

**ASSAM ENGINEERING COLLEGE
JALUKBARI, GUWAHATI-781013
ASSAM**

Tel:-03612570550

Ref: AEC / NEQIP /2017-18/003/MED/1696

Date: 23-03- 17

**NOTICE INVITING TENDER (NIT)
FOR SUPPLY & INSTALLATION OF MACHINES, TOOLS & EQUIPMENT TO
ASSAM ENGINEERING COLLEGE UNDER NEQIP PROGRAM**

The Principal, Assam Engineering College invites quotation for supply & installation of Machines, Equipments & Tools, **ON TURNKEY BASIS**, as per details at **ANNEXURE-IV**, in **Two Bids** to reach the undersigned on or before 05-04-2017.

Sl No.	Reference No.	Items	Qty	EMD (Rs.) in the form of DD	Tender Document Fee (Rs.) in the form of DD only.
01.	AEC/NEQIP/2017-18/003/MED/1696	Supply & Installation of Machines, Tools & Equipments on turnkey basis to be installed at MED, Assam Engineering College, Jalukbari, Guwahati, Assam	One Package	50,000.00	1000.00

1). Last date & Time for Submission: 05-04-17 (14.00 HRS)

(2). Date/Time for Opening of Tech. Bids: 06-04-17 (13.30 HRS)

After evaluation of technical bids, financial bids of the successful bidders, will be opened on a later date which will be notified in the Institute website. Venue of Bid Opening at Assam Engineering College, Jalukbari, Guwahati, Assam

BID INSTRUCTIONS:

- 01.** Quotations will have to be submitted in TWO Bids. The address of the firm submitting the quotation and the officer to whom the quotation is addressed must appear distinctly on sealed covers. Further, on sealed cover, the following are to be written:
QUOTATION FOR SUPPLY & INSTALLATION OF MACHINES, TOOLS & EQUIPMENTS ON TURNKEY BASIS TO ASSAM ENGINEERING COLLEGE UNDER NEQIP PROGRAM .
NIQ REF NO. AEC / NEQIP /2017-18/003/MED/ , Dt.23-03-17
- 02 Submission of Compliance Certificate:** Duly filled and signed Compliance Certificates (as per formats at **Annexure-I(A & B)** are must with the Technical bid.
- 03. Bid not transferable:** The bid documents are not transferable and the seal and signature of the authorized official of the firm's must appear on all the papers and envelopes submitted.

QUALIFICATION REQUIREMENTS

- 1.** The Bidder should be a firm of reputation having sufficient expertise and experience in the subject tender with sound warranty / service support capability and authorization from manufacturers.
- 2.** The Bidder has to quote for all the items in the NIT. Bidders who do not quote for all the items are subject to be disqualified.
- 3.** The Bidder should have experience of executing at least One Purchase Order of equipments/machines etc of value of Rupee Twenty Five Lacs (INR 25, 00,000.00) or higher within the last 3 Years from any IIT /NITs/ Govt. Institutions of North East Region of India.
- 4.** Free trainers' training on the supplied machines & equipments will have to be arranged by the suppliers/ manufacturers through concerned experts.

NIT TERMS & CONDITIONS:

01. **Rates:** Rates quoted in the **Price Bid** should be on **DOOR DELIVERY AEC, Guwahati basis, including installation and commissioning if necessary**, as per details below:

Sl. No.	Particulars	Rate
I	Basic Price (INR ,per unit)	
	Total(INR)	
	Taxes(pl. give break up)	
	Grand Total for the item up to AEC Premises including installation and commissioning in all respect.	

Bidders shall indicate their rates in clear/visible figures as well as in words and shall not alter/overwrite/make cutting in the quotation. In case of a mismatch, the rates written in words will prevail.

02. **Validity of Quotation:** Quoted rates must be valid for **90 days** from the date of quotation.

03. **Warranty:** The quoted equipment and components must be warranted for a minimum of one Year or period specified against the item.

