



PHARMA DEVILS

**USER REQUIREMENT SPECIFICATION
FOR
HANGING LAF**

1.0	Name of Equipment / system	Vertical Laminar air flow unit (Ceiling Mounted Version)
2.0	Equipment Make / Model	Approved make
3.0	Purpose of equipment	An ISO 5 Unidirectional Flow Clean Air Work Station for Product Protection.
4.0	Capacity	Inches: W x D x H HEPA projected area: 2750 x 1500 Overall (without duct): Vendor to provided but the Width Should not exceed 2900 mm
5.0	Process Requirement	CONSTRUCTION : SS 304 <ul style="list-style-type: none">a. Filter Frames and motor-blower assemblies in generic execution.b. There should not be any gaskets below the HEPA when viewed from Bottom. REACTIVE FILTERS : <ul style="list-style-type: none">a. Separatorless Minipleat Anti-microbial HEPA filters of EU 13 grade with an efficiency of 99.99% on monodisperse, 0.3 micron challenge.b. Rehabilitatable anti-microbial EU-6 filter with efficiency to 80-90 %. Media is inherently bactericidal & fungicidal. FEATURES : <ul style="list-style-type: none">a. Custom-built direct drive type motors with impellers that are statically and dynamically balanced electronically. The machine-made impellers are sized to provide adequate airflow volumes at required total system differential pressures over the full life-cycle of the HEPA filters.b. Enhanced motor-blower execution and unique suspension mounting ensures low vibration, low noise levels. Their dynamic pressures raises all performance parameters, taking those to new benchmarks.



PHARMA DEVILS

**USER REQUIREMENT SPECIFICATION
FOR
HANGING LAF**

**5.0 Process Requirement
(s)**

INSTRUMENTATION AND ACCESSORIES :

- a. Fluorescent lights (in excess of 300 lux)
- b. Audio-visual alarm which triggers incase blower trips, as a safety measure.
- c. Pressure Monitor
 - 0 to 25 mm to indicate differential pressure across HEPA filter with respect to ambient.
- d. DOP introduction port for upstream challenge of the HEPA filter.
- e. 5 / 15 Amp single-phase safety socket with switch for external equipment.

PERFORMANCE :

- a. Air cleanliness : ISO Class 5 (ISO 14644-1:1999 (E)
- b. Air Velocities : 0.45 ± 0.05 mps
- c. Air Flow : Vertically oriented
- d. **Power Supply** : 230 V AC 1- ϕ 50Hz
- e. Antistatic Curtains from LAF upto 300mm above ground level

Controls:

- a. Should have facility to provided remote ON/OFF for the LAF from nearby Wall.

Support to LAF

- a. Support for the LAF shall be taken from the slab through the clean room walkable ceiling. SS cover to be provided above the LAF till the walkable ceiling.

6.0: Components Details:

S.No.	Description of Component	MOC/Surface finish	Features
6.1	MOC	SS 304	<ul style="list-style-type: none">• SS 304 construction
6.2	Pre filter		<ul style="list-style-type: none">• As per requirement
6.3	Intermediate and Final Filter		<ul style="list-style-type: none">• As per requirement
6.4	Exhaust filter		<ul style="list-style-type: none">• As per requirement



PHARMA DEVILS

**USER REQUIREMENT SPECIFICATION
FOR
HANGING LAF**

7.0 : Control Systems:

Applicable / Not Applicable

S.No.	Component(s) / Feature(s)	Required (Yes/No)	Description (as applicable)
7.1	Power panel - MOC	Yes	SS cover along with magnahelic gauge and ON/OFF switch
7.2	Protection Class	NO	
7.3	Indicator(s)	YES	Magnahelic gauge, motor
7.4	Alarms and Warnings	YES	
7.5	Data security	NO	NA
7.6	MMI / HMI and PLC Details	NO	NA
7.7	User interface –compatible to SCADA system.	NO	NA
7.8	Interface to other system (s) / equipment (s) / instrument (s)	NO	NA
7.9	Data storage Capacity	NO	NA
7.10	Password Protection	NO	NA
7.11	Others	Yes	Lighting fluorescent tube with operating switch



PHARMA DEVILS

**USER REQUIREMENT SPECIFICATION
FOR
HANGING LAF**

S.No.	Safety Feature(s)	Required (Yes / No)	Description (as applicable)
8.1	Emergency Stop	Yes	
8.2	Power Failure / Recovery	No	
8.3	Electrical Protection (Flame Proof / Non Flame Proof)	Yes	NON FLAME PROOF TYPE
8.4	Alarms & warnings	Yes	MOTOR TRIP ALARM
8.5	Earthing	Yes	
8.6	Noise level	YES	Noise level around the equipment should be Less than 70 db
8.7	Interlocks	NO	
8.8	Others	NO	



PHARMA DEVILS

**USER REQUIREMENT SPECIFICATION
FOR
HANGING LAF**

9.0 Documentation

: Applicable / Not Applicable

S.No.	Title	Required (Yes / No)	Description (as applicable)
9.1	Material of construction Certificate (MOC) of Contact Parts / Non contact parts	YES	
9.2	Calibration Certificates traceable to NIST standard	YES	
9.3	Performance Test Certificates	YES	
9.4	Qualification Document (FS /DS / DQ/IQ&OQ document)	YES	
9.5	Operation and Maintenance Manual	YES	
9.6	Drawings		
9.6.1	GA Drawing	YES	
9.6.2	P& ID Drawings	NO	
9.6.3	Electrical	YES	
9.6.4	Ladder Diagram	NO	
9.7	Back up of software / PLC based system	NO	
9.8	Others	NO	



**USER REQUIREMENT SPECIFICATION
FOR
HANGING LAF**

10.0: Others

S.No.	Title	Required (Yes / No)	Description (as applicable)
10.1	Training	-	
10.2	Inspection at Vendor's end	NO	
10.3	Technical support	YES	During Installation at site and validation of the unit
10.4	Others	-	

11.0 : URS Acceptance by the vendor:

The User requirement specification has been discussed and agreed upon. We hereby declare that we will supply the equipment / system as per above laid down specification.

Name of the Vendor	Signature / Date