



INDIAN INSTITUTE OF TECHNOLOGY, KANPUR

GT ROAD, KALYANPUR, KANPUR – 208016

UTTAR PRADESH, INDIA

OPEN TENDER ENQUIRY

TENDER DOCUMENT

For

“Purchase of UPS 60KVA (Qty - 01) with Batteries 12v 100ah (Qty - 44)”

Tender Details:

Tender Reference Number	IITK/WSAIS/2025-2026/03
Item Description	Purchase of UPS 60KVA with Batteries 12v 100ah
Item Quantity	1- UPS 60KVA (Quantity – 01) 2- 12v 100ah Batteries (Quantity – 44)
Bid Submission Start Date & Time	11/03/2026
Bid Submission End Date & Time	21/03/2026
Bid Opening Date	23/03/2026
Bid Submission Address	Dr Nitin Saxena Room No. 207, Gate/JEE Building, Second Floor, Wadhvani School of AI & Intelligent Systems, Uttar Pradesh PIN – 208016 Ph. No - 0512-679-6636

Sealed quotations are invited for the purchase of the above items in the **Two bid system**. Both **Technical bid and financial bid in separate envelopes** must be kept in a big envelope which must be superscribed by Tender Reference number, Item Description and bid submission end date. The sealed copy of bids must reach the above designated address on or before the Bid Submission End Date & Time.

1. List of Documents to be submitted in Technical Bid

1. Copy of Bank details.
2. Copy of work experience.
3. Copy of the Company incorporation certificate.
4. Copy of specifications/brochures & tender acceptance letter, Country of Origin of goods/services and local content on Appendix 1-3.
5. Copy of other documents mentioned in **tender terms and conditions**.
6. Declaration for turnover and bidder's credentials on Appendix 4-6.

Note: - No indication of the rates/amounts be made in any of the documents submitted with the Technical Bid.

2. List of Documents to be submitted in Financial Bid

1. Financial Bid with Complete Break-up of Item

Tender document

Department of WSIAS
Indian Institute of Technology Kanpur
Kanpur (UP) 208016 India

Enquiry date: 11.03.2026

Enquiry No: IITK/WSAIS/2025-2026/03

TECHNICAL SPECIFICATION AND SCOPE OF SUPPLY

1. For UPS

S.No.	Technical Specification for UPS	
1	Item Name	60KVA/60KW rated UPS With 30Mins Battery backup system
2	Quantity	1 Set
3	Warranty	3 Years Onsite warranty on UPS & 3Years on Battery
4	Communication/Information sharing / SNMP module	System must have module enabled which provides all the information as well as send an email/sms to inform about the statistics.
5	Installation and commissioning	All installation and commissioning is the part tender (all item including wires or any component required for installation and commissioning are provided by the bidder)
6	Test & Certifications	1.Product must have Type Test certificate from NABL Accredited Lab / Govt. lab for the offered model 2. Tender specific MAF certificate 3. Product must have CE certification 4. RoHS Certification, REACH certification & PEP Certification
7	Compliance	OEM must have a Local service center

Part 1 - Three Phase Solid State Uninterruptible Power Supply Specifications 60kVA Online Double Conversion UPS system with 30 minutes battery backup at full load, complete with all accessories as per technical specifications and standards

A. **Scope:** Provide design and engineering, labor, material, equipment, related services, and supervision required, including, but not limited to manufacturing, fabrication, erection, and installation for a solid-state uninterruptible power supply (UPS) as required for the complete performance of the work, and as shown on the Drawings or as herein specified.

B. **Section Includes:** The work specified in this section includes, but shall not be **limited** to, a three- phase, online, double conversion, and solid state UPS. The UPS shall operate in conjunction with the existing building electrical system to provide high quality power conditioning, back-up power protection, and distribution for electronic equipment loads. The system shall consist of transformer less with solid state IGBT based power factor corrected rectifier, IGBT based inverter, a 100 percent rated for continuous duty static switch, battery plant, Touch screen LCD display plus Synoptic status/control panel, possibility to parallel connection for Power

and Redundancy and synchronizing circuitry as described herein.

1.1. UPS DEFINITIONS

A. **Purpose:** The purpose of this specification is to define the design, manufacture and testing characteristics required in view of supplying, putting into operation and maintaining an Uninterruptible Power Supply system (referred to as a UPS in the rest of this document).

B. Brief description:

1. The UPS system shall be made up of 1Nos standalone configuration single-UPS units (same power rating), operating in double-conversion mode (also called on-line mode); it shall be a VFI-type UPS (as per standard IEC 62040-3).
2. Each UPS unit shall have a unit rating of 60kVA and shall comprise the following components, described below in this specification:
 - a) PFC rectifier
 - b) Module based monolithic architecture with fault tolerant design, power modules
 - c) Inverter
 - d) Battery 12V FR Grade MF VRLA
 - e) User and communications interface
 - f) Inbuilt MCCBs for input, output, static bypass, and manual bypass circuits
 - g) Static bypass (via a static switch) for each UPS unit
 - h) Manual maintenance bypass for each UPS unit
 - i) Remote Emergency Power Off (REPO): UPS shall be equipped with provisions for remote emergency power off and dry contact input that shall be used to command UPS shutdown remotely.

C. System Aim:

The UPS shall ensure continuity of electric power to the load within the specified tolerances, without interruption upon failure or deterioration of the normal AC source (utility power) for a maximum protection time determined by the capacity of the backup batteries installed.

1.2. OPERATING PRINCIPLES

A. System Typology:

Each single-UPS unit shall operate in double-conversion mode (also called on-line mode); it shall be a VFI-type UPS (as per standard IEC 62040-3), made up of the following components, described in detail in this specification.

B. Normal operation (normal AC source available):

The rectifier supplies the inverter with DC current while the charger simultaneously floats charges the battery. The load is continuously supplied with dependable electrical power by the inverter.

C. Operation on battery power (normal AC source not available or outside tolerances):

Upon failure or excessive deterioration of the normal AC source, the inverter shall continue to supply the load from battery power without interruption or disturbance, within the limits imposed by the specified battery backup time.

D. Battery recharge (normal AC source restored):

When the normal AC source is restored, the rectifier shall again power the inverter, without

interruption or disturbance to the load, while the charger automatically recharges the battery. The UPS system shall ensure equal sharing of the total load between the various parallel-connected units.

1. **Recharge characteristic:** Intermittent charging with prevailing state of complete rest and control of the battery status IU (DIN 41773)

E. Parallel operation and redundancy

- a. The units shall operate in parallel with redundancy, with the load shared equally between the units.
- b. Redundancy shall be of the "n+1" (or n+2) type, i.e. "1" (or 2) units shall be redundant in the total of n units. If a major fault occurs on a unit, it shall automatically disconnect.
- c. If the remaining unit(s) are sufficient to supply the load, it/they shall remain in operation.
- d. If the total available power is insufficient, the load shall be automatically transferred, without interruption, to the bypass AC source, if it is within tolerances.

F. Transfer to bypass AC source:

1. In the event of an overload exceeding system capabilities (short-circuits, heavy inrush currents, etc.) the load shall be automatically transferred, instantaneously and without interruption, to the bypass AC source, on the condition that bypass power is available and within tolerances.
2. To that end, synchronization of each inverter in phase and frequency with the bypass source shall be automatic. Transfer of the load back to the UPS-unit outputs shall be automatic or manual. During transfer, the load shall not suffer an outage or disturbance in the supply of power.
3. To ensure transfer in complete safety, the system shall simultaneously control the static switches.
4. On request, the UPS system may automatically transfer the load with a micro-interruption if a major fault occurs on the UPS system and if synchronization with the bypass source has not been established.

G. UPS maintenance:

1. For maintenance purposes, all electronic components shall be accessible from the front of the UPS.
2. In addition, a built-in manually operated mechanical bypass system shall be installed in each UPS unit;
3. For personnel safety during servicing or testing, this system shall be designed to isolate the UPS units while continuing to supply power to the load from the bypass AC source. Transfer to the manual bypass mode and back shall be possible without interruption to the load.
4. The UPS shall also include a device making it possible to isolate the rectifiers and the chargers from the normal AC source.

