

Indian Institute of Technology Kanpur
Department of Materials Science and Engineering

Enq. No.: MSE/SI/2014-15/SERI_GB/04

Enquiry Date: December 04, 2014

Closing Date: 5 PM, December 17, 2014

Sub: Inviting quotation for a Glove Box with oxygen and moisture control

Quotations are invited for a **Glove Box with oxygen and moisture control** complying with or better than all of the specification mentioned in **Appendix A**. The prospective supplies are required to send quotation in two parts, each part sealed in a separate envelope. One part will be "Technical Bid" and second part will be "Financial Bid". The Technical Bid should contain detailed technical specification of the product being offered; it must not mention any prices. The Financial Bid should include the detailed price quotation clearly including the cost of the equipment, taxes, service charges if any, shipping and handling charges. The two separate and sealed envelopes should be clearly marked appropriately as "Technical Bid" and "Financial Bid".

Terms and Conditions:

1. Maximum educational discount should be offered.
2. Validity of quotation should be at least for 60 days.
3. Prices should be FOR IIT Kanpur. If imported item, then indicate the FOB Price and additional charge for delivering to IIT Kanpur on CIF terms.
4. Prices should include the installation and training cost.
5. Warranty for the entire system should be comprehensive on-site for at least one year after installation.
6. Normal payment terms for the Institute will be applicable (90% on delivery of the items and the remaining 10% after satisfactory installation/ inspection)
7. Quotation should carry proper certifications like agency certificate, proprietary certificate if applicable, etc.

Please send the Technical and Financial bids in sealed envelopes latest by 5 PM, December 17 (Wednesday), 2014 to:

Dr. Sarang Ingole
Room No. 204, Western Labs
Department of Materials Sciences and Engineering
IIT Kanpur, U.P. 208016, India. Ph: 0512-259-7089 (O)

Appendix A

SPECIFICATIONS FOR THE GLOVE BOX:

Glove Box	Dimension of Internal workspace	Width: 120-130cm; Depth: 75-80cm; Height: 90-95cm
	Material & coating	304 Stainless steel, should be coated for chemical and scratch resistance
	Electrical points	Four power points (two points for 5 Amp & two for 15Amp)
	Dust filter (0.3 micron)	One 'Gas inlet' and One 'Gas outlet' filter; both Class H13
	Window	Scratch resistant polycarbonate with clear viewing; 10 mm thickness
	Shelves	3 shelves of stainless steel with adjustable height 1000 mm Length and 220 mm depth.
	Glove port	2 Nos. (220 mm diameter, O-ring sealed)-solvent and rust resistant.
	Gloves	Butyl, 0.4 mm thick (2 pairs extra)
	Box light	Fluorescent lamp, Front Mounted
	Box pressure	Adjustable from -15 mbar to +15 mbar with sensor
	Foot pedal	Integrated with water proof foot pedal
	Stand	With castor wheels and levelling feet
	Gas purifier	Single filter purifier re-generable <i>Attainable purity: <1ppm moisture and <1ppm O₂ (attainable purity should be readable/displayed)</i>
	Regeneration	Should be automatic, should have restart facility –no manual intervention. Max 18 hours.
	Vacuum pump	Dry Scroll Pump (Edwards/Varian preferred)
	Blower	Vacuum tight, oil free, Flow rate between 20-30 m ³ /hr or better. Speed should increase or decrease as per the oxygen and moisture level inside the box
Antechamber	Type	cylindrical
	Size	Diameter: 35-45 cm

		Length: 55-65 cm Wall thickness: 0.25-0.30 cm Sliding tray: stainless steel (SS)
	Material	Stainless steel (type 304)
	Door	Aluminum
	Door lock	spindle lock type
	Pressure and vacuum gauge	To be fitted on the antechamber and manual valves
Mini Antechamber	Type and Size	Mini Antechamber 10-15 cm (dia) x 35-45 cm (length), sliding SS tray, vacuum and pressure gauge fitted.
System Control		Controller with color touch panel - should clearly display all box parameters like pressure, oxygen and moisture levels.
Sensors		Solid state oxygen (0 to 1000ppm) and moisture probes (0 to 500ppm)
Electrical feed through	4 electrical feed through of BNC type as shown next to schematic.	It should be attached to the glove box through KF flange so that if necessary it can be detached from the glove box. The flange must come with a cap and clamp so that the port could be closed when replacing the feed through.
Chilled water in/out ports		Two of ¼" ports with ball valve for water in and out. Outer ends should have ferrule connectors. It should be attached to the glove box through KF flange so that when required it could be detached from the glove box. The flange must come with a cap and clamp so that the port could be closed when replacing the feed through.
Gas in/out ports		Two of ¼" ports with ball valve for water in and out. Outer ends should have ferrule connectors. It should be attached to the glove box through KF flange so that when required it could be detached from the glove box. The flange must come with a cap and clamp so that the port could be closed when replacing the feed through.
Power Supply		220-230 V AC/50-60 Hz
On site comprehensive		One year

