

Rajdhani College
(University of Delhi)
Mahatma Gandhi Marg, Raja garden,
New Delhi –110015

Inviting quotations

Sealed quotations are invited for the purchase of below mentioned instruments. The quotations should be sent to THE PRINCIPAL and marked “DST Project (Dr. Pawan Kumar)”. Quotations should be send with detail specifications and relevant warranty and guarantee conditions within 20 days of posting this advertisement.

1. Fume Hood

Sr. No	Specification	Description
	Model and usage	
	Dimension	Overall Dimensions with base cabinet: 1800 mm W X 900 mm D X 1800 mm H Fume Hood dimensions: 1800 mm W X 900 mm D X 1600 mm H Base Cabinet dimensions: 1600 mm W X 540 mm D X 700 mm H Inside Fume Hood working volume: 1520 mm W X 650 mm D X 1155 mm H Bed size: 1520 mm W X 650 mm D
	Design Structure	Aerodynamic, Floor mounted
	Material of Construction	Galvanized Iron (GI) as per IS 277: 2003 standard of □ 1.0 mm thickness for all sheet metal paneling □ 1.2 mm for back pillars □ 1.2 mm for front corner post
	Front Top Panel	Easily openable hinged Top Panel for easy access to Flow Control Valve and Electrical Lighting fixtures for maintenance. Flow control valve should must be built in and not projected outside of main fume hood.
	Corner Post	Triangular profiled Corner Post is placed on Left and Right Hand Side of the Fume hood and it houses the utility line fittings and electrical receptacles
	Construction (Interior)	Chemical & Heat Resistant, Fire Retardant, Smooth Finish, Easily Cleanable Panels Made out of PP coated work walls
	Airfoil	Aerodynamic Design, Horizontal fixed airfoil mounted on the worktop made of SS 304 (1.2mm). Airfoil should be Black Teflon coated
	Worktop	Chemical resistant splash & spillage proof dished ‘Jet Black Granite’ worktop (18 +1 mm thick). Skirting of 15 mm from all sides for no chemical spillage
	Sash (Shutter)	Vertical rising sash counter-balanced with pulley and counter-weight system. Toughened Float Glass sash (4 mm thick). Smooth and light sash operation. Clear openable height = 750 mm. Impact Resistance of the sash (Toughened Glass) is four times higher than other sash materials (like Safety Glass and Polycarbonate). Breaking Stress value for fully toughened glass (Tempered Glass) = 24,000 psi. Sash rope should be of timing belt made-up of non metallic material. SS/Nylon or any other kind of rope is not acceptable.

Ajay

Wet & Dry Service valves	Remotely operated Color coded Brass Needle Valves(Imported make) for fine control over utilities (as per DIN 12920 norms) total 6 nos. service valves with SS braided hose with 6 mm internal dia, withstands up to 5 kgf pressure (3 LHS + 3 RHS) <input type="checkbox"/> 2 for Raw water <input type="checkbox"/> 2 for Nitrogen <input type="checkbox"/> 2 for Vacuum
Maintenance ports	<input type="checkbox"/> Open-able top panel for easy maintenance of tube light and flow control valve <input type="checkbox"/> Triangular service panel for maintenance of utility valves and tubing
Internal nozzles	Brass powder coated fittings are staggered in the fume hood to avoid the intermingling of the flexible tubes. Also the taps are tapered in shape to use with flexible tubing of sizes from 1/4" to 1/2" in dia, to provide greater flexibility to the user. Note: - Our Scope of supply for utility lines ends at 1/4th BSP male adppter.
Lighting	Fluorescent light (40 watt, 2 Nos.) with vapour-proof fitting for proper illumination. Intensity approx 400 lux at worktop level.
Electrical Utilities	6 nos. electrical sockets „NorthWest/Norisys“ make (230 V, 6/16 A, 50 Hz), 6 nos. „NorthWest/Norisys“ make MCBs with blower NO/NC switch with built -in starter & light switch on front fascia. Cables & wires „Fire Retardant“ grade. (3 LHS + 3 RHS)
Chemical Storage Base Cabinet (Ventilated & on castors	Base cabinet will be ready to receive the fume hood at its top. It will have following features: a) Internal special chemical resistant material lining to the cabinet walls b) Two exhaust ports connected to the fume hood exhaust system Internally. C) Complete chemical resistant, fire proof pre-lam/chipboard Cabinet construction. d) One removable horizontal partition to store chemicals. e) PP Trays for chemical storage. Locking System for the Base Cabinet
Apparatus Holding Grid (Lattice Assembly) (Optional - To be ordered separately if required)	A grid made up of Duralumin Powder coated rod (Dia. 12.7 mm) to hold the apparatus. It will cover the entire length of the fume hood and will be built-in at fume hood backside. Installed at the distance of 150 mm from backside of fume hood.
Level adjusting screws	Made of SS Bolts to adjust the fume hood level by + 10 mm.
Exhaust Port	Unique exhaust port design ensures that the fumes will be exhausted smoothly without any turbulence at the exhaust port. Also it ensures low noise level.

Note: CENTRIFUGAL BLOWER: (For air suction in Cluster of 4 Nos. of Fume Hood & 1 No. Of Spot Extractor) - 3Nos. Silent PP + FRP high efficiency remote blower, consisting of continuous rating motor and chemical resistant impeller. It satisfies international safe velocity norms



2) Vacuum Pump

Two stage oil sealed direct drive rotary vacuum pump with effective pumping speed of at least 12M³/Hr is required and it should be capable of pumping to an ultimate base pressure better than 1 x 10⁻³ mbar. All the flanges, hoses, Connection cable, filter & any accessories required should be quoted.

3) HOT AIR OVEN

1. Interior Volume: 199 Liter
2. Operating temperature: Ambient temp.+20°C up to 250°C
3. Easy to operate with natural convection & air circulation drying option to meet general drying needs
4. Short process & heat up times & precise heat control to 250°C
5. Temperature regulation by microprocessor based controller with large eye level display
6. Interchangeable silicone door gasket, removable shelf support & rounded corner for easy cleaning
7. Power: 220 volt, 50/60 hertz

Dr. Pawan Kumar

(Principal Investigator)

डा० पवन कुमार/Dr. PAWAN KUMAR
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दिल्ली विश्वविद्यालय/Univeristy of Delhi

Shravan
30/11/16

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