



**CLARIFICATION/CORRIGENDUM/ADDENDUM**

**Subject: - Amended Technical Specifications of item (01) Deep Freezer(-20<sup>o</sup>) (02) Biological Safety Cabinet, under NIB No. F-8( ) RMSC/EPM/M-1/17-18/NIB-305/ 2018/508 date: 05.02.18**

In reference to subject cited above and NIB-305, the representations received from the various firms and issues raised by the Bidders, are examined by the competent Authorities and technical committee and approved by purchase committee. The following Clarification/Corrigendum/Addendum is issued for inclusion in Bid document Amended Technical Specification of items as below:-

**1. Amended Technical Specifications of Items (01) Deep Freezer(-20<sup>o</sup>) as below:-**

**((01) Technical Specifications of Item - Deep Freezer(-20<sup>o</sup>)**

1. The system should be vertical standing model
2. The system should have 7 segment electronic control unit.
3. The system should be made of rust & chip resistant high grade stainless steel.
4. The system should have volume capacity of 350 liters
5. The temperatures range should be - 15<sup>o</sup> C to -25<sup>o</sup> C
6. The system should be microprocessor controlled
7. Uninterrupted 24 X 7 electronic temperature circular chart recorder / integrated digital temperature cum controller with inbuilt 7 days inkless circular chart recorder with supply of free charts for the period of guaranty and should be provision to connect with central (temperature) monitoring system.
8. The system should have CFC Free refrigerant
9. The entire cabinet should be able to maintain uniform temperature in each drawer.
10. The system should have PUF insulation
11. The system should have minimum 4 to 7 storage drawer/shelves with lids.
12. The system should have a built- in audible & visible alarm, if temperature fluctuates from its set-point range & door open warning system
13. The system should be CE / ISO / GMP / NSIC certified.
14. A servo stabilizer inbuilt/external to be supplied with the system
15. The system should be operable at 220-230 V & 50-60 Hz
16. Should have digital temperature display on panel
17. Supply with four wheel base for easy operation with locking mechanism.
18. Guarantee: Three years on equipment.
19. **CMC:** CMC will be given @ 5 % of Net Rate exclusive of GST (As applicable) and yearly escalation of 5 % on last year's CMC price. The CMC may be awarded for Five years (on yearly basis) after completion of Guarantee period of three years.
20. Each Firm/ Company is requested to submit Brochure of the equipment with detailed specification Pre- installation requirement, installation and training to be done by firm on site Local service engineer should be available in 24-48 hr time Support to be provided for application on phone User list and satisfactory certificate to be provided from Indian institution. Firm to give 3 year guarantee and rates for 5 year CMC.

*(Signature)*

**(2.) Amended Technical Specifications of Items (02) Biological Safety**

**Cabinet as below:-**

**Technical Specifications of item - Biological Safety Cabinet Based On Class II Type A-2 For 30% Exhaust- Vertical Flow As per International**

**Standards:**

1. Work Area :- 4 x 2 ft (approx) Shutter opening
2. Air Flow :- Vertical down flow (30% Exhaust)
3. Average Inflow velocity of 100ft/min (.51m/s) through work access opening.
4. Cleanliness Level :- Less than 3.5 particles/liter of 0.5 um and larger (ISO 14644-1)
5. Noise Level :- Less than 65 db
6. Vibration Level :- Less than 2.5 um
7. Average Air Flow :- 90 ± 20 fpm (down flow)

**CONSTRUCTION**

1. Main Body :- STAINLESS STEEL [(304 GRADE) - Heavy gauge – 16G]
2. Table Top & Working zone :- STAINLESS STEEL [(304 GRADE) - Heavy gauge – 14G & 16G]
3. Table Top in two part :- (a) Front Perforated portion – 4” size  
(b) Non – Perforated working Zone: - Table sunken type (through type) for Spillage Management. It can be lift easily for b cleaning below the table.

