden death prevention technology to continually monitor and identify the beginning of VF or VT. 31. The machine should have Auto Sequencing Charge function. 32. Should be upgradable to monitor SpO2, NIBP and EtCO2 Module (No	Nos	1	

	external Module/POD is acceptable) 33. The Defibrillator must have data storage capability of 100 patients. 34. The device should have separate disarm and freeze button. 35. The Manufacturer should be ISO13485 certified. 36. The Defibrillator should have USFDA/European CE from 4 digit notified body. 37. The Defibrillator should be EN1789 or AIS 125 Certified. 38. The Defibrillator should be 0.75m drop test certified. **Accessories**: Li-ion rechargeable Battery – 1 no. ECG cable - 1 no. External defibrillator paddles (paediatric in built in adult) -1 set. Recorder paper roll -5no. Multi- function Defibrillator & Monitoring pads/gel sheets: 1 Nos. Gel bottle – 1 no			
24	**SITC of Advanced ICU Ventilator** 1. Should be a microprocessor-controlled ventilator with 12'' or more color TFT touch screen integrated graphics and easy to use rotary knob operation providing support to Adult/pediatric and upgradable to pre-term & neonatal ventilation patient range. 2. The display should be tiltable for better and easy viewing. 3. Ventilator must have internal air supply (turbine driven) OR with External compressor. Turbine/Compressor must have standard warranty of minimum 5 years. The external compressor should be from the same manufacturer and it should be US FDA and European CE approved. 4. Should be based on reliable flow measuring technology, preferably proximal flow sensing technology or equivalent which ensures the most precise flow and pressure measurements for better patient assessment. 5. Should have O2 cells/O2 sensors and It should cover under warranty. 6. Ventilator should have the following modes: • Assist/control- Ventilation (A/C); • Volume • Pressure. • SIMV; • CPAP; • Pressure Support Ventilation (PSV), • APRV, • DuoPAP/BiPAP/Biphasic; • Combination/Dual modes like PRVC/APV or VAPS; • Should have option to upgrade to High flow oxygen therapy. • Apnea Back-up Ventilation. 7.Machine should have Advanced close loop ventilation mode with minimum input setting with optimal breathing pattern based on lowest work of breathing & minimum force of breathing principle or equivalent mode like PAV, NAVA, SMARTCARE, ASV Etc. 8. Should be capable to upgrade Advanced mode: Advanced close loop ventilation solution, Automatic/Manual Adjustment of Oxygenation and Ventilation (Different Lung Mechanics) from intubation to extubation with Lung Protective Ventilation which minimizes the risk of Hypo Ventilation, Hyper Ventilation, High/Low Tidal Volume, Minimum Alveolar Ventilation, Dead Space Ventilation Etc. Which includes automatic SBT to avoid delay in weaning. 9. It should have enhanced Invasive as well as Non-Invasive Ventilation (NIV/NIPPV) modes with facility of effective leak compensation. 10. Ventilator should have upgradable option to mainstream EtCO2 and Spo2. 11. The system should have Disposable Expiratory valve to prevent Cross contamination Infection 12. The ventilator should have standard facilities like a) Tube resistance Compensation. b) On screen help c) LPO-Low pressure oxygen for intra hospital transportation. 13. Ventilator should have the upgrading facility for Lung recruitment& Assessment maneuver along with the facility to calculate the LIP and UIP for finding the optimum PEEP to ventilate severe ARDS patients.	Nos	1	