1.3. CERTIFICATION

- A. UPS Should comply with RoHS certified and CE Certified, PEP & REACH CERTIFICATION.
- B. Product must have Type Test certificate from NABL Accredited Lab / Govt. accredited institution

PART 2 - SYSTEM DESCRIPTION

2.1 Technical Characteristics

A. UPS Design Requirements:

1. **Output Power Continuous Rating:** The continuous output power rating of the UPS shall be 60kVA/60kW at PF=1.
2. **Input Voltage:** [400] volts AC, -40 percent +20 percent, 3Ph +N + PE.
3. **Output Voltage:** [400] volts AC, three-phase, 3 wires plus Neutral plus ground.
4. **Input Current:** Max 136amps @ 400 volts AC with maximum charging
5. **Output Current:** Max 87amps @ 400 volts AC
6. **Battery Autonomy:** UPS shall be capable of operating for 30minutes at 0.8 PF output at a temperature of 12V battery /25 °C on battery power, with a minimum VAH 52800, Battery sizing calculation must be submitted.
7. **Battery Type:** FR Grade 12V MF VRLA Monoblock

B. AC Input Characteristics:

1. **Voltage:** 400V volts AC, -40 percent +20 percent, three-phase, 3Ph +N + PE.
2. **Frequency:** 50Hz \pm 5Hz compatibility
3. **Power Factor:** \geq 0.99 lagging.
4. **Total Harmonic Distortion:** Less than 3% at 100% load.

C. AC Output Characteristics:

1. **Voltage:** 400 volts AC, \pm 1% steady state variation phase-to-phase voltage volts AC, three-phase
2. **Frequency:** 50 hertz, \pm 2% (Inverter Synch with Mains); 50 hertz, \pm 0.001 percent when free running.
3. **Voltage Stability:** \pm 1.0% for balanced load, \pm 2.0% for unbalanced load.
4. **Voltage Distortion:** \leq 2% total (THD) linear loads, \leq 4% total (THD) nonlinear loads.
5. **Voltage Transient (Step Load) Response:** \pm 5 percent for load step changes from 100 percent to 20 and from 20 to 100 percent. The system returns to the \pm 1 percent range in rms value in less than 20ms.
6. **Voltage Recovery Time:** Return to within 1 percent of nominal value within 20 milliseconds (one cycle).
7. **Phase Angle Displacement:** 120 degrees \pm 1 degree for balanced load; 120 degrees \pm 2 degrees for 100 percent unbalanced load.
8. **Non-Linear Load Capability:** Output voltage total harmonic distortion shall be less than 5 percent when connected to a 100 percent non-linear load with a crest factor not to exceed 3 percent.
9. **Slew Rate:** 1.0 Hz/Sec.
10. **Power Factor:** 1.0 at the rated volt amperes (VA).
11. **Inverter Overload Capability:** Up to 110% for 30Mins, 125% for 10Mins, 150% for 1Min
12. **Bypass Overload Ratings:** Static bypass transfer switch shall have the following overload characteristics:
 - a. $>$ 150% percent of UPS output rating for one cycle
 - b. 110 percent continuous.

D. Battery:

1. **Number of Battery Connections:** 36Nos \sim 50Nos adjustable
2. **Battery Voltage Nominal : 432V \sim 600V**
3. The battery charger is equipped with a temperature probe to enable temperature compensated charging.

E. Environmental Requirements:

1. The UPS shall operate under the following environmental conditions:
 - a. **Temperature:**
 - 1) UPS Module Operating: 0 $^{\circ}$ C to 40 $^{\circ}$ C.
 - 2) Non-Operating (Storage): -20 $^{\circ}$ C to 55 $^{\circ}$ C.
 - b. **Relative Humidity (Operating and Storage):** 0 percent to 95 percent non-condensing.
 - c. **Barometric Pressure:** Up to 1000 meters above sea level.
 - d. **Audible Noise:** $<$ 58 dBA at 1m.

2.2 MODES OF OPERATION

A. UPS module shall be designed to operate as a double conversion, on-line reverse transfer system in the following modes.

Normal: The inverter shall continuously supply power to the critical load. The PFC rectifier shall derive power from the utility AC source and supply DC power to the inverter while simultaneously float charging the battery.

Emergency: Upon failure of the utility AC power source, the critical load shall be supplied by the inverter, which, without any interruption, shall obtain its power from the battery.

Recharge: Upon restoration of the utility AC power source (prior to complete battery discharge), the PFC rectifier shall power the inverter and simultaneously recharge the battery.

Bypass Mode: The static bypass transfer switch shall be used to transfer the load to the bypass without interruption to the critical power load. This shall be accomplished by turning the inverter off. Automatic re-transfer or forward transfer of the load shall be accomplished by turning the inverter on.

2.3 COMPONENT DESCRIPTION

A. PFC Rectifier and Battery Charger: Incoming AC power shall be converted to a regulated DC output voltage by an IGBT (insulated gate bipolar transistor) power factor correction (PFC) rectifier. The PFC rectifier shall provide high quality DC power to charge the batteries and power the inverter and shall have the following characteristics:

Input Power Factor Correction (PFC): The PFC rectifier shall be power factor corrected so as to maintain an input power factor of 0.99 lagging to unity at 75 percent or above load levels to ensure generator compatibility and avoid reflected harmonics from disturbing loads sharing the utility power.

Input Harmonic Current Suppression: The PFC rectifier shall produce a sinusoidal input AC current on each phase with low harmonic content, limiting THD on the UPS input to below 3 percent at 75 percent or above load levels.

Temperature Compensated Charging: The battery charger shall be equipped with a temperature probe to enable temperature compensated charging and shall adjust the battery float voltage to compensate for the ambient temperature.

Input Phase reversal Correction: The ups shall auto correct and adjust the Input phase sequence to avoid battery discharge and continuity of supply to load whenever there is phase sequence change for input power supply.

Auto & Manual battery testing Shall be available in the UPS

B. Inverter: The UPS output shall be derived from a variable frequency with 3 Level Inverter Pulse Width Modulated (PWM) inverter design. The inverter shall be capable of providing the specified precise output power characteristics while operating over the battery voltage range.

C. Static Bypass - 100 Percent Rated, Continuous Duty: The static bypass transfer switch shall be solid state, rated for 100 percent continuous duty without mechanical contactor device in parallel for higher reliability and

consistent response time and shall operate under the following conditions:

1. **Uninterrupted Transfer:** The static bypass transfer switch shall automatically cause the bypass source to assume the critical load without interruption after the logic senses one of the following conditions:
 - a. Inverter overload exceeds unit's rating.
 - b. Battery protection period expired, and bypass current is available.
 - c. Inverter failure.
2. **Interrupted Transfer:** If the bypass source is beyond the conditions stated below, the UPS shall make an interrupted transfer (not less than 100 milliseconds in duration).
 - a. Bypass voltage greater than +10 percent, -10 percent from the UPS rated output voltage.
 - b. Bypass frequency greater than $\pm 1\pm 5$ hertz (programmable) from the UPS rated output frequency.
3. **Automatic Uninterrupted Forward Transfer:** The static bypass transfer switch shall automatically forward transfer power, without interruption, after the UPS inverter is turned on after an instantaneous overload-induced reverse transfer has occurred and the load current returns the UPS's nominal rating or less.
4. **Manual Transfer:** A manual static transfer shall be initiated from the UPS control panel by turning the UPS inverter off.
5. Variable DC BUS: In event of 1 or 2 batteries fail UPS can cater load with (manually 0 removal of those faulty battery and adjust the DC voltage to deliver minimal backup.
6. Back feed protection: UPS shall be equipped with standard contractor at Bypass path in case failure of static switch faults in and to secure the available source with reverse power
7. UPS must have RECTIFIER WALK-IN TIME to be designed at 1 - 20 Sec selectable
8. UPS AC_ AC Double Conversion at 25%,50%,75% & 100% Load (THIRD PARTY TYPE TEST CERTIFICATE) - > 94.5%
9. Product with CE certification & RoHS
10. Product must comply to IEC/EN 62040-1,-2,-3 along with CE complied

2.4 SYSTEM CONTROLS AND INDICATORS

A. DSP-Controlled Logic:

1. The full UPS operation shall be provided using DSP-controlled logic. Operation and parameters shall be firmware-controlled, thus eliminating the need for manual adjustments or potentiometers. The logic shall include, but shall not be limited to, a self-test and diagnostic circuitry such that a fault shall be isolated down to the printed circuit assembly or plug-in power assembly level. Every printed circuit assembly or plug-in power assembly shall be monitored. Diagnostics shall be performed via a PC through the local diagnostics port on the UPS.
2. The UPS shall include, but shall not be limited to, a standard easy-to-use control and indicator panel. Included shall be a backlit, LCD display, LED indicators and synoptic diagram to show the overall running status of the UPS.
3. Display shall facilitate operation by offering the functions listed below:
 - a. Operating information supplied on the screens.
 - b. The display shall assist the user by providing step-by-step help in the user's language.
 - c. LED mimic diagram. The mimic diagram shall enable display of installation parameters, configuration, operating status and alarms and indication of operator instructions for switching operations (i.e., bypass).
 - d. It shall be possible to display the following measurements through **Front Panel LCD Display**:
 - Input Voltage R Y B
 - Input Current R Y B
 - Input Frequency
 - Input PF
 - Bypass Voltage R Y B
 - Bypass Frequency
 - Battery Voltage +/-
 - Battery Charge / Discharge Current
 - Battery status
 - Battery Temperature (Option)
 - Battery capacity rate %
 - Remaining Backup Time in minutes
 - Output Voltage R Y B

- Output Frequency
- Output Current R Y B
- Output Load in % R Y B
- Output Power in W / VA
- Output / Load CF
- Warning History
- Mimic Power flow Diagram
- Configuration settings
- Event Log : 1000 Events with Date & time

f. Additional information shall be provided in view of accelerating servicing of the system.

g. Log of time-stamped events. This function shall store in memory and make available, for automatic or manually initiated recall, time-stamped logs of important status changes, faults, and malfunctions, complete with an analysis and display of troubleshooting procedures.