04. **Literature a must:** All the quotations must be supported by the printed technical leaflet/literature and the specifications mentioned in the quotation must be reflected/ supported by such printed technical leaflet/literature. The model and specifications quoted should **invariably be highlighted** in the leaflet/literature for easy reference.

05. **After Sales Service: The Bidder** should clearly state the available nearest after sales & service address in Assam, without which the offer will be rejected. **Supporting Documentary evidence should be provided along with the Technical bid.**

06. **Dealership Certificate:** Dealers or Agents quoting on behalf of Manufacturer must enclose valid dealership certificate for the Machines & Furniture's.

07. **Earnest Money:**

Refundable earnest money deposit (EMD) of Rs 50,000.00 (Rupees Fifty Thousand only) through demand draft drawn in favour of “The Principal, Assam, Engineering College”, payable at Guwahati, will have to accompany the technical Bid. The EMD of unsuccessful bidders shall be returned after award of contract. EMD of the successful bidder will be

released on submission of the Performance. Offers received without Earnest Money or valid Certificate shall be summarily rejected.

08. **Performance Bank Guarantee (PBG):** In case of items with order value of Rupees five lakhs (INR 5,00,000/-) and above, the successful bidder shall furnish an unconditional PBG (as per format at **Annexure II**) for 5% of the Purchase Order value from a scheduled Bank of India, after receiving the purchase order. Where the PBG is obtained by a foreign bank, it shall be got confirmed by a Schedule Indian bank and shall be governed by Indian Laws and be subject to the jurisdiction of courts at Guwahati. The PBG shall guarantee that,

- (a) The Vendor guarantees satisfactory operation of the Equipment & components against poor workmanship, bad quality of materials used, faulty designs and poor performance.
- (b) The Vendor shall, at his own cost, rectify the defects/replace the items supplied, for defects identified during the period of guarantee.
- (c) This guarantee shall be operative from the date of installation till 60 days after the warranty period.

09. **Delivery:**

- a) **Time Limit:** Maximum within 6 Weeks from the date of issue of this supply order.
- b) **Safe Delivery:** All aspects of safe delivery shall be the exclusive responsibility of the vendor. At the destination site, the package will be opened only in the presence of AEC user/representative and vendor's representative. The intact condition of the package and the seal/indicators for not being tampered with shall form the basis for certifying the receipt in good condition.
- c) **Insurance:** The supplier is to establish 'All Risk Transit Insurance' coverage till door delivery at AEC, Guwahati, Assam.
- d) **Part Delivery:** Acceptance of part delivery shall be a prerogative of the institute.

10. **Conditional tenders not acceptable:** All the terms and conditions mentioned herein must be strictly adhered to by all the vendors. Conditional tenders shall not be accepted on any ground and shall be rejected straightway. Conditions mentioned in the tender bids submitted by vendors will not be binding on Assam Engineering College, Guwahati.

11. **Road Permit:** Assam Engineering College will not provide any Road Permit to the Vendors.

12. **VAT deduction at source:** In case of suppliers within Assam, VAT deduction at source, as per order/ notifications of the Govt. of Assam will be applicable.

13. **Late and delayed tender:** Late and delayed tender will not be considered. In case any unscheduled holiday occurs on the prescribed closing/opening date the next working day shall be the prescribed date of closing/opening.

14. Payment:

(a) 100% payment within 30(thirty) days from date of delivery, installation, commissioning and acceptance.

15. Enquiry during the course of evaluation not allowed: No enquiry from the bidder(s) shall be entertained during the course of evaluation of the tender till final decision is conveyed to the successful bidder(s). However, the Purchase Committee or its authorized representative may make enquiries/seek clarification from the bidders. In such a case, the bidder must extend full co-operation. The bidders may also be asked to arrange demonstration of the offered items, in a short period of notice.

16. The acceptance of the quotation will rest solely with the Principal, AEC, who in the interest of the Institute is not bound to accept the lowest quotation and reserves the right to himself to reject or partially accept any or all the quotations received without assigning any reasons. The number of items to be included in the supply order will be also rest solely with the principal, AEC.