**INCLUSIVE OF STANDARD ACCESSORIES**

1. HEPA / ULPA filter- MINIPLEAT – 99.99 % efficiency for 0.2 to 0.3 micron with integral metal guard & filter frame gasket & manufactured in class 1000 super clean Air-Conditioned environment for longer life. (at supply and exhaust)
2. Air Pressurization system- Statically and dynamically balanced fitted with special vibration reducing system to suit low noise and vibrations.
3. Front Door-Polycarbonate/Toughened Glass (6 mm) – Adjustable as per requirement vertical sliding (one piece with counter weight arrangement finger tip control)
4. Slide walls in Stainless Steel (304 grade) - Heavy Duty – 14 Gauge.
5. Fluorescent Light-low energy chokes less to withstand larger fluctuations in voltage- Placed outside working zone to avoid turbulence. (Intensity – More than 1200 Lux)
6. Support Stand with leveling Screws adjustable from 55-85 mm
7. U.V. lamp-in working zone (40 micro watts/squares cm at 254 nm or better). So placed that you cannot see directly i.e. eyes are always protected.
8. Universal Service fittings for gas & Air
9. Rehabitable Pre Filters with efficiency of more than 80%
10. Switches & Electrical Socket outlet (15/5 amp- industrial type for longer life)
11. Pressure Monitors: Magnehelic Gauge- to indicate pressure drop across HEPA Filter / air velocity sensors.
12. Display of air velocity down flow and inflow.
13. DOP Port. Current Leakage Circuit Breaker. Air Tight Duct Exhaust Extension Exhaust ducting.
14. Automatic air velocity compensation through increase in the motor speed.

**SPECIAL FEATURES**

- Contaminated plenum in negative pressure to prevent leakage into the environment. Exhaust blower placed outside at roof top level.
- Exhaust Blower- Suitable for 30% Exhaust interconnected with supply air blower, the system will only start when the negative pressure is developed. With virus burn out unit.
- Special precautions are taken so that if by chance the exhaust blower is not working, you will get buzzer
- Audible alarm warns the operator if the window is raised above the recommended height of 203 mm (8”)
- Air Short Circuiting or the By Pass arrangement: By chance there is ingress of fresh air from near the top of front shutter. This ingress will not percolate into the working zone: but will be short circuited to return duct at the back. Safety Suction points near the upper portion of the front shutter transfer short circuit dirty air into exhaust/return duct.
- Adjustable Zero-leak proof damper at supply air intake & exhaust ducting.
- Two dedicated blower – exhaust blower and down flow Blower with damper to dynamically balance the inflow and down flow air velocities.
- Special provision for system which gives alarm to stop supply air in case the negative pressure goes beyond certain limits to stop contamination egress to laboratory
- Spillage trough below the working table is of 16G Heavy Duty Stainless Steel. This trough has drain cock

MP



- Back holes on vertical walls: To provide more work area on table top.
- Certifications Required : NSF-49 / EN-12469
- Comply with IEC 60601 towards Safety Requirements
- Guarantee: Three years on equipment.
- CMC: CMC will be given @ 3 % of Net Rate exclusive of GST (As applicable) and yearly escalation of 5 % on last year's CMC price. The CMC may be awarded for Five years (on yearly basis) after completion of Guarantee period of three years.

**POWER REQUIREMENT: 1KW Single/Three Phase**

Firm to validate the cabinet at time of installation and 2 times every year to change HEPA as and when required during guarantee period validation to include following requirements (at site) :-

1. Down flow velocity and volume Test
2. Inflow velocity Test
3. Airflow Smoke Pattern Test
4. HEPA Filter Leakage Test
5. Cabinet Leakage Test
6. Electrical Leakage : Ground Circuit Resistance and Polarity Test
7. Lighting Intensity Test
8. Vibration Test
9. Noise Level Test
10. UV Lamp Intensity Test
11. Alarms and indicators test (if provided).

The differential pressure gauge should be calibrated.

It is also clarified that information of award of contract shall be communicated to all participating bidders on the website [www.rmssc.nic.in](http://www.rmssc.nic.in) and [sppp.raj.nic.in](http://sppp.raj.nic.in). Please note that individual bidder will not be intimated."

**Note:-** Please note that all above amendments/corrigendum in technical specifications/bid conditions is the integral part of (Section-V, Schedule of Supply, and Point no. 3) and the bid document. This corrigendum/ addendum should be signed and annexed with bid document. All other terms & conditions remains the same.

This bears the approval of M.D., RMSCL, Jaipur.

*dy*  
*13-4-2018*  
Executive Director (EPM)  
RMSCL, Jaipur

*MD*