B. Front Panel LCD Display: The UPS control panel shall provide display should capable of show Schematic diagram, readings of input, rectifier, charger, DC-DC, inverter & bypass, Alarms, event logs upto 1000nos, history & User parameter settings.

C. LED Status Indicators: The UPS control panel shall provide three LEDs that shall signal the following status conditions.

Green LED: Load protected.

Yellow LED: Battery Run, UPS on Bypass or Minor fault.

Red LED: Major fault, load not protected.

D. Audible Alarm Reset: The UPS shall provide an audible alarm that can be stopped using the user interface. If a new alarm is sensed after the original alarm has been silenced, it shall reactivate the audible alarm.

Below alarm signaling must be available

- a. Battery weak or faulty
- b. Output short circuit
- c. EPO mode
- d. UPS over temperature
- e. Inverter overload
- f. Utility Low or battery disconnected
- g. By pass overload

E. USB: One USB/RS232 connector with serial output shall be provided for field diagnostics.

F. Dry Contacts: The UPS shall be provided standard with a programmable input/output relay board.

This board shall have eight dry contacts (i.e., six for input signals and two for output signals).

1. Contacts shall be programmed as:

- a. General Alarm
- b. Mains Fault
- c. Battery Low
- d. Inverter out of tolerance
- e. Bypass Operation
- f. Booster OK & not (BCB open)
- g. Inverter Operation
- h. Bypass OK

2. The contacts shall be normally open and shall change state to indicate the operating status. The contacts shall be rated at 120 VAC voltage 1A current, 50 VDC voltage 1A current resistive load.

3. **Remote Emergency Power Off (REPO):** UPS shall be equipped with provisions for remote emergency power off and dry contact input that shall be used to command UPS shutdown remotely.

2.5 MECHANICAL DESIGN AND VENTILATION

A. Enclosure: The UPS shall be housed in a freestanding enclosure with dead front construction. The mechanical structure of the UPS shall be sufficiently strong and rigid to withstand handling and installation operations without risk. The sheet metal elements in the structure shall be protected against corrosion by a suitable treatment, such as zinc electroplating, bi-chromating, epoxy paint, or an equivalent. Enclosure to be of IP20 based.

B. Cable Access: The standard UPS available shall accommodate bottom entry cables (top entry shall be optional).

C. Ventilation and Heat Rejection: The UPS shall be designed for forced air cooling. Air inlets shall be provided from the front and top of the UPS enclosure. Air exhaust shall be from the top portion of the unit. Full load heat rejection with Axial fans

2.6 BATTERY

2. For Batteries

S.No.	Technical Specification for Battery	
1	Item Name	100Ah FR Grade Battery with 30 Minute Backup
2	Quantity	44 * 1 = 44 (for 1 UPS we need four battery banks of 44 Battery each)
3	Warranty	3 year Onsite warranty
4	Battery Type	FR Grade

A. General: The UPS module shall use a valve-regulated sealed lead acid heavy duty industrial battery, designed for auxiliary power service in an UPS application. The primary battery shall be furnished with impact-resistant plastic cases and housed in a matching cabinet(s) next to the UPS module.

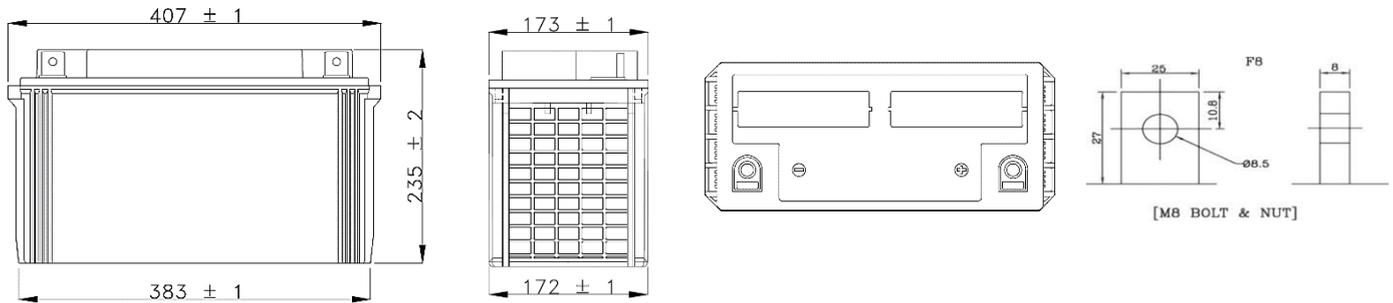
Battery Particulars

TECHNICAL SPECIFICATIONS FOR 12V 100AH VRLA(SMF) BATTERY [Quantity – 44]	
Types of Lead Acid of Battery	Small-sized Valve Regulated Lead -Acid Batteries (SMF) conforming to JISC: 8702/1998 (Part 1,2 & 3) with latest amendments
Nominal Voltage of Battery (volts)	12.0 Volt
Material of container	Fibre Reinforced Plastics (FRP)
Rated Capacity at C20 discharge (AH)	100
Warranty (Years)	2Years onsite
Dimensions (L x W x H) (mm x mm x mm)	As per relevant IS Specifications
Special Terms & Conditions	
Battery serial number list shall be furnish by the seller along with the supply of the battery to Buyer	
Generic	

Types of Lead Acid of Battery	Small sized Valve Regulated Lead -Acid Batteries (SMF) conforming to JISC: 8702/1998 (Part 1,2 & 3) with latest amendments
Nominal Voltage of Battery (volts)	12.0 Volt
Material of container	Fibre Reinforced Plastics (FRP)
Rated Capacity at C20 discharge (AH)	100
Warranty (Years)	3 Years
Battery Condition	Dry Charged
CONSTRUCTIONAL	
Dimensions (L x W x H) (mm x mm x mm)	As per relevant IS Specifications
Weight of Dry Battery (Kg) shall be as per relevant IS: Specn., corresponding Ah	Yes.
No. of cells per Battery (No.)	6 Cells for 12 Volt battery
Certifications	
Availability of Test Reports from Central Govt./NABL/ILAC accredited Lab showing conformity to the specifications	Yes
Compulsory Registration (CRS) of BIS for safety as per IS 16046 as applicable. Secondary Cells and (Batteries containing Alkaline or other non-acid Electrolytes-Safety Requirements for Portable sealed secondary cells, and for Batteries made from them for use in portable applications	Yes

SPECS FOR 100-12 (12V 100AH) VRLA BATTERY

BATTERY OUTLINE



CONSTRUCTION:

- ▶ Positive and negative plates in lead-tin-calcium alloy. ▶ Separator - low resistance micro porous glass fiber.
- ▶ The electrolyte is absorbed within this material, preventing acid leakage in case of accidental damage.
- ▶ Terminals with a large surface area provide maximum conductivity. ▶ Self-regulating pressure relief valve. ▶ 100% ensured capacity (through Data-logger) during manufacturing. ▶ Stronger, sturdier & attractive packaging. ▶ Especially suited for UPS & Power Application

FEATURES: -

- ▶ International Size. ▶ Free from Orientation Constraints. ▶ Eco-Friendly. ▶ Easy Handling. ▶ Ready to Use. ▶ Long Service Life. ▶ Low Self-discharge. ▶ Excellent Charge retention & recovering ability. ▶ Superior High Rate Discharge. ▶ High Reliability.