17. Force Majeure:

If the performance of the obligation of either party is rendered commercially impossible by any of the events hereafter mentioned that party shall be under no obligation to perform the agreement under order after giving notice of 15 days from the date of such an event in writing to the other party, and the events referred to are as follows:

- i. Any law, statute or ordinance, order action or regulations of the Government of India,
- ii. Any kind of natural disaster, and
- iii. Strikes, acts of the Public enemy, war, insurrections, riots, lockouts, sabotage.

18. Applicable Law:

- (a) The contract shall be governed by the laws and procedures established by Govt. of India and subject to exclusive jurisdiction of Competent Court and Forum in Guwahati/Assam.
- (b) Any dispute arising out of this purchase shall be referred to The Principal, Assam Engineering College, Guwahati, Assam and if either of the parties hereto is dissatisfied with the decision, the dispute shall be referred to the decision of an arbitrator, who should be acceptable to both the parties, to be appointed by the Head of the Institute. The decision of such arbitrator shall be final and binding on both the parties.

**Principal,
Assam engineering College,
Guwahati 781013**

Encl.: ANNEXURE-I, ANNEXURE-II, ANNEXURE-III & ANNEXURE-IV

Annexure -I

A. COMPLIANCE CERTIFICATE FOR NIT TERMS
(To be enclosed in the Technical bid)

Sl. No.	NIT Terms and Conditions	Yes/No
01	Rate quoted as per instruction	
02	Validity of quoted rate for 90 days agreed	
03	EMD submitted (appropriate certificate enclosed)	
04	PBG term agreed	
05	Payment term agreed	
06	Delivery terms agreed	
07	Warranty period agreed	
08	Literature: Printed Literature provided	
09	Dealership / distributorship certificate (in case of dealers/agents) provided	
10	Sales Service: address of after Sales Service centre	
11	Applicable law terms agreed	

Signature with Seal:.....

Vendor: M/s.....

B. COMPLIANCE CERTIFICATE FOR SPECIFICATIONS
(One for each item must to be enclosed in the Technical bid)

Item Sl. No.	Specifications as per Annexure-IV	Quoted Item Specs.*	Complied (Yes/No)

Signature with Seal:.....

Vendor: M/s.....

*** Vendor must quote the parameter specification of the quoted product in this column and not just copy the specification from the tender call document. Failure to do so will lead to rejection of the tender.**

Annexure -II
PERFORMANCE BANK GUARANTEE

To:

The Principal , Assam Engineering College,
Guwahati, Assam

WHEREAS (Name of Supplier)
hereinafter called "the Supplier" has undertaken, in pursuance of Contract No.....
dated,..... 20.. to supply..... (Description of Goods
and Services) hereinafter called "the order".

AND WHEREAS it has been stipulated by you in the said order that the Supplier shall furnish
you with a Bank Guarantee by a recognized bank for the sum specified therein as security for
compliance with the Supplier's performance obligations in accordance with the order.

AND WHEREAS we have agreed to give the Supplier a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of
the Supplier, up to a total of (Amount of the
Guarantee in Words and Figures) and we undertake to pay you, upon your first written demand
declaring the Supplier to be in default under the order and without cavil or argument, any sum or
sums within the limit of (Amount of Guarantee) as aforesaid, without your
needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until theday of.....20.....

Signature and Seal of Guarantors

.....
.....
.....

Date.....20....

Address:.....

.....
.....

All correspondence with reference to this guarantee shall be made at the following address:

The Principal , Assam Engineering College, Guwahati, Assam

Annexure -III

MANUFACTURERS' AUTHORIZATION FORM

No.

Dated _____

The Principal , Assam Engineering College,
Guwahati, Assam

Dear Sir,

We..... who are established and
reputable
manufacturers ofhaving
factories at-----

(address of factory) do hereby certify
that.....

