



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
Powai, Mumbai 400076.

Ref No. (PR No.1000045192)

(Rfx No.6100002063)

Technical Specifications : Benchtop Freeze Dryer
(Qty : 1 No.)

Sr. No	Detailed Technical Specification	Technical Compliance (Yes / No)	Additional Information (if any)
1.	Compact benchtop system, HCFC/CFC- free refrigeration systems with operating temperature -50° C and operational voltage should be 230 volts, 50 Hz, and pressure should be controlled automatically.		
2.	System should have a moisture sensor to detect the moisture in the collector chamber area.		
3.	System should have an LCD display that shows operating parameters, set parameters, and alarm messages.		
4.	System should have a touchscreen display to show real-time collector temperature and vacuum.		
5.	System should have an alarm for power failure, improper line voltage supply, collector temperature rise above -40° C to -30° C, service vacuum pump, and moisture in the collector.		
6.	The Instruments should have an ice condenser made with stainless steel coil inside the chamber to trap moisture.		
7.	The Instruments should have an ice holding capacity 2.5 litres before defrosting and should have a capacity of removing 2 litres of water or better in 24 hrs.		
8.	System should have automatically restart if the power outage less than 5 minutes.		
9.	Drying chamber should be drum having dia 12 inches or better height 16 inches or more, clear/Transparent type to see through.		
10.	System should be at least 8 neoprene valves		

	with molded plastic knobs to accommodate adapters in the size range of ½” to ¾” for the connection of flasks.		
11.	System should have freeze drying samples in small bottles with split stoppers attaches to any drying chamber to stopper bottles under vacuum. For up to 48, 2 ml bottles or 8, 30 ml serum bottles.		
12.	System should have data logging store inbuilt which could be export via USB or Ethernet in table /chart format.		
13.	System should have feature for program the alert to send via Ethernet connection to user-entered email addresses.		
14.	System should have an automatic and manual startup.		
15.	Should have vacuum break valve to prevent oil back streaming.		
16.	Vacuum pump with displacement capacity of around 95 Litre or more @ 50Hz and ultimate vacuum of 0.002 Mbar.		
17.	System should have Product shelf with three-tier and compatible with drying chamber.		
18.	System should be supplied with following flasks having wide mouth with capacity of 300ml (3 numbers);600 ml (3numbers) along with suitable adapters, O-rings, flask covers.		
19.	Manufactures should be ISO 9001, CE conformity marking.		
20.	Instrument should be quoted for at least 1 years of comprehensive warranty.		
21.	System should be installed by OEM company trained service engineer. Training certificate must be submitted with tender.		
22.	Detailed specification sheet(s) highlighting all the technical and other specifications must be attached.		
23.	Complete list of users in India for the equipment (inclusive of the quoted model) along with certificates/testimonials from the customers shall be enclosed.		
24.	Supply of spares and services should be guaranteed for 10 years from the date of installation.		