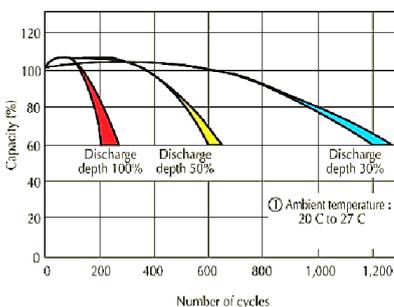
Performance Characteristics confirming to JISC8702

Battery Type	Nominal Voltage (V)	Rated Capacity (Ah) at 27°C						Dimensions (mm)				Weight (Kg) (±5%)
		20 hr 1.75V/ cell	10 hr 1.75V/ cell	3 hr 1.7 V/ cell	1.5 hr 1.7V/ cell	1 hr 1.6V/ cell	30min 1.6V/ cell	Overall Height ±2	Height up to lid top ±2	Length ±1	Width ±1	
EP100-12	12	100	91	75	72	60	50	235.0	235.0	407.0	173.0	32.5

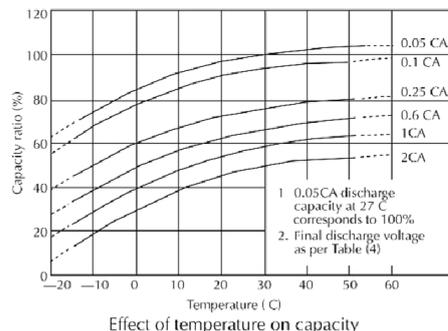
NOTES ON OPERATION

Mode of Operation	Voltage setting per 12V unit for ambience Temp. 20-30 @C	Current setting
FLOAT	13.7V ± 0.1V	Maximum :0.3CA Minimum: 0.1CA
BOOST	14.1V ± 0.1V	
CYCLE	14.7V ± 0.1V	

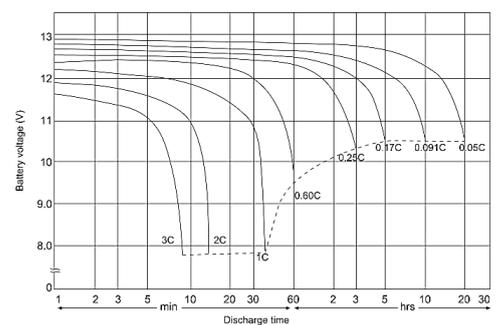
Number of Cycle



Effect of Temp on Capacity



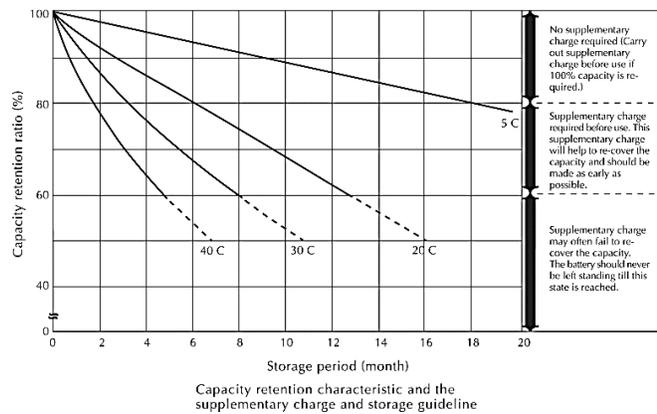
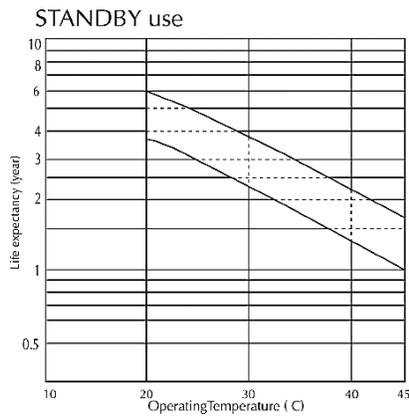
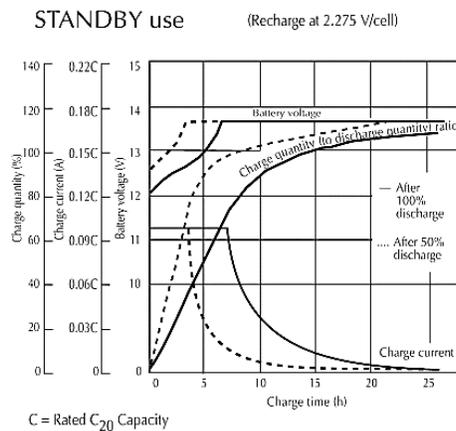
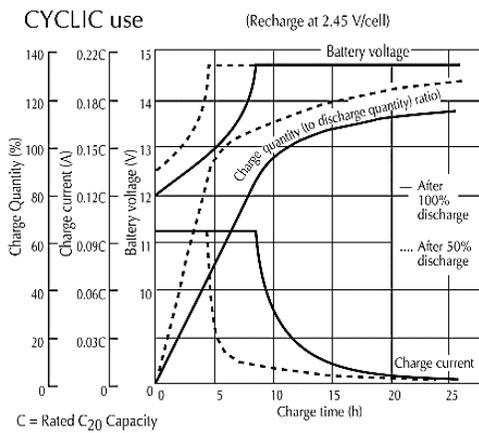
Discharge Characteristics



Constant Power Discharge Rating in Watts per Battery @27°C							
	Ah	5Min	10Min	15Min	20Min	30Min	60Min
Watt/Battery @ 1.60V	100Ah	3834	2569	2015	1618	1207	749
Watt/Battery @ 1.70V		3660	2416	1948	1583	1200	724
Watt/Battery @ 1.80V		3307	2323	1810	1491	1125	682

Discharge Current & Recommended Final Discharge Voltage

Discharge Current (A)	Final Discharge Voltage(V/Cell)
0.2 C > (A) or intermittent discharge	1.75
0.2 C < or = (A) < 0.5 C	1.70
0.5 C < or = (A) < 1.0 C	1.55
1.0 C < or = (A)	1.30



Product Details	
AH Efficiency	>90%
WH Efficiency	>80%
Internal Resistance	6 mΩ Max @ full charge 27°C
Short Circuit Current	2151 Amps
Operating Temperature Range	0°C to 45°C
Self-Discharge/Month @ 27 °C	<3% of Rated Capacity
Recommended period of storage	3 months from the date of manufacturing and to be stored in a covered place at 27 °C
Material of container	PPCP (FR Grade optional)
Type of +ve & -ve plate	Flat Pasted
Recommended Terminal Torque	12.3 N-m

DATA SHEET OF UPS (Complied Mandatory)

To be submitted on bidder letterhead. All compliance to be mentioned with the value being offered in column as applicable. Product Datasheet of offered model needs to be submitted.			
SR. NO.	PARTICULARS	REQUIREMENTS	CONFIRMATION BY BIDDER
1	Technology	IGBT-based APFC (Active Power Factor Correction) rectifier combined with DSP-controlled three-level IGBT inverter, delivering true double-conversion online operation in VFI-SS-111 topology, fully compliant with IEC 62040-3 performance standards, ensuring high reliability, power quality, and protection for mission-critical applications.	
2	Architecture	Module based monolithic UPS with fault tolerant design power modules designed for rapid serviceability, ensuring low Mean Time to Repair (MTTR) and high Mean Time Between Failures (MTBF) for maximum system availability and reliability.	
3	Input Voltage Range	3-Phase, 260 VAC to 480 VAC, suitable for operation under load conditions ranging from 40% to 100% of rated capacity.	
4	Input current harmonics(THDi)	<3% @ full load	
5	Input power factor	≥ 0.99	
6	Input Frequency	50 Hz / 60 Hz nominal, with an operating range of 40 Hz to 70 Hz.	
7	Input Phase Reversal Correction & Protection	UPS should be with Input Phase Sequence auto Correction & protection feature that allow the UPS to function on mains power without going to the battery mode	
8	Soft start	Power Walk-in facility (1-20 secs selectable)	
9	Real-Time Waveform Monitoring	UPS should be designed to provide real-time waveform monitoring, assuring users of reliable power quality and uninterrupted business continuity, by promptly detecting and addressing any power anomalies. If not built-in feature, externally to be provided.	
10	Inbuilt Molded Case Circuit Breaker (MCCB) for Input, output, bypass and manual bypass	Inbuilt MCCBs for input, output, static bypass, and manual bypass circuits, providing enhanced protection, simplified maintenance, and improved operational safety within the UPS system for best in class protection for the connected loads, ensuring safe operation, setting a benchmark in protection and performance standards in critical power applications under overload & short circuit protection	
11	Remote Emergency Power Off	UPS must have Remote Emergency Power Off feature to enhance safety and protection by providing a quick and reliable method to immediately shut down power in emergency situations, enhancing the safety & protection of the UPS and the load.	