.....(Name of the Authorized Dealer)is our authorized dealer to quote
against your tender enquiry no

.....
.. ,Last Date of Submission is:

Yours faithfully,
(Name)
(Name of manufacturers)

ANNEXURE -IV
LIST OF MACHINE,TOOLS & EQUIPMENTS


Sl. No.	Technical Specification of the Equipments	Qty
1	<p>Compressed Air Counter The compressed air counters are designed for the measurement, monitoring and recording of compressed air consumption, and therefore also for the determination of leakages in compressed air systems</p> <ul style="list-style-type: none"> ➤ Measurement of norm volume flow in the measuring range 0.75 to 225 m3/h; consumption quantity in m3; media temperature in °C ➤ Highest flexibility different signal outputs: <ul style="list-style-type: none"> - Analog output 4 to 20 mA (4-wire) - Pulse output - 2 switch outputs (parameterizable: consumption or volume flow-dependent, opener, closer, hysteresis, window) ➤ Built-in totalizer, even without additional analysis unit ➤ Operating menu with LED display ➤ Selectable units: m3/h; m3/min; m3 ➤ Measuring range: 0.75 to 225 m3/h ➤ Sensor: Thermal, glass-coated ceramic sensor (calorimetric measurement procedure) ➤ Response time: <0.1 sec ➤ Temperature measuring range: 0 to +60 °C / 32 °F to +140 °F ➤ Output type: 4 to 20 mA (4-wire) ➤ Voltage supply: 19 to 30 V DC ➤ Current consumption: <100 mA ➤ Pipe diameter: DN 25 (for 1" pipes) ➤ Protection class: IP 65/III ➤ Media contact: Materials stainless or galvanized steel, PEEK, polyester, Viton, anodized aluminium ceramic ➤ Connection cable 5m length for Compressed air counter ➤ Warranty: 2 years 	01
2.	<p>Thermo Hygrometer humidity/temperature measuring instrument, incl. plug-in humidity probe head, battery and calibration certificate. Measuring Range : -10 to +60 °C / 0 to +100 %RH, Accuracy : ±0.5 °C / ±2.5 %RH (+5 to +95 %RH)Resolution : 0.1 °C / 0.1 %RH Features:-</p> <ul style="list-style-type: none"> ➤ Display of temperature and relative humidity / Wet Bulb temperature / dewpoint ➤ Min./max. values ➤ Hold-button for fixing measurement value ➤ Display illumination ➤ Auto-off function ➤ Warranty: 2 years ➤ Battery type: 9V block battery, ➤ Long-term stable and compact ➤ 	01

3.	<p>Anemometer Vane anemometer with telescope (max. 890 mm) incl. battery and calibration certificate.</p> <p>Features:-</p> <ul style="list-style-type: none"> ➤ Direct display of volume flow ➤ Point and timed mean value calculation ➤ Max./min. values ➤ Hold button for freezing measurement value ➤ Display illumination ➤ Auto-off function <p>Technical Specification:-</p> <ul style="list-style-type: none"> ➤ Measuring range: 0.6 m/s to 40 m/s ➤ Accuracy: $\pm(0.2 \text{ m/s} + 1.5\% \text{ of m.v.})$ ➤ Resolution: 0.1 m/s ➤ Operating temperature: -20 to +50 °C ➤ Storage temperature: -40 to +70 °C ➤ Battery type: 9V block battery ➤ Battery life: 80 h ➤ Dimensions: 182 x 64 x 40 mm ➤ Weight: 325 g ➤ Housing material: ABS ➤ Warranty: 2 years 	01
4.	<p>Air Capture Hood Air capture hood with body, 610 x 610 mm flow hood, 5 x tension rods, USB cable, batteries, trolley & calibration certificate.</p> <p>Features:-</p> <ul style="list-style-type: none"> ➤ Less than 2.9 kg weight ➤ Flow straightener for more precise measurement at swirl outlets ➤ Removable and tiltable measuring instrument with a large display ➤ App integration via Bluetooth for fast and easy monitoring and reporting on site ➤ Measuring range for volume flow: 40 to 4000 m³/h ➤ Measuring range for Capacitive humidity sensor: 0 to 100 %RH ➤ Measuring range for Differential pressure sensor: 0 to 120 Pa ➤ Stable, wheeled tripod with central fitting for secure working at high ceiling outlets ➤ Pitot tube, 350 mm long, Ø 7 mm, stainless steel, for measuring flow velocity, measuring range: 1 to 100 m/s, Operating temperature: 0 to +600 °C, Pitot tube factor: 1.0 ➤ Connection hose; silicone; length 5 m; max. load 700 hPa (mbar) ➤ Warranty: 2 years 	01
5.	<p>Gas leak detector</p> <ul style="list-style-type: none"> ➤ The gas leak detector with integrated pump for fast check measurements. ➤ Electronic gas leak detector with flexible measurement probe, mains charger and earphones. ➤ Measuring Range: 10 ppm to 4.0 Vol. % CH₄ 10 ppm to 1.9 Vol. % C₃H₈ 10 ppm to 4.0 Vol. % H₂. ➤ Optical and audible alarm with bar display for increasing and dangerous gas concentrations ➤ Display: 18 segment bar display 	01