Warranty		
Technical Acceptance Criterion		<ul style="list-style-type: none"> • Company's technical representative should demonstrate leakage and attainable purity of oxygen and moisture as per specifications • Demonstration of main function through PLC • Local service support should be available

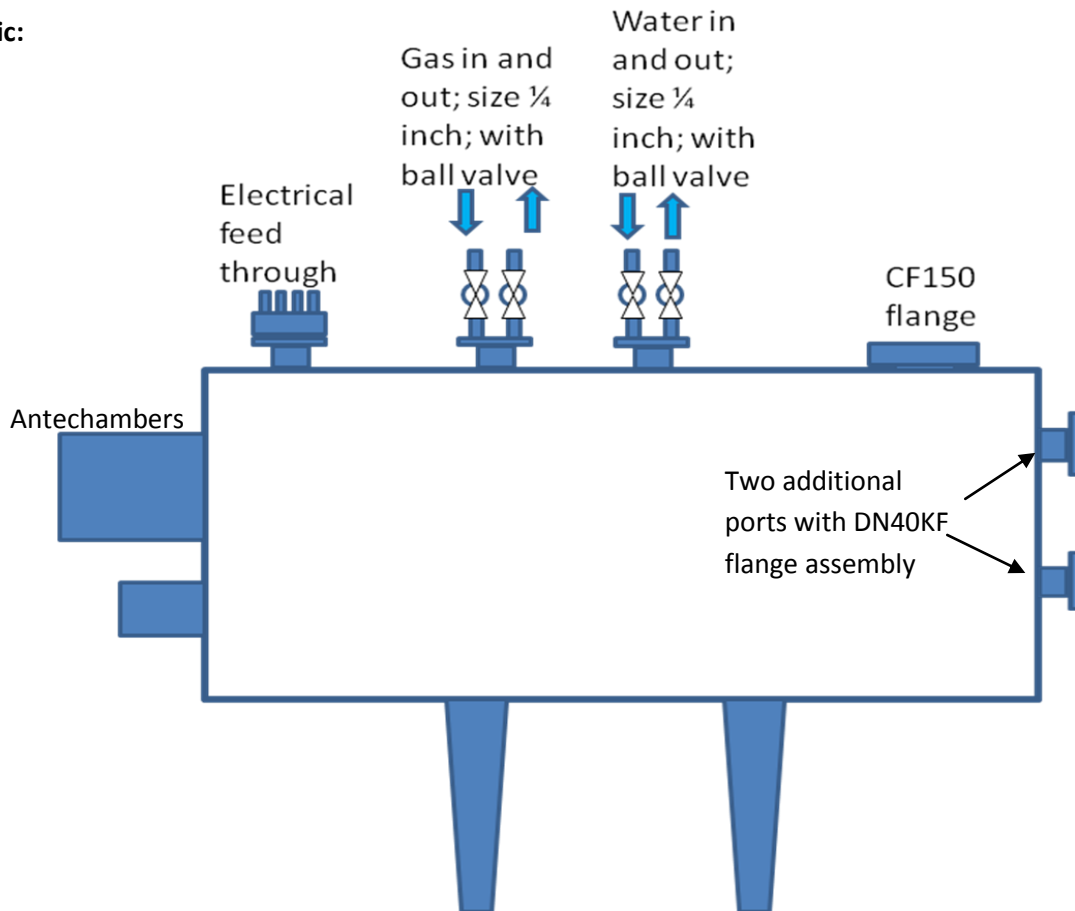
▪ **Mention prices for the following items in the optional category:**

(1) CF 150 flange with cap.

Location: refer to the schematic

(2) Two blank port with DN40KF flange assembly

Schematic:



- The offer must have a statement comparing the specifications of the offered system against the required specification in the present enquiry.
- Provide the name and contact information of labs where the offered system is already being used.

- **Final drawing** with all the dimensions for the complete system must be provided in order to evaluate its suitability for the required task.
- **Power Supply:** The unit must be compatible for power supply used in India without the need of any transformer.
- **Documentations:** One set of operating manual for the equipment and control system should be provided in hard copy.
- **Installation, Commissioning and Training:**
 - a) The delivery should be considered complete only after successful commissioning of the instrument.
 - b) The pre-installation requirements should be communicated to IIT Kanpur well in advance of the installation.
 - c) The supplier should provide training to at least two candidates at the installation site to make them familiar with smooth operation of the instrument.

Note that those providing better after sales service and support with proven track record will be given preference.