12	Degree of protection	UPS enclosure shall provide a minimum protection level of IP20 in accordance with IEC standard	
13	Cable entry	Rear Bottom Entry	
14	Self-Loading Feature	UPS must have self-loading feature for on-site testing of UPS without connecting any physical load for 100% performance checking before connecting the UPS to the actual load.If not inbuilt, load arrangement to be done by bidder for site acceptance testing before original load connection.	
15	Dual Input	UPS should have dual input feature to enhance its adaptability by enabling it to accept power from and switch seamlessly between two independent power sources which maximizes uptime and operational continuity of the UPS	
16	Conformal Coated PCB	UPS should be designed using conformal coated PCBs with protecting critical components from environmental stressors & enhances durability	
17	Output voltage	400V, 3Ph+4W+PE (380V/415Vselectable)	
18	AC output voltage accuracy	±1% in steady-state conditions across the entire load power factor range and DC voltage window, for balanced load	
19	Transient (Dynamic) voltage regulation	±5% peak-to-peak for load steps between 20% and 100%	
20	Transient recovery	UPS shall return to steady-state operating conditions within 20 ms following a load disturbance	
21	Voltage wave form	Sinusoidal	
22	Output Voltage THD	<2% for linear load & <4% for nonlinear load	
23	Phase displacement	120°±1° for balance load 120° ±2° for unbalance load	
24	Nominal frequency	50/60 Hz	
25	Output Power Factor	UPS should have unparalleled operating temperature without deration, delivers Unity Power Factor even at 40 degrees Celsius, for continuous operations under the most demanding conditions i.e. 60KVA/60KW.	
26	Overload Capacity	UPS should have Permitted overload on mains (PF=1.0) with 110% @ 30 mins, 125% @ 10min & 150% @ 1min Bypass Overload >150% percent of UPS output rating for one cycle & 110% for Continuous	
27	Efficiency at rated load	AC ~ AC Efficiency @ 100 % load must be ≥ 94.5%	
28	Crest Factor	Should be 3:1	
29	Inbuilt Automatic Static Bypass	Required as built-in continuous duty full rated automatic bypass	
30	Bypass Synchronization	Synchronization of each inverter in phase and frequency with the bypass source shall be automatic. During transfer, the load shall not suffer an outage or disturbance in the supply of power	

31	Voltage range for static bypass mode	Maximum Voltage: + 20% (optional + 10%, + 15%) & Minimum voltage: - 40% (optional - 10%, - 15%, - 20%, - 30%) in accordance with 400V Nominal	
32	Output Short Circuit	When a UPS output experiences a short circuit, it can be configured to switch to either bypass mode or have no output.	
33	Type of battery & Make	Battery shall be Sealed Lead Acid (SLA), Maintenance-Free VRLA FR Grade type, 12V nominal voltage, suitable for UPS applications. Approved Makes: Exide / Amaron Quanta	
34	Charging mode & End Cell Voltage	UPS shall employ a three-stage advanced charging cycle (boost, float, and equalization) to ensure optimal battery life and performance. The end-of-discharge voltage shall be 1.75 V per cell.	
35	Backup Time	Each individual UPS shall be capable of providing a minimum of 30 minutes backup at minimum of 48kW load. The bidder must submit detailed battery sizing calculations to validate the autonomy requirement. Must be minimum of 100AH x 44Nos	
36	Nominal DC Voltage	UPS shall support variable nominal DC voltage configurations from 432 V to 600 V, allowing operation across a wide range of battery string voltages as per system design requirements.	
37	Cold Start	UPS shall be capable of starting and supplying the connected load directly from the battery bank without the presence of input mains power.	
38	Battery bank accessories	Battery bank shall be installed on a dedicated external MS (mild steel) rack equipped with a battery breaker. All necessary accessories shall be within the vendor's scope, including: Uninyvin copper DC cable of suitable rating (minimum 10 meters) from UPS to battery bank Battery-to-battery interconnection cablesCopper lugs/thimbles on both ends of appropriate rating Dedicated battery breaker for each battery bank.	
39	Parallel Redundancy	UPS system shall support parallel operation of up to six (6) units, enabling scalability of capacity and ensuring N+1 redundancy as required.	
40	LCD Display	UPS shall be equipped with a 7-inch, multi-color, intuitive touchscreen LCD interface for real-time visualization of operating parameters and graphical interpretation of system status. The display shall provide comprehensive event logging with sufficient storage capacity for historical data and alarms.	
41	Display Measurements	Input Voltage R Y B , Input Current R Y B , Input Frequency, Input PF, Bypass Voltage R Y B , Bypass Frequency, Battery Voltage +/- Battery Charge / Discharge Current, Battery status , Battery Temperature (Option), Battery capacity rate % Remaining Backup Time in minutes, Output Voltage R Y B , Output Frequency, Output Current R Y B Output Load in % R Y B, Output Power in KW / KVA / Load %, Warning History , Mimic Power flow Diagram, Configuration settings Event Log : 500 Events Date & time	

42	Protections	Input Over Current, Input Under/ Over Voltage, Output Under/ Over Voltage, Over Temperature, Battery Under/ Over Voltage, Deep Discharge at battery terminals, Output Overload & Short Circuit protections are required in the UPS	
43	Automatic battery load test	UPS shall have a mandatory built-in feature to perform automatic battery load testing at predefined intervals or on-demand, ensuring battery health and reliability	
44	Communication interface	UPS shall be equipped with multiple communication options, including: USB port for local connectivity MODBUS over RS485 for integration with BMS RS232 interface for serial communication Potential-free (dry) contacts for critical alarms and status signaling	
45	ENVIRONMENTAL		
46	Ambient temperature range	UPS shall operate reliably within an ambient temperature range of 0°C to 40°C under specified load and environmental conditions.	
47	Acoustic noise level	UPS shall have a maximum audible noise level of less than 60 dBA, measured at a distance of 1 meter under normal operating conditions.	
48	Operating Humidity	UPS shall operate reliably within a relative humidity range of 20% to 95%, non-condensing.	
49	Storage Temperature	UPS shall be capable of being stored within a temperature range of -20°C to +55°C without degradation of components or performance.	
50	Operating Altitude	UPS shall operate without any performance derating at altitudes up to 1000 meters above mean sea level.	
51	Ventilation	UPS shall utilize forced-air cooling with integrated coaxial fans, ensuring efficient heat dissipation and maintaining optimal operating temperature under all load conditions.	
52	Battery management	UPS shall have integrated battery management features as a standard inbuilt function, ensuring continuous monitoring of battery health, charge/discharge status, and protection against deep discharge or overcharging.	
53	Product Certifications	UPS shall comply with the following international standards and directives: IEC 62040-1 (Safety requirements) IEC 62040-2 (Electromagnetic compatibility) IEC 62040-3 (Performance requirements) RoHS (Restriction of Hazardous Substances) CE (European Conformity) Additionally, REACH certification & PEP certification or its Indian Equivalent Standard certification to be provided. UPS model shall have a valid Type Test Report for the same model, issued by a Third-Party Accredited Laboratory (NABL) or a Government-approved laboratory. All relevant certificates and test reports must be submitted along with the bid.	

54	OEM Certifications	UPS manufacturer (OEM) shall be certified for the following management systems: ISO 9001:2015 – Quality Management Systems – Requirements ISO 14001:2015 – Environmental Management Systems – Requirements ISO 45001:2018 – Occupational Health and Safety Management Systems – Requirements	
55	Electrical Drawing	Bidder shall provide the following detailed drawings as part of the submission: Operational Single Line Diagram (SLD) UPS General Arrangement Drawing (GAD) Battery Bank General Arrangement Drawing (GAD) Proposed Room Layout indicating equipment positioning, clearances, and cable routing	

NOTE

1. The bidders should submit a point wise technical compliance of the offered product against the tendered specifications and the technical brochure evidencing the compliance should be available in the public domain.
2. Enclose copies of the technical brochures of the quoted products, wherever applicable. All required documents and certifications must be submitted by the bidder. The relevant proofs shall be verifiable from the public domain.
3. Do not just write Yes, complied or do not make verbatim copy of the asked specification in entire document. It may lead to rejection of the bid. Attach product data sheet for each of the parameters where ever needed.
4. Bids will be considered non-responsive if the above (1-3) points are not fulfilled.
5. The product will be installed in a shaded, uncovered area; therefore, the proposed item must be compatible with such installation conditions

Dr Nitin Saxena
Room No. 207,
Gate/JEE Building, Second Floor,
Wadhvani School of AI & Intelligent Systems,
Uttar Pradesh, PIN – 208016
Phone Number – 0512-679-6636

***Note: Only hard copy accepted at Bid Submission Address (page # 2).**

➤ **Selection Criteria:**

Phase-I: Technical Evaluation

Technical evaluation will be done based on information/item or product catalogue provided in technical bids submitted by the bidders. A bid containing partial, incomplete, unclear, superfluous and unwanted information will be summarily rejected.