	<ul style="list-style-type: none"> ➤ Battery type: NiMH battery ➤ Storage temperature -25 to +60 °C ➤ Oper. humidity 20 to 80 %RH ➤ Operating temperature -5 to +50 °C ➤ Warranty: 2 years 	
6.	<p>Data logger Mini Data logger Temperature and Humidity Mini data logger set, 2-channel, incl. USB interface for programming and reading out the logger, software, wall bracket, battery (2 x CR 2032 lithium) and calibration certificate, Features:</p> <ul style="list-style-type: none"> • Long-term stable humidity sensor • High data security • Large display • Display of current temperature or humidity values • Measurement data store for 16,000 measurement values • Fast data analysis and documentation on a PC <p>Technical Specification: <u>Temperature</u></p> <ul style="list-style-type: none"> ❖ Sensor type: NTC ❖ Meas. Range: -20 to +70 °C ❖ Accuracy ±1 digit: ±0.5 °C (-20 to +70 °C) ❖ Resolution: 0.1 °C <p><u>Humidity</u></p> <ul style="list-style-type: none"> ❖ Sensor type: Testo humid. sensor, cap. ❖ Meas. Range: 0 to 100 %RH ❖ Accuracy ±1 digit: ±3 %RH (2 to 98 %RH) ❖ Resolution: 0.1 %RH <p><u>General technical data</u> Channels: 2 x internal Battery type: 2 lithium batteries (CR2032) Battery life: 1 year (15 min measuring cycle, +25 °C) Oper. temp.: -20 to +70 °C Storage temp.: -40 to +70 °C Dimensions: 60 x 38 x 18,5 mm Protection class: IP20 Measuring rate: 1 min - 24 h Memory: 16.000 readings</p>	01
7.	<p>Electronic manifolds for refrigeration Digital manifold for refrigeration systems and heat pumps; incl. batteries and Calibration certificate. Features:-</p> <ul style="list-style-type: none"> ➤ Calculation of superheating/sub cooling in real time with up to two external temperature probes ➤ 2-way valve block with three connections, three hose parkers and sight glass ➤ 60 common refrigerants stored in the instrument ➤ Display illumination for better legibility in dark surroundings ➤ Battery life: 250 hours' battery life ➤ Measuring range: -50 to T150°C ➤ Warranty: 2 years 	01