14. The machine should have spontaneous breathing trial or equivalent features for better and successful weaning.
15. The ventilator should represent virtual lung which shows changes in lung mechanics including spontaneous activity of the patient.
16. The ventilator should have integrated pneumatic nebulizer which should be synchronized with inspiratory cycle. Also, the unit should have the possibility of upgrading to micropump nebulizer if required.
17. Controls: Tidal volume minimum 20ml to 2000ml in Volume Control Mode or better.
18. Respiratory rates 1 to 80 BPM or better.
19.. Peak flow setting from 0 to 240 LPM or better.
20. Trigger sensitivity: - Flow 0.5 to 20 l/min, Pressure Trigger: -0.1 to -15 cm H2O.
21. PEEP: 0 to 35cm H2O or better.
22. FiO2: 21 to 100 %.
23. I:E ratio 1:9 to 4:1.
24. Inspiratory time (TI) 0.1 to 12s
25. Pressure control 5 to 60 cmH2O
26. Pressure support 0 to 60 cmH2O
27. Pressure ramp 0 to 2000ms.
28. Expiratory trigger sensitivity (ETS) 5 to 80% of inspiratory peak flow.
29. Should have facility of

a) Manual Breath,
b) O2 Enrichment,
c) Standby,
d) Screen-lock,
e) Apnea backup ventilation,
f) Inspiratory hold,
g) Screenshot,
I) Automatic brightness control of display,
J) Configurable Quick Start-Settings,
k) Start-up over patient height and IBW.

30. Facility to permanently deactivate the O2 alarm, if the O2 cell is depleted or defective.
31. Should have following Alarms:

- low/high Minute Volume
- Low/high Pressure,
- Low/high tidal volume,
- low/ high Rate,
- Apnea time,
- low/high oxygen,
- Oxygen concentration,
- Loss of PEEP
- Patient Disconnection,
- Exhalation obstruction,
- Flow sensor,
- Power supply,
- Batteries,
- Gas supply failure.

32. Should have Visual representation of ventilator dependency, grouped into oxygenation, CO2 elimination, and patient activity.
33. Should have Graphic display of target and actual parameters.
34. Should have Real-time waveforms Pressure, Flow, Volume, and Ptrachea as standard. EtCO2 and SpO2 waveforms as optional.
35. Should have facility to show minimum 3 wave forms and at least 2 Loops simultaneously. P -V, V- Flow, P-Flow should be available as standard.
36. Should have graphical trends for maximum of 72 hours.
37. Should display vital monitoring parameters including Exhaled tidal volume, Breath rate, I:E ratio, FiO2, Peak
Pressure, Mean Airway Pressure etc.
38. Source input pressure of oxygen: 40 to 60 psi.
39. Should work with double limb and single limb patient circuit both reusable & disposable.
40. Ventilator should be supplied with the following,

