



**HAFFKINE BIO PHARMACEUTICAL CORPORATION LIMITED**  
**Procurement Cell**

( A Government of Maharashtra Undertaking)

Regd. Office : Acharya Donde Marg, Parel, Mumbai 400 012 (INDIA)

<b>Phone No: 022- 24129320-23</b> <b>Managing Director :022-24150628</b> <b>General Manager (Procurement Cell) :022-24100478</b>	<b>Website :</b> http://www.vaccinehaffkine.com <b>E-mail:</b> procurementcell@haffkinemumbai.com <b>No.:</b> 606 /Haffkine/Procurement Cell/E-2730/ 128 Slice CT Scan Machine/ 2021-22. <b>Date:</b> 31/12/2021
दि: २४.०७.२०२० प्रशासकीय मंजूर निधी ८,००,००,०००/- (State Plan २०२०-२१)(Qty.- 01)	

**To,**  
**M/s. Wipro GE Healthcare Pvt. Ltd.,**  
No. 4, Kadugodi Industrial Area,  
Bangalore – 560 067, Karnataka, India.  
Contact No.: 9900144650.  
**E-Mail:** aruny@ge.com

**Subject : Supply Order for Tender No. E-2730/128 Slice CT Scan Machine.**  
**Reference: 1. Tender No. E-2730/HBPCL/PC/128 Slice CT Scan Machine/2020-21.**

**2. शासननिर्णय, क्रमांक - जीएचबी-२०२०/प्र.क्र.१८७/प्रशा-१**  
**दिनांक : २४ जून, २०२०.**

**3. Sanction of Tender Approval Committee Meeting No. 134**  
**Dated :- 16.12.2021**

With reference to the tender cited under reference no 1, you are requested to supply the following goods as per details mentioned below to consignee list enclosed with this order.

Sr. No.	Name of the item	Specification of item	Quantity / Unit (DMER)	Unit Rate inclusive of GST(Rs.)	Total Amount Rs.
1	128 Slice CT Scan Machine Make : GE Healthcare Model : Revolution EVO 128 Slice CT Scan Machine	As per Annexure X	01	7,00,00,000/-	7,00,00,000/-
<b>Total amount in words: Rupees Seven Crores Only.</b>					
<b>Factory Location:</b> GE HANGWEI MEDICAL SYSTEMS CO. LTD., No. 2 North Yong Chang Beijing Technological Development Zone, Beijing 100176, China, GE Medical Systems SCS, 283 rue de la Miniere, 78530 BUC, France, GE Healthcare, Japan and USA.					

- 1 Forwarding:** Forwarding Free on Road Destination. I.e. door delivery basis.
- 2 Delivery Period:** 24 weeks from the date of receipt of order by the supplier to the consignee attached.
- 3 Pre-Dispatch Inspection:** Supplier shall make necessary arrangement / facilitate to carry out Pre-Dispatch inspection as per Tender Terms & condition and submit the Inspection report to this office. The Pre-Dispatch inspection cost will be borne by supplier. Machine should be dispatched only after Satisfactory Pre-Dispatch Inspection.