8.	<p>Infrared Thermometer Infrared thermometer with 2 point laser sighting, adjustable limit values, alarm function and connection of external probes. Measuring Range : -30 to +400°C Accuracy : ±1.5 °C or ±1.5% of mv ±1 digit (+0.1 to +400 °C) ±2 °C or ±2% of mv (-30 to 0 °C) The larger value applies Resolution : 0.5 °C Features:-</p> <ul style="list-style-type: none"> ➤ Laser measurement point marker and large optics for exact measurement even at greater distances ➤ Fast recording of measurement values at two measurements per second ➤ Adjustable emissivity ➤ Two adjustable alarm limit values ➤ Hold function and display of min./max. values ➤ Spot ratio: 12:1 ➤ Warranty: 2 years 	01
9.	Assembly of evaporator, condenser, compressor & expansion valve	04
10.	Tool kit for Maintenance, repairing and supervision of air conditioning and refrigeration unit (Tube Cutter, flaring tool, swaging tool, brazing torch , copper tube bender, adjustable wrench, flat edge screw driver ,allen wrench, long nose plier, slip joint plier, electric plier, pipe wrench, socket wrench set, nut drivers, box wrench, flat file , round file , Carpenter's Saw, Tape measure, Hack Saw, Electric Drill Gun, Bench Vise, Yoke Vise, Gauge Manifold, refrigerant recovery cylinder, blower, power circuit board, oxygen and acetylene gas cylinder, refrigerant recovery unit)	01
11	Dehumidifier and humidifier(each of capacity for 1000 sqft area)	01
12	<p>Clamp meter TRMS Digital Clamp Meter, including batteries and 1 set of measuring cables. Features:-</p> <ul style="list-style-type: none"> ➤ Unique grab mechanism makes it easier to work at tight measuring points ➤ Auto AC/DC for current and voltage ➤ Large two-line display ➤ True root mean square measurement - TRMS ➤ With additional functions, such as starting current, power and µA measurement ➤ Power measurement, continuity testing, diode testing, inrush current measurement. <p>Technical Specification:-</p> <ul style="list-style-type: none"> ➤ Voltage measuring range: 1 mV to 600 V AC/DC ➤ Current measuring range: 0.1 to 600 A AC/DC ➤ µA measuring range: 0.1 to 400 µA AC/DC ➤ Resistance measuring range: 0.1 Ω to 60 MΩ ➤ Capacitance measuring range: 0.001 µF to 60,000 µF ➤ Display (counts): 6,000 ➤ Measurement category: CAT IV 600 V, CAT III 1,000 V ➤ Operating temperature: -10 to +50 °C ➤ Warranty 2 years ➤ Authorizations TUV, CSA, CE <p>Standards EN 61326-1, EN 61140</p>	01
13	Non contact voltage tester	01

	<p>Non-contact voltage tester including batteries. Voltage range: 12 to 1,000 V AC Measurement category: CAT IV 600 V, CAT III 1,000 V, Protection class: IP67, Authorizations: CSA, CE Standards: EN 61326-1, EN 61010-1 Features:-</p> <ul style="list-style-type: none"> ➤ Filter for high-frequency interference signals ➤ Adjustable sensitivity ➤ Visual and acoustic signal ➤ Waterproof and dustproof according to IP 67 ➤ Measuring point illumination 	
14	<p>Non contact tachometer Non contact tachometer Including Calibration certificate, Protective Cap, Wrist strap, Belt holder, Batteries, Measuring range : 100 ... 29,999 rpm, Measuring range: 100 ... 29,999 rpm, Measuring rate : 0.5 sec. Features:-</p> <ul style="list-style-type: none"> ➤ Optical rpm measurement with LED measurement spot ➤ marking ➤ Min./max. values ➤ Display illumination ➤ Protective cap for safe storage ➤ Incl. wrist strap and belt holder ➤ Battery type: 2 AAA micro batteries ➤ Protection class: IP40 ➤ Warranty: 2 years 	01
15.	<p>Glass Tube Rotameter: Measurable flow rates - Water (20 °C) : 0.002 l/h to 630 l/h - Air (20 °C; 1 bar abs.): 0.2 l/h to 6 300 l/h Power supply : 4.5 V to 15 V DC Consumption : acc. DIN EN 60947-5-6 (NAMUR) For float below ring sensor : < 1mA above ring sensor : > 2.2 mA Temperature range : -25°C to +65°C</p>	01
16	Heat recovery wheel (Capacity of 2.5 CMM)	01
17	Evaporative cooling pads (Thickness 100mm-300mm) of different materials)	04
18	HVAC Energy simulation Software	01
19	<p>High pressure gauge High-pressure gauge operated with smartphone, incl. batteries. Features:-</p> <ul style="list-style-type: none"> ➤ Measurement of high and low pressure ➤ Fast and easy installation at a pressure connection ➤ Measurement data analyzed and sent via App ➤ Space-saving and easy to transport <p>General technical data:-</p> <ul style="list-style-type: none"> ➤ Storage temperature -20 to +60 °C ➤ Operating temperature -20 to +50 °C ➤ Battery type 3 micro batteries AAA ➤ Battery life 150 hrs ➤ Measurable media CFC, HFC, HCFC, N, H2O, CO2 ➤ Dimensions 125 x 32 x 31 mm ➤ Warranty 2 years ➤ Measuring range: -1 to 60 bar ➤ Accuracy(±1 digit): 0.5 % of final value ➤ Resolution: 0.01 bar 	01

