

Department of Chemical Engineering  
 Indian Institute of Technology  
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August 2, 2014  
 IITD/BCHE/Sudip/ RP02854/2014-2015/GB

Dear Sir,

Sealed Technical and Commercial Quotations are invited separately for the Purchase of Glovebox of the following major specifications. You should quote for various options as indicated in specifications and other items available with the instrument. Your quotation should reach latest by 18/08/2014 by 5:00 PM to the Head of Department; your specifications should be superscripted by our reference number.

**Specifications :**

(1)Body/Piping	The body and piping of Glove box (GB) should be made of stainless steel. The body should have at least two ports with minimum 200 mm diameter. Height Minimum 900mm Width minimum 1200mm Depth Minimum 725mm
(2) Inert gas purifier	GB should have purifier to purify the inert gases (Ar or N <sub>2</sub> )
(3) Gas circulation with looping	At least one gas inlet and outlet with filters should be attached with GB
(4)Response time	10s or better
(5)Temperature Stability	+/- 0.005° C or better
(6) Antechamber	Antechamber having movable tray (diameter > 350 mm * length ~ 600 mm)  Antechamber with movable tray should be attached with main body of GB Leak-free (at least on the order of 10-5 mbar l/s)
(7)Vacuum operation (Manual or automatic)	Vacuum operation of antechamber should be performed either manual or automatic which can be controlled by controller that should be attached with GB
(8)Vacuum pump :	Rotary vane pump connections to Antechamber (0-1 bar) Rotary vane pump or equivalent should be attached with antechamber for vacuum purpose and should include Oil mist filter, Oil re-circulation,

	Automatic gas ballast control, Automatic switch off of vacuum pump 12m <sup>3</sup> /h, dual stage
(9)H <sub>2</sub> O and O <sub>2</sub> purifiers	H <sub>2</sub> O and O <sub>2</sub> purifier system should be attached with GB Cooling system should be attached, if required, with purifiers. Oxygen removal > 20 l; Moisture removal > 750 g
(10)Monitor/Display	The level of H <sub>2</sub> O and O <sub>2</sub> of GB should be monitored through displaying panel (0 – 1000 ppm)
(11)Moisture and O <sub>2</sub> regeneration system	Automatic H <sub>2</sub> O and O <sub>2</sub> regeneration system is required which is to be attached with GB. Integrated heating system should be attached with the regeneration system.
(12)Pressure controller - Automatic pressure control.	Pressure controller should be attached with GB to control the pressure automatically.
(13)Gloves	Butyl polymers or equivalent gloves should be attached with GB
(14)Pressure gauge with Antechamber	Pressure gauge should be attached with antechamber of GB.
(15)Foot pedal	Foot pedal should be attached with GB to control the pressure of GB manually.
(16)Solvent filter	Activated charcoal filter or equivalent should be attached with GB.
(17)Mini antechamber (150 mm * 400 mm)	Leak-free (at least on the order of 10-5 mbar l/s) Movable tray
(18)H <sub>2</sub> O-sensor and O <sub>2</sub> -sensor should be attached with GB.	H <sub>2</sub> O-sensor and O <sub>2</sub> -sensor should be attached with GB. H <sub>2</sub> O and O <sub>2</sub> level (less than 1 ppm)  O <sub>2</sub> sensor detection range: 0 -1000 ppm Moisture detection range: 0 - 1000 ppm
(19)Castor wheels	Castor wheels with lock facility should be attached with GB

(20)Lighting	Lamp system should be attached inside of GB for better visibility.
(21)Electrical port connections	Electrical port should be attached in side of GB
(22)Shelves	Shelves should be attached inside of GB for storing the chemicals
(23)Solvent filter	Activated charcoal filter or equivalent should
(24) Warranty	option-1: 1year; option-2:3year

### **Terms and Conditions**

1. Letter from the manufacturer specifically to quote for this tender is to be attached for authenticity of dealership/ agency and the dealer should be authorized service provider.
2. Sealed quotations in separate envelopes of Technical and Commercial bids kept in one sealed outer envelope should be submitted
3. Special discount/ rebate wherever admissible keeping in view that the supplies made for educational purposes in respect of the public institution of national importance may please be indicated.
4. Taxes, terms and conditions should be clearly mentioned. The rates quoted must be at *CIF Delhi price*.
5. Payment terms and conditions should be clearly mentioned. No advance payment is encouraged by IIT Delhi.
6. The Institute/ purchase committee has the right to accept or reject any bid or all quotations without assigning any reason whatsoever.
7. Firm MUST provide a compliance statement vis-à-vis specifications in a “tabular form” clearly stating the compliance and giving justification, if any supported by technical literature with clear reference of page number, paragraph or lines. This statement must be signed, with the company seal, by the tendered for its authenticity and acceptance that any incorrect or ambiguous information found submitted will result in disqualification of the tender. The quotation should be complete in all respects (as per IIT-Delhi rules).
8. Sealed quotations in separate envelopes of Technical and Commercial bids kept in one sealed outer envelope (super-scribed “Quotation for Glovebox”) should be addressed to Head of Department Attn: Dr. Sudip K. Pattanayek, Department of Chemical Engineering, Indian Institute of Technology, Hauz Khas, New Delhi 110016, INDIA and should reach by 5.00pm  
**August 18, 2014**

Sudip K. Pattanayek