- HME filters - 5nos
- Autoclavable Expiratory valve assembly – 1no

	○ Disposable flow sensors with each ventilator – 1 nos. ○ Reusable flow sensor with each ventilator – 1 no. ○ Disposable dual heated wire circuit for Adult/pediatric usage – 1 numbers. ○ Test lung Adult/pediatric – 1 no ○ Oxygen hose – 1no ○ Power cable – 1 no. ○ Disposable Expiratory valve-1 41. The trolley should be from the same manufacturer. 42. Internal rechargeable battery with minimum operating time of Minimum 2 Hrs. or more. 43. Ventilator should be upgradable to inbuilt Nurse Call system. 44. Should be supplied with servo-controlled humidifier with display of minimum 3 inches. The patient circuit of the humidifier should be externally coiled to minimize condensation. Vender should be quote Humidifier consumable separately. Humidifier and its consumable preferably from same Manufacturer. 45. Should have Interface connectors USB as a standard and upgrading facility to RS -232 and connecting facility to PDMS. 46. Ventilator should be US FDA and European CE approved and manufacturer should be ISO (latest) certified. 47. Should have 2 years standard warranty and five years CAMC after the completion of warranty period. 48. The demonstration of the quoted equipment is a must. 49. The unit should have EN 60601-1:2006/A1:2013, IEC 60601-1-2:2014, ANSI/AAMI ES60601-1:2005/(R)2012, ISO80601-2-12:2011, CAN/CSA-C22.2 NO. 60601-1:14, EN ISO 5356-1:2015, ISO 80601-2-55:2018 or equivalent certifications. 50. The unit should develop in accordance with pertinent international standards and US FDA guidelines. The ventilator is manufactured within an EN ISO 13485 and EN ISO 9001, Council Directive93/42/EEC, Annex II, Article 3 certified quality management system. The ventilator meets the Essential Requirements of Council Directive 93/42/EEC, Annex I or equivalent.			
25	**SITC of Double Arm Movable Pendent for Surgeon** • The pendant should have a safety factor of 3 • The length of the drop tube from extension • The arm should be suitable to the OT height • Double Arm Pendant should have a total length of 900mm arm • The weight carrying capacity of the arm should not be less than 140 Kg • The pendant should have a friction braking used should be of high strength aluminium alloy • The arm should be capable of 330 degrees of rotation, which can be easily adjusted to suit the desired mode of operation • The distribution column should be at least 1200 mm in height & it should be capable of accepting a range of shelves, infusion poles, electrical sockets, gas outlets other accessories as asked in tender • Electrical & Gas are separated in different chambers in the distribution column • The Pendant should support the range of Physiological Monitor/ Patient Monitor Mounting Solutions • Pendant should be supplied of gas outlets with DIN Standard and probes as mentioned below Provision for the below Gas Outlets ➢ Oxygen Outlets – 2 Numbers. ➢ Vacuum Outlets – 2 Numbers. ➢ Air (4 bar) Outlets - 1 Numbers. ➢ Electrical sockets - 10 Numbers. ➢ Shelf 50 cm x 50cmwith two rails one on each side – 3 no. Each shelf should have a weight capacity of 50 Kg or more. ➢ Shelf 50 cm x 50cm with drawer – 1 no. ➢ Data socket RJ-45 -2 no	Nos	1	

अटीवशर्ती

1) इच्छुक उत्पादकांनी उपरोक्त तक्त्यात नमूद केलेल्या बाबींची दिलेल्या SPECIFICATION सह सीलबंद कोटेशन मा.कार्यकारी अभियंता(विद्युत), ब क्षेत्रीय कार्यालय यांचे नावे दिनांक - ११/०३/२०२५ ते दिनांक - १५/०३/२०२५ पर्यंत दुपारी ३ वाजेपर्यंत ब क्षेत्रीय कार्यालय विद्युत विभाग,चिंचवड, पुणे. येथे समक्ष सादर करावेत. किंवा a.kumbhar@pcmcindia.gov.in, or electrical@pcmcindia.gov.in.in ह्या इमेल आयडीवर इमेल द्वारे पाठविण्यात यावे..
2) साहित्यांचा दर इतर सर्व करासहित उदा. ट्रान्सपोर्टेशन, इन्शुरन्स, इ. तथापी जीएसटी विरहीत असे देणेत यावा. (GST चा दर HSN कोड सहीत वेगळा नमुद करावा)
3) सीलबंद कोटेशन पाकिटावर कोटेशन नोटीस क्रमांक,कामाचे नाव तसेच फर्म / कंपनीचा नावाचा उल्लेख करावा.
4) अटीयुक्त, उशिरा आलेल्या व अपूर्ण कोटेशनचा विचार केला जाणार नाही.
5) उत्पादक कंपनी यांनी त्यांची फर्म अस्तित्वात असलेबाबतचा पुरावा मागणी केली असता सादर करावा.
6) सदर कोटेशन नोटीस www.pcmcindia.gov.in या वेबसाईटवर उपलब्ध आहे.

जा.क्र :-बक्षेका/वि/जा/ १०३ /२५
दिनांक :- ११/०३/२५

सही /-
सह शहर अभियंता(वि)
पिंपरी चिंचवड महानगरपालिका

प्रत : १) माहिती व तंत्रज्ञान विभाग, वेबसाईटवर प्रसिध्दिकामी
२) नोटीस बोर्ड, ब क्षेत्रीय कार्यालय प्रसिध्दिकामी