20		01
	<p>Environmental Perimeter Air Monitor</p> <p>Technical Specifications:</p> <ol style="list-style-type: none"> 1. Operation 4-key splash-proof membrane switch 2. Power 12-V Absorption Glass Mat (AGM) rechargeable battery, 3. 100-240 V AC, or optional solar panel 4. Display Measurements Max, Min, TWA, STEL 5. Recording Time 1 sec to 21 weeks 6. Sampling Rate 1 sec, 1 min, 10 min, 1 hr, adjustable 7. Data Storage 454,545 data points 8. Sampling Pump 1.0 to 3.0 L/min 9. Digital Output RS-232 (PC), RS-423 (Mac) 10. Software PC or Mac 11. Dimensions (weather-proof case) 6 x 14 x 10 in (15.2 x 35.6 x 25.4 cm) 12. Weight 12 lbs (5.4 kg) 13. Operating Temperature -4 to 140 F (-20 to 60 C) 14. Storage Temperature -40 to 140 F (-40 to 60 C) 15. Humidity 95% non-condensing (use inlet heater) 16. Wireless Radio Modem 900 MHz (U.S.), 868 MHz (Euro) up to 17. 5 miles - line of sight (<i>optional</i>) 18. Auxiliary Analog Input 0 to 2.5 VDC (1 channel for alternative meter) <p>The following Gas Sensors should be Connected with the System :</p> <ul style="list-style-type: none"> ■ Ammonia (EC) ■ Carbon Dioxide (NDIR) ■ Carbon Monoxide (EC)(0-10ppm) ■ Chlorine (EC) ■ Hydrocarbon (methane-specific, EC) ■ Hydrocarbons (EC) ■ Hydrogen Cyanide (EC) ■ Hydrogen Sulfide (EC) ■ Nitric Oxide (EC) ■ Nitrogen Dioxide (0-5ppm) ■ Oxygen ■ Ozone ■ Sulfur Dioxide ■ Rain ■ Solar Radiance ■ Sound and Noise ■ Atomic Radiation ■ ELF Radiation ■ Barometric Pressure ■ Dew Point Temperature ■ Wet Bulb Temperature <p>ADDITIONAL ACCESSORIES:</p>	

1. Rota meter to verify flow rate of 2 Lpm
 2. Particulate Calibration Standard- Verifies sensor performance for functional tests in the field
 3. **Additional Particulate Sensor for PM 10**
 - Additional sensor, electronics and impactor sleeve with PM10 impactor. Enables simultaneous measurement of TSP or PM10
 4. **Additional Particulate Sensor for PM 1.0**

Additional sensor, electronics and impactor sleeve with PM1.0 impactor. Enables simultaneous measurement of TSP and PM1.0 or PM10 (impactor included with EPAS) and PM1.0 or PM2.5 (impactor sold separately) and PM1.0.
 5. **Additional Particulate Sensor for PM 2.5**

Additional sensor, electronics and impactor sleeve with PM2.5 impactor. Enables simultaneous measurement of PM10 and PM2.5, TSP and PM 10 (impactor included with EPAS) or TSP and PM.25.
 6. **Barometric Pressure Sensor**
 7. Atomic/Nuclear Radiation Meter
 8. Wet Bulb Temperature Sensor
 9. Oxygen (O2) Sensor
 10. Ozone (O3) Sensor
 11. Sulfur Dioxide (SO2) Sensor
- Methane (CH4) Sensor