Technical declaration must be supported with relevant documents. Discrepancy in relevant supporting documents and technical compliance sheet shall lead to rejection of technical bids.

Phase-II

- a. Financial bids of technically qualified shall be opened.
- b. Financial evaluation is purely done on the total financial implication.
- c. Financial Bids with any superfluous, unreasonable rates will be summarily rejected.

➤ **Late Delivery:**

Delivery must be completed within the period mentioned in tender document from the date of receipt of the order. Penalty @ 0.5 % per week or part thereof subject to a maximum of 10% of the delivery price will be deducted from the balance payment if supply is not completed within stipulated period.

➤ **Instruction to the bidder of countries which share land border with India (Rule 144(xi) of GFRs, 2017)**

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Department for Promotion of Industry and Internal Trade (DPIIT). Further, any bidder (including bidder from India) having specified Transfer of Technology (ToT) arrangement with any entity from a country which shares a land border with India shall also be required to be registered with the DPIIT.
- II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "Bidder (or entity) from a country which shares a land border with India" for the purpose of this Order means: -
 - a. An entity incorporated, established, or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established, or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established, or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls

under any of the above

IV. The beneficial owner for the purpose of (III) above will be as under:

- 1.** In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation-

- a.** "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company.
 - b.** "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements.
- 2.** In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership or entitlement to more than fifteen percent of capital or profits of the partnership.
 - 3.** In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals.
 - 4.** Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official.
 - 5.** In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

[Note: i. A person who procures and supplies finished goods from an entity from a country which shares a land border with India will, regardless of the nature of his legal or commercial relationship with the producer of the goods, be deemed to be an Agent.

ii. However, a bidder who only procures raw material, components etc. from an entity from a country which shares a land border with India and then manufactures or converts them into other goods will not be treated as an agent.]

VI. In case of tenders for Works contracts, including Turnkey contracts, the successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

VII. The registration shall be valid at the time of submission of bid and at the time of acceptance of bid.

VIII. If the bidder was validly registered at the time of acceptance/placement of order, registration shall not be a relevant consideration during contract execution.

- As per the Ministry of Commerce and Industry Order No. P-45021/2/2017-PP(BE-II) dated 16.09.2020, preference shall be given to Make in India products for which it is mandatory for

bidders to declare Country of Origin of goods and percentage of Local contents in the product.

Definitions:

“Local Content” means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

“Class-I local supplier” means a supplier or service provider, whose goods, services or works offered for procurement, has local content to or more than 50%, as defined under this order.

“Class-II local supplier” means a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%, as defined under this order.

“Margin of purchase preference” means the maximum extent to which the price quoted by a Class-I local supplier may be above the L1 for the purpose of purchase preference. (shall be 20%)

Purchase Preference:

- (a) Subject to the provisions of this Order and to any specific instructions issued by the Nodal Ministry or in pursuance of this Order, purchase preference shall be given to ‘Class-I local supplier’ in procurements undertaken by procuring entities in the manner specified here under.
- (b) In the procurements of goods or works, which are covered by para 3(b) above and which are divisible in nature, the Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:
 - i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is Class local supplier', the contract for full quantity will be awarded to L1.
 - ii. If L1 bid is not a 'Class-I local supplier', 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on the L1 bidder.
- (c) In the procurements of goods or works, which are covered by para 3(b) above and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'Class-1 local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:
 - i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-1 local supplier', the contract will be awarded to L1.
 - ii. If L1 is not 'Class-1 local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to Class-I local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.

- iii. In case such lowest eligible 'Class-1 local supplier' fails to match the L1 price, the 'Class-1 local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-1 local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1 bidder.
- (d) "Class-II local supplier" will not get purchase preference in any procurement undertaken by procuring entities.

(A)

COMMERCIAL TERMS AND CONDITIONS

1. DEFINITIONS

These Commercial Terms and Conditions shall constitute the General Conditions of Contract, where no separate contract is signed with the selected Bidder(s), and, the Bidders by putting their signature and stamp on each page of this Section V are binding themselves to these Terms and Conditions. In the Commercial Terms and Conditions as defined below, words and expressions shall have the following meanings assigned to them:

- a. "Contract" means the agreement of the Parties relating to the procurement of Goods and / or the IITK Purchase Order (PO), and all attachments incorporated by reference, which shall form an integral part of the Contract. In the event of any discrepancy, the documents to prevail shall be given precedence in the following order: (i) the Contract (where separately signed), (ii) the IITK Purchase Order, (iii) its attachments, and (iv) these Commercial Terms and Conditions;
- b. "Contractor" means the person or entity named in the 'CONTRACTOR' named field of the IITK Purchase Order and any agreed in writing by the IITK legal successor(s) in title;
- c. "Day" means any calendar day;
- d. "Delivery Date" means the latest possible date by which the Goods shall be delivered by the Contractor to the IITK, as specified in the 'DELIVERY DATE' named field of the IITK Purchase Order;
- e. "Force Majeure" shall mean any unforeseeable exceptional situation or event beyond the Parties' control which prevents either of them from fulfilling any of their obligations under the Contract, was not attributable to error or negligence on their part (or of their partners, contractors, agents or employees), and could not have been avoided by the exercise of due diligence. Defects in equipment or material or delays in making them available, labour disputes, strikes or financial problems cannot be invoked as Force Majeure by the defaulting Party. Neither of the Parties shall be held liable for breach of its obligations under the Contract if it is prevented from fulfilling them by Force Majeure. The Party invoking Force Majeure shall notify the other without delay, stating the nature, likely duration and foreseeable effect, and take any measure to minimise possible damage;
- f. "Goods" means all of the goods to be supplied to the IITK by the Contractor under the Contract;
- g. "IITK" means the Indian Institute of Technology Kanpur;
- h. "IITK Purchase Order" means the IITK's official Purchase Order document;
(i) "Party" means the IITK or the Contractor and "Parties" means the IITK and the Contractor;
and

(ii) "Place(s) of Delivery" means the location(s) or place(s) where the Goods are to be delivered, as specified in the 'SHIP TO' named field of the IITK Purchase Order.

2. CONCLUSION OF THE CONTRACT

- 2.1. The Contract is made between the IITK and the Contractor. The Contractor is engaged as an independent contractor for the sole purpose of delivering the Goods.
- 2.2. The Contract shall be concluded upon the Contractor duly following the countersigning procedure as stated in the IITK Letter of Intent (LOI).

3. FUNDING

This Contract shall become and remain effective only on the condition that an official Purchase Order is issued by IITK following the conclusion of tender exercise. In the event this is not or no longer shall the case, the IITK without unreasonable delay notify the Contractor thereof.

Any continuation of the Contractor's performance under this Contract after being notified by the IITK shall be at the Contractor's risk and expense.

4. DELIVERY AND TAKE-OVER OF GOODS

The Contractor shall deliver the Goods at the Place(s) of Delivery. On behalf of the IITK, a duly authorised representative(s), shall take-over the Goods upon delivery. Take-over of the Goods by the IITK shall not be deemed acceptance of the Goods by the IITK. The time of delivery as specified in the Contract / PO shall be strictly adhered to, and time shall be of the essence.

5. QUALITY OF GOODS

- 5.1. The Contractor shall deliver Goods that are:
 - a. of the quality, quantity and description as required by the Contract / PO; and
 - b. free from any right or claim of a third party, including rights based on industrial property or other intellectual property.
- 5.2. Should the Goods be of the type "homogeneously defined" or disposable, the Contractor shall provide a sample and undertake, certify, and guarantee that all Goods delivered shall be of the same quality and characteristics as the sample(s) provided.