- 4 **Risk purchase clause:** If the bidder fails to supply the stores within the stipulated delivery period, the order will stand cancelled. Undersigned shall be entitled to purchase such stores from any other source at such price which ordinarily should not be more than 10% of the tender price. The extra expenditure in such cases shall be recovered by Managing Director, Haffkine Bio Pharmaceutical Corporation Ltd. (Procurement Cell), Mumbai from the Supplier.
- 5 **Payment Terms:** Payment of 100% of the contract value will be made within 8 weeks on delivery and successful installation and satisfactory commissioning and operation of the machinery.
- 6 **Acceptance & Receipt:** It should be submitted in Appropriate Format to the purchasing authority.
- 7 **Delivery Challan** - Should be sent in the name of consignee in duplicate. It should specify Name of Equipment / Mfg. by / packing & quantity.
- 8 **Invoice Copy** - Should be sent in triplicate on the Name of Managing Director, Haffkine Bio Pharmaceutical Corporation Ltd.(Procurement Cell), Mumbai. Along with Bill of Entry and Country of Origin Certificate of the consignment.
- 9 **Other Terms :**
  - 1) **Warranty:** The warranty period shall be for 2 years from the date of commissioning of all equipment supplied as certified by the consignee. After completion of 2 years warranty period Manufacturer/Supplier should give commitment to ensure services and supply of spare part for further 8 years. The successful tenderer must ensure 95% uptime during warranty period. In case of downtime, warranty period will be extended for period of downtime. If the equipment is not attended within 24 hours for Mumbai and 48 hours for other places the supplier will be liable to pay a penalty of 0.07% of purchase cost for every day of delay. Such penalty will be recovered from the amount of security deposit. Certificate of such uptime / downtime issued by the end user will be binding for the supplier Replacement of spares parts there of due to manufacturing defects during warranty period will be entirely at the supplier's cost.
  - 2) The user institution will enter to the Comprehensive Maintenance Contract with supplier agency @ 5% of the order value (excluding taxes) of the equipment per year for 8 years after completion of warranty period. In case of non-compliance of CMC the supplier will be liable to pay penalty or for appropriate action. Payment of CMC on yearly basis will be made by the user's institution, at the end of the year after satisfactory performance report from the end user.
- 10 **Contract Agreement:** Bidder should submit a tripartite (Importer, Manufacturer and Haffkine Bio Pharmaceutical Corporation Ltd.) Contract Agreement on non-judicial stamp paper of requisite value.

#### **Fall Clause**

It is a condition of the contract that all through the currency there of, the price at which you will the supply stores should not exceed the lowest price charged by you to any customer during the currency of the contract and that in the event of the prices going down below the rate contract prices you shall promptly furnish such information to us to enable to amend the contract rates for subsequent supplies.

- 11 The Bidder should submit (within 7 days) amount of 1.5% i.e. **Rs. 10,50,000/-** of order value to meet other incidental expenditure and 3% i.e. **Rs. 21,00,000/-** as Security Deposit in form of Bank Guarantee. The Bank Guarantee valid for 2 months after the expiry of date of warranty issued by any Nationalized / Scheduled Bank.

**Amount to be deposited to Following Account:**

Name of Account	Haffkine B P C L (Procurement Cell), CESS Account
Name of the Bank & Branch	Bank of Maharashtra, Branch- Mumbai Parel
Account No.	60381379835
IFSC Code	MAHB0000079

**Consignee:** As per list enclosed

या. व्यवस्थापकीय संचालक यांच्या मान्यतेने व करित्वा



**General Manager**  
**Haffkine Bio Pharmaceutical Corporation Ltd.**  
**(Procurement Cell), Mumbai.**

**Copy to:**

- 1) Commissioner Health Services, Mumbai.
- 2) Director, Medical Education & Research, Mumbai-400 001.
- 3) Account Manager, Haffkine Bio Pharmaceutical Corporation Ltd. (Procurement Cell), Mumbai.
- 4) Office File.

**Copy to Consignee:** **Dean, Government Medical College & General Hospital, Baramati.** As per Tender Condition No.17 The user Institution should get the Comprehensive Maintenance Contract done with supplier agency @ 5% of the Order value (excluding taxes) of equipment per year for Eight years after Completion of warranty period.

**Copy Submitted to:** 1) Secretary, Medical Education & Drug Department, Mantralaya, Mumbai.

**Annexure-X**

Sr. No.	<b>Technical Specification for 128 Slice CT Scan Machine</b>	
	THE SYSTEM SHOULD HAVE 64 ROWS OF DETECTOR WITH 128SLICE ACQUISITION/GENERATION PER ROTATION The system should be latest state of the art. independent 64 or more rows of detectors with capable of integrating with any PACS/HIS system. The system should be DICOM ready with true isotropic volume acquisition and sub millimeter resolution. The model quoted should be AERB Type approved and should have USA FDA and for European CE with four digit notified body number certificate and copy of such certificates to be submitted.	
	<b>FEATURES</b>	<b>SPECIFICATION</b>
<b>1</b>	<b>GANTRY</b>	
1.1	Aperture	≥ 70 cm
1.2	Scan field	≥ 50cm
1.3	Gantry Tilt	Minimum tilt of 24 degree on either side.
1.4	Integrated display panel	Gantry front showing current scan parameters such as kV, mA Patient details such as FCG waveform breath holdin instructions etc are preferred.
1.5	Positioning	3D laser light or better
<b>2.</b>	<b>SINGLE OR SEQUENTIAL DUAL ENERGY- license should be floating to be used on console and workstatio</b>	
2.2.1	Gout Imaging	Color coded visualization of deposited uric acid crystals in peripheral extremities.
2.2.2	Calculi Characterization	Visualization of the chemical composition of kidney stones.
2.2.3		All other dual energy or sequential dual energy applications should be quoted as standard.
<b>3.</b>	<b>XRAY GENERATOR</b>	
3.1	Output capacity (actual and not effective)	≥ 70 kW or more
3.2	mA range	20-600mA or more, incremental sets of 10ma.
3.3	kV	80-140 kVp ( Mention KV Selection )
3.4	Low KVp imaging	Specific Best Available
<b>4.</b>	<b>TUBE ASSEMBLY</b>	
4.1	Tube Voltage	80-140 kv or more
4.2	Tube current range	600mA or more
4.3	Anode heat storage capacity	≥ 7 MHU or more
4.4	Anode heat dreipation rate	≥ 1 MHU or more
4.5	Focal spor	1.0 X 1.0 cm or less
<b>5.</b>	<b>PATIENT TABLE</b>	
5.1	Maximum load capacity	≥ 200 kg
5.2	Scammable range	1500 mm
5.3	Longitudinal table speed	≥ 100 mm per sec
	<ul style="list-style-type: none"> <li>• The minimum rable top height should not be more than 35 cms from floor level for easy transport of tran patients.</li> <li>• Table top width to be at least 42 Cms for better comfort</li> <li>• The range of metal free scannable range should be at least 160 cmis,</li> <li>• The vertical range (max. Ht-min: Ht.): Please specify</li> <li>• specify the reproducing accuracy of the Table</li> </ul>	
<b>6.</b>	<b>SCANNING MODES</b>	
6.1	Spiral scanning	

6.1.1	Spiral exposure	At least 60 sec or more
6.1.2	Scan time for full 360 degree rotation	≤0.35 sec. specify range, and whether real time image option available
6.1.3	Bolus triggered / Bolus chase spiral Acquisition.	The system should be integrated with injector for auto trigger (care contrast/Xstream injector/ Injector Synchronization Sync Right equivalent)
6.1.4	Pitch	0.5-1.5.mention availability with respiratory gating and cardiacscanning also.
6.1.5	Image reconstruction time	Image reconstruction time-should be 50 images second of more.
6.2	Axial Scanning	
6.2.1	Slice Thickness (Axial mode)	0.625-5 mm variable
6.2.2	Dynamic Multiscan	It must be possible to do dynamic multi-scan for any body Part.
<b>7.</b>	<b>DATA ACQUISITION SYSTEM -LATEST DETECTOR CONFIGURATION- should generate 128 slice per 360 degree rotation</b>	
7.1	Detector coverage width	38 mm or more at 1:1 pitch
7.2	Number of acquired slices per rotation	Number of acquired slices per rotation Minimum 128 slices Mention maximum scan collimation offered.
7.3	Number of detector rows or elements	Minimum 64 rows
7.4	Whole brain perfusion	The system should do whole brain CT perfusion with coverage of not less than 8 cm.
7.5	Dynamic CTA	Enabling 4D CT DSA, time resolved perfusion with a minimum range of 14 cm.
7.6	2D intervention scan mode	2D intervention for biopsy needle planning with in room ceiling mounted monitor, remote control, foot switch controller & integrated OEM software for seamless operation.
<b>8.</b>	<b>PATIENT COMMUNICATION</b>	
8.1	Integrated patient intercom	There should be intergrated patient intercom.
8.2	Automatic Patient instruction	A standard set of commands for patient communication before, during and after scanning should be available in the English and Hindi language.
<b>9.</b>	<b>PATIENT REGISTRATION</b>	
9.1	Pre-registration	It should be possible to do pre- registration of patient at any time prior to scans.
9.2	Emergency registration	Special emergency registration should be possible.
9.3	HIS& RIS integration	It must transfer patient information from departmental existing HIS & RIS via DICOM get work list.
9.4	PACS/HIS/RIS	It must transfer examination information from scanner into departmental HIS & RSI via MPPS
<b>10.</b>	<b>OPERATOR CONSOLE WITH TABLE</b>	
	Computer System & image processor CPU Processor	
10.1	CPU Processor	Minimum quad core processor, 292 GB hard disc. 8 GB RAM. The best available option to be quoted by the vendor.
10.2	Display	One large minimum 18" high resolution LCD monitors with a display on 1,024 X 1,024 or more.

10.3	Software	Should perform the functions like scanning image reconstruction, film documentation, MPR, CT angiography, MIP, 3D VRT, 3D SSD, Fly through, ready made perfusion for stroke imaging
10.4	CT Angiography Automated bone removal	Protocols to do CT angiography of anybody region and accurate presentation of subtracted CTA data sets.
11.	<b>Advanced Visualization Software</b>	
	Volumetric Navigation	<ul style="list-style-type: none"> <li>• For 2D,3D and 4D Viewing</li> <li>• Configurable Workflow Creation</li> <li>• Measurement Toolset</li> <li>• Image Batching and Report Generation</li> </ul>
	CT Cardiac	<ul style="list-style-type: none"> <li>• Comprehensive Vascular Assessment Tools.</li> <li>• Dual Source Data Support</li> <li>• CBF, CBV, MTT, TTP, TOT RT and Uptake Graph Map Types</li> <li>• Image Fusion</li> </ul>
	CT Chest	<ul style="list-style-type: none"> <li>• Automated a Lung Segmentation</li> <li>• Lung Volume and Histogram Analysis</li> <li>• Sphere-like Structure identification</li> <li>• Comparative Tracking Options</li> <li>• Virtual Flythrough</li> </ul>
	Ct Body	<ul style="list-style-type: none"> <li>• Organ Volume and Histogram output</li> <li>• Dynamic Data Support</li> <li>• Sphere-like Structure identification</li> <li>• Dynamic Image Filtering</li> <li>• Dual Source Data Support</li> <li>• Colon hythrough</li> </ul>
	Interventional radiology	<ul style="list-style-type: none"> <li>• Centerline Analysis tools</li> <li>• Stent-Graft Planning</li> <li>• Curved Planar Reformation</li> <li>• Analysis and Follow-up Tools</li> <li>• Perspective Flythrough</li> </ul>
	EVAR	<ul style="list-style-type: none"> <li>• Pre-generated Conterlines</li> <li>• User Definable planning Template</li> <li>• Diameter vs. Distance and Cross-sectional Views</li> <li>• Straightened View, Diameter and Length Measurements</li> <li>• Embedded Vendor Specific Report Templates</li> </ul>
	TVAR	<ul style="list-style-type: none"> <li>• Aortic Root Segmentation and Orientation</li> <li>• Centerline Pre-processing and Extractions</li> <li>• User Definable Planning Template</li> <li>• Report Output</li> </ul>
	Body Fusion	<ul style="list-style-type: none"> <li>• Registration Fusion</li> <li>• Subtraction</li> <li>• CT,MR,PET,SPECT</li> <li>• Motion-correction</li> <li>• Min, Max, Mean, Standard Deviation, Standard Uptake Values (SUV)</li> <li>• Finding Viewer and Follow-up</li> </ul>
	MR Body	<ul style="list-style-type: none"> <li>• 2D,3D 4D MR Image Sequencing</li> </ul>

		<ul style="list-style-type: none"> <li>• Centreline Analysis Tools</li> <li>• Analysis and Follow-up Tools</li> <li>• Time Intensity ROI Analysis</li> <li>• Parametric Mapping</li> </ul>
	Maxillo - Facial	<ul style="list-style-type: none"> <li>• Panoramic Projection</li> <li>• Cross-section Multi-planar Reconstruction</li> <li>• Definable Mandibular Groove Path</li> </ul>
	iGENTLE	<ul style="list-style-type: none"> <li>• Noise Reduction Management</li> <li>• Improve Effectiveness of 3D Image Quality</li> <li>• Improve Contouring, Segmentation Features, and Centerline Accuracy</li> </ul>
	Lung Segmentation	<ul style="list-style-type: none"> <li>• Lung and Trachea Segmentation</li> <li>• Semi-automated Lobar Segmentation with Volume Calculation</li> <li>• Sphere-like Structure Identification</li> <li>• Low Attenuation</li> <li>• Doubling Time</li> <li>• Criteria RECIS 1.0, RECIEST 1.1 WHO, Cheson</li> <li>• Dynamic Image Filtering with Configurable Filtering Strengths</li> </ul>
	Liver Segmentation	<ul style="list-style-type: none"> <li>• Semi-automated Liver segmentation</li> <li>• Vascular Classification Options</li> <li>• Multi-cut Option for pre-Surgical Planning</li> <li>• Dynamic Images Filtering with Configurable Filtering Strengths</li> </ul>
	MR Cardiac	<ul style="list-style-type: none"> <li>• Volumetric Analysis of Ejection Fraction</li> <li>• LWRV Inner and Outer Common detection</li> <li>• AHA17 – Segment – model</li> <li>• Flow Dynamics</li> </ul>
	Auto Batch	<ul style="list-style-type: none"> <li>• Image Data Pre-processing</li> <li>• 2D Batch output-Reformation of Image Data into Alternative Planes</li> <li>• Create a Derived Series with Any Number of images. FOV. Slab Thickness Slice Spacing and Rendering Mode including MIP</li> </ul>

**Web based advanced visualization Software to be integrated with Radiology Department PACS**

The below mentioned advanced visualization software to be quoted with appropriate server hardware required for two concurrent licenses.

Diagnostic Workstations (HP/Dell or equivalent)

**Workstation Grade**

- 1 x Intel Xeon E-2124, 4 Core, 8MB Cache, 3.3GHz, 4.3GHz Turbo
- 1 x 16GB (2x 8GB) 2666MHz DDR4 UDIMM Non-ECC
- 1 x 3.5" 1TB 7200 rpm SATA Hard Disk Drive
- 1 x DVD + RW
- 1x NVIDIA Quadro P620 2GB.
- 1 x USB Mouse
- 1 x 21.5" LED Monitor
- 1x Windows 10 Pro for Workstationst
- 5 Years Warranty

2 MP Colour Single Head Medical Grade Monitor with 5 Years warranty

(Barco EM Version or equivalent)		
12.	<b>IMAGE RECONSTRUCTION</b>	
12.1	Recon speed	Minimum 35 images/sec
12.2	Recons Field of View	5 to 50 cm continuous
12.3	Recon Matrix	512 X 512
12.4	Real time display	Real-time display (512 x 512) or (340 X 340) during spiral acquisition.
13.	<b>IMAGE QUALITY</b>	
13.1	High contrast Spatial Resolution for entire width of the detector	>16 Lp/cm@cut-off
13.2	Low-contrast resolution	At least 5 mim at 3.0 HU. Measurement to be based on 20 cm CAT PHAN (dose in mGy to be mentioned).
14.	<b>DOSE REDUCTION TECHNIQUES</b>	
14.1	Radiation dose	There should be radiation dose calculation and display during the procedure; DICOM structured dose report, dose notification, dose alert
14.2	Pre-patient collimation	There should be pre-patient collimation to reduce unnecessary dose to the patient.
14.3	Model based alterative reconstruction ( software & hardware)	Latest iterative reconstruction technology for imaging protocol including brain including hardware and software.
14.4	Pediatric & Infant protocol	Low dose CT Protocols must be provided.
14.5	Minimum recon speed using alterative Reconstruction.	20 images / sec.
15.	<b>DOSE PERFORMANCE DATA(USING IEC STANDARD PHANTOMS)</b>	
15.1	Head	Not more than 20 mGy/ 100 mAs
	Body	Not more than 10 mGy/ 100 mAs
16.	<b>NETWORKING</b>	
16.1		DICOM Storage (Send Receive)
16.2		DICOM Modality Work list User
16.3		Modality Performed Procedure Step (MPPS)
16.4		DICOM Print User
16.5		Query/Retrieve User and Provider
16.6		DICOM 3 and DICOM RT compliance
16.7	Integration with departmental RIS	Integration with departmental RIS and PACS and institution HIS must be done.Any licenses or software needed for the same is to be provided
17.	<b>ARCHIVING</b>	
17.1		Fully DICOM 3.0 compliant including capability from HIS RIS interface
17.2		Service Class User & Provider (CT, MR, NM, Secondary Capture)
17.3		Storage Commitment User
17.4		Removable Media export to HDD
17.5		DVD-ROM archive
		DICOM CD Writer. Specify minimum number of uncompressed and compressed images that it can store per disc. Option of viewing these discs on any PC without DICOM viewer should be available. Warranty of the system should protect against obsolescence of this device.



18.	<b>DUAL HEAD PRESSURE INJECTOR</b>	
18.1	Dual head pressure injector	Dual Head Technology with pedestal mount & scanner Interface cable.
18.2	Compatible pump hose and patient hose	500 syringes and 2000 patient tubings
18.1.b	Dual head pressure injector	Integrated Synchronized Ceiling mounted Dual Head injector with injector protocol editing from OEM operator console & CAN4 scanner Interface cable connectivity to be quoted as option.
19.	<b>UPS (EMERSON OR APC)</b>	
19.1	Power	Minimum 120 KVA UPS (Emerson /PC/APC or equivalent).
	Minimum full system backup time	Minimum 30 min back for full system including image processing server
20.	<b>DRY LASER CAMERA-To be integrated with main console and workstations.</b>	
20.1	Resolution	16 bits / 500 dpi or more
20.2	Port	Min 3
20.3	Number of film trays	Minimum 3
20.4	Support film Sizes	17 X14, 10X12 and others.
21.	<b>Technical Specifications for Anaesthesia Workstation</b>	
	<p><b>1. Description of Function</b> 1.1 Anaesthesia Workstation is used for delivering aesthesia agents to the patients during surgery.</p> <p><b>2. Operational Requirements</b> 2.1 Anaesthesia machine complete and integrated with Anaesthesia gas delivery system: Circle absorber system: TEC Vaporisers for Isoflurane / Sevoflurane; Anaesthesia ventilator. 2.2 Essential accessories to make the system complete and compatible with existing system of gas outlets.</p> <p><b>3. Technical Specifications</b> <b>3.1 Flow management</b> 1. Should be Compact, ergonomic &amp; easy to use 2. Machine shall provide dual cascading rotameter for O<sub>2</sub> &amp; N<sub>2</sub>O for accurate mixing. It should work for low and minimal flow. 3. Should have litrous Oxide cut off in absence of oxygen. 4. Should have anti Hypoxic guard like Link 25 to ensure a minimum of 25% in fresh gas flow. 5. Gas regulators shall be integrated. 6. One no. yoke each for Oxygen &amp; Nitrous Oxide. Separate Pipeline inlet for Oxygen, Nitrous Oxider with pressure gauges to indicate inlet pressures. 7. Tender to quote individual price of TEC vaporizer for each drug (Isoflorane, Sevoflorano) 8. Drawers shall be minimum 3 nos.</p> <p><b>3.2 Breathing system</b> 1. Fully integrated Latex free fully autoclavable (upto 134°C), Compact and total volume should not exceed 3ltrs. 2. Sensor should not require daily maintenance. 3. Bag to vent switch shall be bi-stable and automatically begins mechanical ventilation in the ventilator position. 4. Adjustable pressure limiting valve shall be flow and pressure compensated. 5. Should have a Manometer to indicate airway pressure disposable or autoclavable. 6. Components coming in contact with patient gas shall be</p>	

7. FIO<sub>2</sub> monitoring should be available.
8. Common Gas outlet should be standard supply for connecting open circuit.
9. Ventilator bellows shall be integrally mounted to the breathing system.
10. Machine shall provide circle mode breathing circuits.

### **3.3 standard Circle Absorber System**

Should have a bag/ventilator selection valve integrated onto the absorber. Should be suitable to use low flow & minimal techniques

Should have CO<sub>2</sub> absorbent chamber canister of atleast 800 gms capacity

Should have CO<sub>2</sub> bypass without any air entrainment or loss pressure/disconnect.

### **3.4 Vaporizers**

1. Vaporizer must be isolated from the gas flow in the off position and prevent the simultaneous activation of more than one vaporizer.
2. Vaporizer shall require no tools to mount.
3. Vaporizer shall be Back Pressure. Flow and Temperature compensated.
4. Vaporizer should not be able to operate in unlocked condition for safety
5. Vaporizer shall mount to a Selectatees manifold which allows easy exchange between agents
6. Back bar to accept two selectatee vaporizers

### **3.5 Ventilator (Integrated)**

1. The workstation should have integrated Anaesthesia Ventilator system
2. Ventilator shall have a Volume Control, Pressure Control
3. Ventilator should have a tidal volume compensation capability
4. Tidal Volume from 20ml to 1500ml. capable of delivering 5 ml in PCV modes
5. Rate 4 to 99bpm
6. E ratio 2: to 1:8
7. Inspiratory Pause: off, 5% to 60%
8. Electronically controlled peep
9. Ventilator display shall have a minimum 7 inches or above LCD screen, with pressure waveform scale, Flow vs time. Set and measured patient data
10. Ventilator should be capable of 120 l/min peak flow in the Pressure Control mode

### **4. System Configuration Accessories, spare and consumables**

- 4.1 Anaesthesia Gas Delivery system-01
- 4.2 Circle absorber -01, Ventilator-01
- 4.3 TEC Vaporizer Sevoflurane-01, TEC Vaporizer Isoflurane-01
- 4.4 Adult autoclavable silicone breathing circuits-01

### **5. Environmental factors**

- 5.1 The unit shall be capable of operating continuously in ambient temperature relative humidity of 15-90 of 100C-400C and
- 5.2 The unit shall be capable of being stored continuously in ambient
- 5.3 Shall meet FEC-60601-1-2:2001 (Or Equivalent Bis) General Requirements of Safety for Electromagnetic Compatibility.
- 5.4 Safe disposal system/port of waste anesthetic gases (Passive AGSS Anesthetic Gas Scavenging System Port) should be in place.

### **6. Power Supply**

- 6.1 Power input to be 220-240V AC 3ut, as appropriate with bay plug
- 6.2 The Anaesthesia Delivery system and Monitoring system will have a one hour battery back up

### **7. Standards, Safety and Training**

- 7.1 Should be CE approved product
- 7.2 Electrical safety conforms to standards for electrical safety ICE-60601/ IS-13450

7.3 Manufacturer should be ISO certified for quality standards.  
 7.4 Certified to be compliant with IEC 60601-2-13-Medical Electrical Equipments part 2-13: Particular requirements for the safety of Anaesthesia Workstations  
 7.5 Should have local services facility. The service provider should have the necessary equipments recommended by the manufacture to carry out preventive maintenance test as per guideline provide in the service/maintenance manual.  
 7.6 All components like anaesthesia machine, Vaporiser should be from one manufacturer/principal.

**Following are the technical Specification for Laptop.**

- 1) Intel i7
- 2) 11th generation.
- 3) RAM-8+8 GB.
- 4) SSD-512 GB.
- 5) SDD-1 TB.
- 6) Touch Screen-2 in FHD 14- Inch.
- 7) Windows 10 with MS Office.
- 8) Color-Natural Silver.
- 9) Graphics-NVidia 4 GB.

**Consignee Details**

<b>M/s. Wipro GE Healthcare Pvt. Ltd.</b>		
<b>128 Slice CT Scan Machine</b>		
<b>Make : GE Healthcare &amp; Model : Revolution EVO 128 Slice CT Scan Machine</b>		
<b>Delivery Period</b>	<b>24 weeks</b>	
<b>PO Ref. No.</b>	<b>No.: 6061 /Haffkine/Procurement Cell/E-2730/128 Slice CT Scan Machine/2021-22. Date: 31/12/2021</b>	
	<b>दि: २४.०७.२०२० प्रशासकीय मंजूर निधी ८,००,००,०००/- (State Plan २०२०-२१) (Qty.- 01)</b>	
<b>Sr. No.</b>	<b>Name &amp; Address of the Consignee</b>	<b>Qty.</b>
<b>1)</b>	<b>Government Medical College &amp; General Hospital, Baramati.</b>	<b>01</b>
	<b>Total</b>	<b>01</b>

या. व्यवस्थापकीय संचालक यांच्या मान्यतेने व व



**General Manager**

**Haffkine Bio Pharmaceutical Corporation Ltd.  
(Procurement Cell), Mumbai.**