6. INSPECTION AND ACCEPTANCE

- 6.1. The duly authorised representative(s) of the IITK shall have the right, before payment, to inspect the Goods either at the Contractor's stores, during manufacture, at the ports and/or in places of shipment, or at the Place(s) of Delivery. The Contractor shall provide all facilities for such inspection. The IITK may issue a written waiver of inspection. Any inspection carried out by representative(s) of the IITK or any waiver thereof shall be without prejudice to other provisions of the Contract concerning obligations assumed by the Contractor, including specifications of the Goods.
- 6.2. Upon delivery and inspection of the Goods, the IITK shall inspect the goods as soon as possible and complete the Goods Receiving Document. Should any Goods fail to conform to the technical specifications, codes and standards under the Contract, the IITK may reject the Goods. The Contractor shall, at no cost to the IITK, replace the rejected Goods or, alternatively, rectify the non-conformity.
- 6.3. In the case of Goods ordered on the basis of specifications or samples, the IITK shall have the right to reject the Goods or any part thereof and terminate the Contract if the Goods do not conform to the specifications and/or samples. Nothing in this clause shall in any way release the Contractor from any warranty or other obligations under the Contract.

7. SHIPPING AND INSURANCE

For overseas orders, shipping arrangements shall be co-ordinated by IITK. Original shipping documents including the packing list shall be airtailed/mailed by the Contractor to the (Deputy Registrar (S&P), IIT, Kanpur – 208 016, UP, India).

8. OBSERVANCE OF LAW AND EXPORT LICENCES

The Contractor shall comply with all laws, ordinance, rules and regulations bearing upon the performance of its obligations under the terms of the Contract. If an export licence or any other governmental authorisation is required for the Goods, it shall be the obligation of the Contractor to obtain such licence or governmental authorisation. In the event of the Contractor's failure to obtain such licence or authorisation within a reasonable time, the IITK may immediately terminate the Contract. Where the award procedure or execution of the Contract is vitiated by substantial errors or irregularities or by fraud, the IITK shall suspend execution of the Contract.

Where such errors, irregularities or fraud are attributable to the Contractor, the IITK may also refuse to make payments or may recover monies already paid, in proportion to the seriousness of the errors, irregularities or fraud. The purpose of suspending the Contract shall be to verify whether presumed substantial errors and irregularities or fraud have actually occurred. If they are not confirmed, execution of the Contract shall resume as soon as possible. A substantial error or irregularity shall be any infringement of a contract or regulatory provision of India, resulting from an act or an omission that causes or might cause a financial loss.

9. PRICE

The price of the Goods shall be as stated in the Purchase Order and may not be increased.

10. PAYMENT

- 10.1.** Unless otherwise stipulated in the Purchase Order, the IITK shall make payment within thirty (30) Days of the later of:
 - a.** Successful delivery of the goods to IITK as confirmed by the consignee (Assistant Registrar, Store & Purchase, IIT-Kanpur), endorsed by the indenter and approved by the indenters' Head of Department / Section;
 - b.** Receipt of customary shipping documents and any other documents specified in the Contract; and (c) Receipt of the original invoice issued by the Contractor.
- 10.2.** All invoices shall be in original and shall contain the IITK Purchase Order number, and a description, the quantities, unit and total price(s) of the Goods delivered. The currency of invoice and payment shall be as specified in the Purchase Order. Unless otherwise authorised by the IITK, a separate invoice shall be submitted for each shipment under the Contract / PO. Subject to Clause 11 below ('Tax Exemption'), if applicable, the GST amount shall be separately identified in the invoice.
- 10.3.** Payments shall be made in the currency stated in the Contract / PO, on the basis of the equivalent value of INR on the day of payment and paid directly into the nominated bank account.
- 10.4.** The IITK shall not pay any charge for late payments.

11. TAX EXEMPTION

The Contractor's price shall reflect any tax exemption to which the IITK is entitled. If it is subsequently determined that any taxes that have been included in the price are not required to be paid or if, having been paid, any such taxes are subject to refunding, the IITK shall deduct the amount from the Contract price. Payment of such adjusted amount shall constitute full payment by the IITK. In the event that any taxing authority refuses to recognize the IITK's exemption from taxes, the Contractor shall immediately consult with the IITK to determine a mutually acceptable procedure for settling the applicable amount.

12. WARRANTY

- 12.1.** The Contractor warrants that the Goods furnished under the Contract conform to the technical specifications, description and standards specified in the Contract, and are new and unused, and free from defects in design, workmanship and/or materials.

- 12.2.** The Contractor shall provide a warranty for the Goods for a period of one year from the date of acceptance of the Goods by the IITK, unless the standard manufacturer's warranty period is longer in which case the longer period shall apply.
- 12.3.** In the case of "homogeneously defined" or disposable goods, should any portion of the Goods, at any time, not comply with clause 5.1 or 5.2 herein or otherwise prove to be defective, the Contractor shall, upon written notification from the IITK, replace that portion of the Goods and bear all costs associated with the replacement of same.

13. PACKING

- 13.1.** The Goods shall be packed and marked in a proper manner and in accordance with the Contract and any statutory requirements and any requirements of the carrier(s). In particular, the Goods shall be marked with the IITK Purchase Order number and the net, gross and tare weights, the name of the contents shall be clearly marked on each container and all containers of hazardous goods (and all documents relating thereto) shall bear prominent and adequate warnings.
- 13.2.** The Contractor shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination. The packing shall be sufficient to withstand, without limitation, rough handling during transit. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the final destination and the absence of appropriate handling facilities at all points in transit.
- 13.3.** All packaging materials shall be non-returnable.

14. DEFAULT AND DAMAGES

- 14.1.** If due to reasons attributable to the Contractor, the Contractor fails or refuses to:
- a. deliver any or all of the Goods under the Purchase Order;
 - b. comply with any or all of the terms and conditions set out in the Purchase Order; or
 - c. deliver any or all of the Goods under the Purchase Order on or before the Delivery Date; the IITK may hold the Contractor in default under the Purchase Order.
- 14.2.** When the Contractor is thus in default, the IITK may, by written notice to the Contractor, immediately terminate the Purchase Order in whole or in such part or parts thereof in respect of which the Contractor is in default.
- 14.3.** Alternatively, to clause 14 above when the Contractor is thus in default, the IITK may, at its own discretion, set a reasonable period of time for the Contractor to remedy its default. Any new Delivery Date shall be specified in a written amendment to the Purchase Order, duly countersigned by the Contractor.
- 14.4.** The IITK may, at its discretion, impose penalties upon the Contractor calculated in accordance with clause 15 for each Day the Contractor is late in delivering the Goods past the Delivery Date initially specified in the Purchase Order.
- 14.5.** If the Contractor does not remedy its default within the period of time accorded under clause 16, the IITK may, by written notice to the Contractor, terminate the Purchase Order with immediate effect.
- 14.6.** Upon any termination of the Purchase Order, in whole or such part(s) thereof in respect of which the Contractor is in default, the IITK may engage another contractor to deliver the Goods and recover any difference in price and any additional costs from the Contractor.
- 14.7.** The Contractor shall indemnify the IITK for all losses, charges, costs and expenses, which the IITK may suffer or incur as a result the Contractor's default, including those resulting from engaging another contractor pursuant to this clause 14.

15. PENALTIES

If, in accordance with clause 15, the IITK imposes penalties on the Contractor, such penalties shall amount to One percent (1%) of the total Purchase Order price for each week following the initial Delivery Date specified in the Purchase Order but shall not amount to more than

Ten percent (10%) of the total Purchase Order value. The penalties for the delay may be deducted by IITK from any sum(s) due, or to become due, by the IITK to the Contractor.

16. DELAY NOT ATTRIBUTABLE TO THE CONTRACTOR

If the Contractor is delayed at any time in the delivery of the Goods or fulfilment of any other of the Contractor's obligations by any act or omission of the IITK, or by any of its officials, or by any separate contractor(s) contracted by the IITK, or by changes ordered in the type and/or quantity of the ordered Goods, or the Place(s) of Delivery, or any causes beyond the Contractor's reasonable control, or by any other cause, which the IITK determines may reasonably justify the delay, the Delivery Date of the Goods, or fulfilment of any other of the Contractor's applicable obligations shall be extended for such reasonable period of time as the IITK and the Contractor mutually determine. The set reasonable period of time and any amended delivery date shall be specified in a written amendment to the Contract / PO, duly countersigned by the Contractor.

17. FORCE MAJEURE

As soon as possible after the occurrence of any event constituting Force Majeure, but no later than three (3) Days, the Contractor shall give notice and full particulars in writing to the IITK of the Force Majeure. If the Contractor is thereby rendered unable, wholly or in part, to meet its obligations under the Contract, the IITK may terminate the Contract / PO with immediate effect by providing written notice to the Contractor.

18. INDEMNITY

- 18.1.** The Contractor shall indemnify, hold and save harmless and defend at its own expense the IITK, and all of the foregoing's officials, agents, servants and employees from and against all suits, claims, demands and liability of any nature or kind, including costs and expenses, arising out of acts or omissions of the Contractor or its employees, agents or subcontractors in the performance of the Contract.
- 18.2.** Clause 18 shall include, without limitation, claims and liabilities in the nature of workmen's compensation and claims and liabilities arising out of the use of patented inventions or devices.

19. ASSIGNMENT

- 19.1.** The Contractor shall not assign, transfer, pledge or make other disposition of the Purchase Order or any part thereof or of any of the Contractor's rights, claims or obligations under the Purchase Order except with the express written consent of the IITK. Any assignment made without such consent shall be void and of no effect.
- 19.2.** The Contractor shall not subcontract any of its obligations under the Contract / PO without the express written consent of the IITK. The IITK may require the Contractor to furnish particulars of the proposed subcontract as the IITK deems necessary.
- 19.3.** The IITK's approval of any subcontracting shall not relieve the Contractor from any liability or obligation under the Contract. In any subcontract, the Contractor agrees to bind the subcontractor by the same terms and conditions by which the Contractor is bound under the Contract / PO.

20. INSOLVENCY AND BANKRUPTCY

- 20.1.** Should the Contractor become insolvent or should control of the Contractor change by virtue of insolvency, the IITK may with immediate effect and without prejudice to any other right or remedy available to it, suspend the performance of the Contractor's obligations or terminate the Purchase Order with immediate effect, by providing the Contractor with written notice thereof.

20.2. Should the Contractor be adjudged bankrupt, or should the Contractor make a general assignment for the benefit of its creditors, or should a receiver be appointed on account of the Contractor's insolvency, the IITK may, without prejudice to any other right or remedy available to it, terminate the Purchase Order with immediate effect by providing the Contractor with written notice thereof.

21. TERMINATION

21.1. The IITK shall have the right to terminate the Purchase Order or any of the provisions thereof at any time by serving a three days' notice to the Contractor.

22. WAIVER

A waiver of any breach of or default under the Contract / PO shall not constitute a waiver of any other breach or default and shall not affect the other terms of the Contract / PO. The rights and remedies provided by the Purchase Order are cumulative and are not exclusive of any other rights or remedies.

23. ADVERTISING

The Contractor shall not advertise or otherwise make public the fact that it is a contractor to the IITK. The Contractor shall not in any way use the name, emblem, logo, official seal, or any abbreviation of the IITK.

24. DISCRETION AND CONFIDENTIALITY

The Contractor is required to exercise the utmost discretion in all matters relating to the Contract / Purchase Order. Unless required in connection with the performance of the Purchase Order or expressly authorised in writing by the IITK, the Contractor shall not disclose at any time to any third party any information which has not been made public and which is known to the Contractor by reason of its association with the IITK. The Contractor shall not, at any time, use such information to any private advantage. These obligations do not lapse upon any completion, expiration, cancellation or termination of the Contract / PO.

25. NOTICES

Any notice given in connection with the Contract shall be given in English and in writing and shall be deemed to be validly given if sent by registered mail or by fax or by email to the other Party at the following:

- a. for the IITK: the contact details set out in the 'IITK BUYER' name field of the Purchase Order; and
- b. for the Contractor: the contact details set out in the 'CONTRACTOR' named field of the IITK Contract/Purchase Order.

26. STAFF MEMBERS NOT TO BENEFIT

The Contractor shall not grant to any official of the IITK any direct or indirect benefit or preferential treatment on the basis of the Purchase Order or the award thereof. Any breach of this provision shall constitute a fundamental breach of the Purchase Order.

27. GOVERNING LAW

The Contract shall be governed by and construed in accordance with the substantive laws of the Republic of India.

28. SETTLEMENT OF DISPUTES

28.1. The Parties shall use their best efforts to negotiate and amicably settle any disputes, controversies or claims arising out of, or in connection with, the Contract / Purchase Order or its interpretation.

28.2. If the Parties fail to settle the dispute amicably within thirty (30) Days of commencement of the negotiations, the dispute shall be settled through arbitration. One (1) sole arbitrator shall be appointed by the Director of IITK who shall have full powers to make final and binding decisions subject to prevailing laws of India. The appointing authority shall be the Director of IITK. The place of arbitration shall be Kanpur and the language used in the arbitration proceedings shall be English.

29. PRIVILEGES AND IMMUNITIES

No provision of the Contract / Purchase Order shall be deemed, or interpreted as, a waiver of the privileges and immunities enjoyed by the IITK.

30. AMENDMENTS

No modification, amendment or change to the Contract/Purchase Order, or waiver of any of its provisions, or any additional contractual relationship with the Contractor shall be valid unless approved in the form of a written amendment to the Contract/Purchase Order, signed by a fully authorised representative of each Party.

31. VALIDITY

The invalidity in whole or part of any condition of the Contract / Purchase Order or clause thereof shall not affect the validity of the remainder of such condition or clause.

32. ENTIRE AGREEMENT

The Contract / Purchase Order constitute the entire agreement and understanding of the Parties and supersede any previous agreement, whether orally or in writing, between the Parties relating to the subject matter of the Contract.

33. GOVERNING LANGUAGE

The Contract / Purchase Order shall be executed in the English language which shall be the binding and controlling language for all matters relating to the meaning and interpretation of the Contract / Purchase Order.

TENDER ACCEPTANCE LETTER
(To be given on Company Letter Head)

Date: _____

To,
The Officer-in-charge
R&D Office
IIT Kanpur-208016

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work: -

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely: _____ as per your advertisement, given in the above mentioned website(s).
2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc .), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/ organisation too have also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. I / We do hereby declare that our Firm has not been blacklisted/ debarred/ terminated/ banned by any Govt. Department/Public sector undertaking.
6. I / We certify that all information furnished by our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organisation shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,
(Signature of the Bidder, with Official Seal)

Certificate for Tender
(To be given on Company Letter Head)

Date: _____

To,
The Officer-in-charge
R&D Office
IIT Kanpur-208016

Sub: Certificate of compliance as per Rule 144 (xi) GFR's 2017

Tender Reference No: _____

Name of Tender / Work: -

1. "I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

2. "I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all the requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Yours Faithfully,
(Signature of the Bidder, with Official Seal)

Declaration for Local Content

(To be given on Company Letter Head - For tender value below Rs.10 Crores)

(To be given by Statutory Auditor/Cost Auditor/Cost Accountant/CA for tender value above Rs.10 Crores)

Date: _____

To,
The Officer-in-charge
R&D Office
IIT Kanpur-208016

Sub: Declaration of Local content

Tender Reference No: _____

Name of Tender / Work: - _____

1. Country of Origin of Goods being offered: _____
2. We hereby declare that items offered has _____% local content.
3. Details of location(s) at which the local value addition is made: _____

“Local Content” means the amount of value added in India which shall, be the total value of the item being offered minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.

*“*False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.”*

**Yours Faithfully,
(Signature of the Bidder, with Official Seal)**

FINANCIAL INFORMATION
(On the letter head of CA)

Tender No: _____ dated: _____

Item Name: _____

Bidder's/Firm's Name: _____

Address and Contact No: _____

PAN No.: _____, GST No: _____

Details to be furnished duly supported by figures in the Balance Sheet/ Profit & Loss Account for the last three preceding years (Financial years) duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (copies to be attached).

Sl. No.	Details	Year ending 31 st March		
		FY 2021-22	FY 2022-23	FY 2023-24
01	Gross annual turnover			
02	Profit (+)/ Loss (-)			

1. Income Tax Return
2. Audited Account of the company for last three years

This is to certify that to the best of my knowledge and belief, the aforesaid facts and figures are correct and in conformity with the books of accounts of the establishment.

Dated:

Signature of Chartered Accountant
with seal and membership number

Bidder's Details
(On the letter head of the Bidder)

1	Name of the Firm/ Company		
2	Offered Product Name, Make and Model		
3	Name and Designation of Authorised Signatory		
4	Office Address of the Firm / Communication Address:		
5	Phone No/Mobile No:		
6	E-Mail ID:		
7	GST registration Number:		
8	PAN Number:		
9	Firm's Bank Account details	Bank Account No.:	
		Name of the Bank:	
		IFS Code No.:	
		Name of Branch:	
Particular Details of the Bidders Representative			
10	Contact Person: Mobile No:	Name of Person:	
		Designation:	
		Tele/Mobile No:	
		Email ID:	

Authorized Signatory (signature in full):

Name and Title of Signatory:

Company Rubber Stamp: