

## SAFETY

- Safety alarm – For HEPA, UV, Sash Door
- True Value for Inflow & down flow



## EASY TO USE

- User friendly microprocessor based LCD Display Stand
- Balance stand with Heavy duty castors with adjustable foot (4 nos )



## COMFORT

- Ergonomic design for easy access
- Arm rest for easy work & maintains unique air flow and prevents Grille blocking.
- Access port Access port for Water & gas

## CERTIFICATION

- ISO 2001:9008, CE, EN Compliance
- European CE Certificate No: Directive 2004/22/EC Class 1
- EN ISO 14971:2012 Applicable Standards
- ISO 13485:2016, ISO 14644-1:2015, EN 12469: 2000
- Cleanliness HEPA : ISO Class 5
- WHO & CED consultation.
- IQ, OQ, PQ Certification

## SERVICE

- Prompt & timely service

## SATISFICATION

- More than 500 satisfied installation



## IMSET Maxi-Safe Series Biosafety Cabinet

“Your Safety, Our Commitment”



International Marketers for Scientific Equipments & Technologies

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# BIOSAFETY CABINET CLASS II A2

SIZE: (L X D X H): 3X2X2

## Class II A2

Class II Biohazard Safety cabinet should provide personnel, product & environment protection.

Class II Cabinets differ in proportion as 70% air is re-circulated within the cabinet through high efficiency particulate air (HEPA) filtration.

Velocity of airflow to the work zone creates a class 100 environment for product protection, where the remaining exhaust air is discharged out through (HEPA).

Air barrier at the work opening & the contaminated air plenum under positive pressure. An air barrier between the operator & the work zone maintained by a flow of room air through a full width grille in the work opening.

The barrier air mixes with the laminar flow air in a sump underneath the work surface & is exhausted to the outside environment through a HEPA filter.

**Main body:** Electro- Galvanized steel with white oven-backed powder coated finish.

### Sleep Mode Operation

We have a special feature of sleep mode operation wherein your machine runs on low consumption of electricity where the blower speed is reduced for longer performance.

**Air inflow velocity:** average 0.54 m/s

**Down flow velocity:** average 0.35m/s

**Air flow volume:** 617/h

**Down flow Air flow volume:** 893 m3/h

**Exhaust air flow volume:** 617m3/h

**Velocity meter accuracy:** 0.001 m/s or better

**Air return mode:** Non- obstructive air return mode in the front suction panel.

**Microprocessor control LCD Display Digital:** Microprocessor Control System for Operating Fluorescent, UV Light & Blower.

Continuously display true value of differential pressure of HEPA filter for inflow as well as down flow velocity.

Conveniently located display on outside of the Biosafety Cabinet for easy use & also easy to reach from a seated working position

**Pressure gauge:** Dwyer pressure gauge, indicate real-time negative pressure between two sides of down flow air filter.

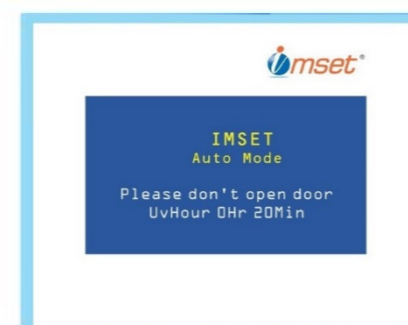
**Blower-Motor Assembly:** Dynamically & statistically balanced brushless Single —DC blower motor with automate air volume compensation driven by single phase, 2800 RPM motor

Double inlet blower fitted in such a way to reduces vibration.

Blower is positioned in such a way that, to create an even filter loading, it helps to prolong the life of HEPA filters.

**Noise Level:** ≤62 and vibration free

Automatic Blower speed adjustment to ensure safe operations.



An ISO 9001 : 2015 Certified Company  
CE Marked : CE marked product  
GMP Certified product  
EN ISO 14971:2012 Applicable Standards  
ISO 13485:2016, ISO 14644-1:2015, EN 12469: 2000  
European Conformity CE certificate

**Filter type:** HN 14 HEPA filter with integral metal guards & frame gaskets. Supply of HEPA filter 99.997% at 0.3 micron.

**Air flow pattern:** 70% air recirculated through filter 30% air exhausted

**UV Light programming:** Available with timer with independent control switch & UV Hour meter to avoid operator risk

**Ultra violet tube light:** Germicidal i.e. 254 nm. Irradiation intensity  $\geq 400\text{m W/m}^2$

**Ultra violet life meter:** Continuously display UV Hour on display

**Electrical water proof socket:** Internal socket inside the chamber. 5/15 Amp 2 Nos.

**Front sash door:** Manual sliding UV proof sash door made up of 6 mm toughened glass with sloping front for better access of samples

Front sash door height can be easily adjusted as per required by end-user.

The transparent sash door maximizes light & visibility inside the cabinet, providing a bright & open working environment.

The closing / opening operation of front door is integrated with the UV ON/OFF.

**Sash door height:** Maximum working opening 250mm and maximum opening 540 mm

**Illumination of work surface:** Fluorescent tube light (intensity  $\geq 1000\text{ lux}$ ) provides excellent illumination for work surface & reduces operator fatigue

**Power supply:** 230 V  $\pm$  15%, 50 Hz  $\pm$  3%

**Support Stand:** Support stand with Castor wheel having locking facility & Leveling Jacks.

**Intelligence Alarm System:** Safety purpose Audio & Visual alarm for air fluctuation and for life of the HEPA filter and UV light

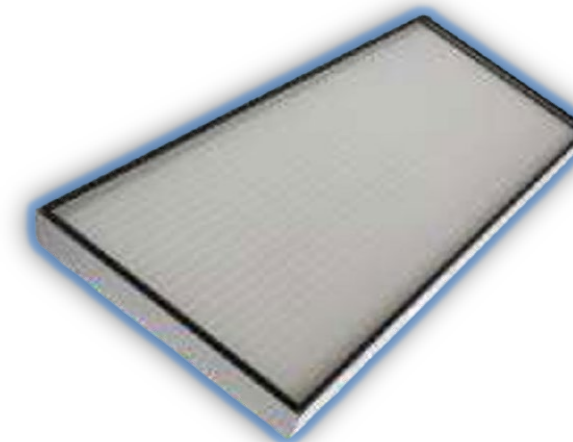
**Inner SS:** Back wall & Sidewall made in single piece stainless steel SS 304 with rounded corner

**Working Platform:** Seamless, Scratch-free, high quality 18 gauge stainless steel, grade 304.

**Working tray:** Autoclavable & Removable stainless steel work surface for easy cleaning.

**Ergonomic tilt:** Exceptionally comfortable 10° ergonomic design improves comfort, prevents user fatigue & promotes safe working techniques.

**Drainage port:** Provide In-built drain valve at the bottom of the working chamber to facilitate easy & better cleaning of the interior & handling of spillage inside the chamber



## SAFETY

- Safety alarm – For ULPA, UV, Sash Door
- True Value for Inflow & down flow



## EASY TO USE

- User friendly microprocessor-based LCD Display



## COMFORT

- Ergonomic design for easy access
- Arm rest for easy work & maintains unique air flow

## CERTIFICATION

- ISO 9001:2015, CE, EN Compliance
- European CE Certificate No: Directive 2004/22/EC Class 1
- ISO 13485:2016, ISO 14644-1:2015, EN 12469: 2000

- WHO & CED consultation.

- IQ, OQ, PQ Certification

## SERVICE

- Prompt & timely service

## SATISFICATION

- More than 2000 satisfied installations

## Performance Certificate

- Performance certificates of IQ, OQ, PQ tests to be submitted at the time of installation/ commissioning.



**IMSET Biosafety Cabinet  
Class II B2**

*"Your Safety, Our Commitment"*

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# BIOSAFETY CABINET CLASS II B2

SIZE: (W X D X H): 4 FT X 2 FT X 2 FT

MODEL: MS BSC C II B2 4X2x2

## Class II B2

**Cabinet provides the Product, Person and Environmental protection**  
Class II Biohazard Safety cabinet should provide personnel, product & environment protection.

Class II B2 Cabinets 100% air exhaust through HEPA filter. Velocity of airflow to the work zone creates class 100 environment for product protection, where the remaining exhaust air is discharged out through (HEPA).

Air barrier at the work opening & the contaminated air plenum under positive pressure. An air barrier between the operator & the work zone maintained by a flow of room air through a full width grille in the work opening.

The barrier air mixes with the laminar flow air in a sump underneath the work surface & is exhausted to the outside environment through a HEPA filter.

**Dimensions:** L x D x H : 4 ft x2 ft x2 ft

**Internal Dimensions:** Approx. 1190 W x 610 D x 640 HT in mm

**External Dimensions:** Approx. 1310 W x 785 D x 2380 HT in mm

**Main body:** whole body constructed in stainless steel.

**Inner SS:** Back wall & Sidewall made in made of single piece SS joint less to avoid collection of contaminants or rust stainless steel SS 304

**Work Surface:** Seamless, Scratch-free, high quality 18 gauge stainless steel, grade 304

**Working tray:** Autoclavable & Removable stainless steel work surface for easy cleaning. Front perforated part 4" in size. Non-perforated working zone: Table sunken type (trough type) for spillage management that can be lifted easily for cleaning below the table.

SS pan Under worktable for collection spilled fluids

**Air flow:** 100% air exhaust through HEPA filter & 0% Re-circulation.

**Air Flow Direction:** Vertical

**Filter type:** H-14 grade 99.995% down to 0.3 micron. Mini Pleat HEPA filters with DOP test certificate, H-14 grade with integral metal guards & filter frame gaskets and manufactured in class 1000 super clean air-conditioned environment for longer life with manufacturer PAO certificate. For both down & exhaust filters.

**Pre-filter:** Coarse Filters, 90% efficiency @ 10 microns, Water Washable, Maximum operating temperature: 50 °C Frame: Aluminium – Unpainted

Media: Non-Woven Polyester with 2 layers of Synthetic Woven Filter Media & 1 layer of aluminium expanded metal as reinforcement throughout the length of the media. Sealant: PU Sealant

**UV Light programming:** Available with timer for specific exposures time for 0 to 24 hrs. & UV Hour meter to avoid operator risk

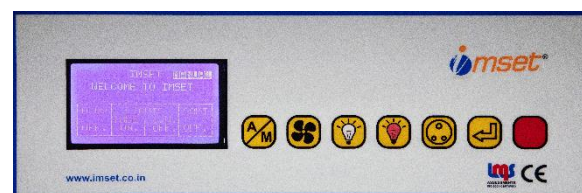
**Ultra violet tube light:** Germicidal i.e. 254 nm.

**Ultra violet life meter:** Continuously display UV Hour on display

**Electrical socket:** Internal socket inside the chamber. 5/15 Amp 2 Nos.

**Ergonomic tilt:** Exceptionally comfortable 10 deg ergonomic design improves comfort, prevents user fatigue & promotes safe working techniques.

**Front control panel:** Provided to avoid exposure of UV Light & Lamp outside, making eyes more comfortable.



**Front sash door:** transparent tempered glass with motorized lift for UP / DOWN sash door made up of Polycarbonate door or toughened glass with sloping front for better access of samples. Working aperture 200-220mm (safe position of front window with alarm)

Front sash door height can be easily adjusted as per required by end-user.

The transparent sash door maximizes light & visibility inside the cabinet, providing a bright & open working environment.

**Air velocity:** Down flow velocity approx. 80 ± 10 fpm

Inflow velocity approx. 100 ± 10 fpm

**Plenum:** Negative pressure plenum to prevent leakage into the environment.

**Illumination of work surface:** Glare free LED lamps (intensity > 600 lux) provides excellent illumination for work surface & reduces operator fatigue placed outside working zone to avoid turbulence.

### **MICROCONTROLLER AND ITS FUNCTIONS:**

- Warm up time to the comfort of the user.
- The system will have audible and visual alarm to prompt user in case of any unsafe cabinet conditions such as low exhaust and low-down flow (filter choking).
- HMI 4.3" Color Touch Screen Unit: 01 No,
- Controller in ABS Plastic Encloser Din Rail Type: 01 No
- Communication DB9 Cable: 01 No
- Feedback Sensor: 03 No's.
- Working Mode: Auto & Manual Only (UV, Blower & TL)
- Sash Detection: Available (Close, Safe & Open)
- Airflow sensor-based air flow control, a thermal anemometer measures the downflow velocity in a single spot in the work surface.
- The exhaust & down flow velocities continuously be displayed on the graphical LCD screen in FPM.
- UV lamp can be programmed for specific exposure time, hour meter for usage, and estimate the need of lamp replacement will be displayed on screen.
- Blower hour meter to estimate the total number of hours run by the equipment from day one.

**Sleep Mode Operation:** Automatically blower speed reduced up to 30%, this will help to save energy as well as help to maintain sterile work area during Biosafety Cabinet is not in operation.

**Intelligence Alarm System:** Safety purpose Audio & Visual alarm for air fluctuation and for life of the HEPA filter and UV light

**Working Noise level:** Low/ should be < 65 dB

**Electronic / Electrical panel:** From clean chamber to give better contamination free results.

**Electrical safety:** Electrical components used are standard for better electrical safety for the operator. Current leakage circuit breaker

**Power supply:** 230 V ± 15%, 50 Hz ± 3%

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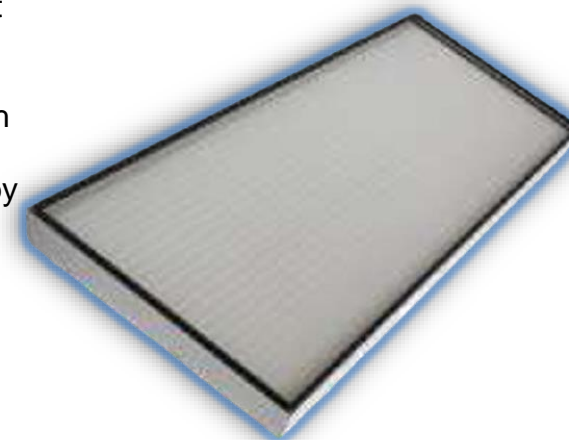
CE Marked : CE marked product

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ISO 13485:2016, ISO 14644-1:2015, EN 12469: 2000

European Conformity CE certificate



**Arm rest bar:** To avoid contamination from outside to inside contamination & for easy working with comfort. Detachable – SS – 304

**Drainage port:** Provide beneath work surface to facilitate easy & better cleaning of the interior & handling of spillage inside the chamber

**Blower-Motor Assembly- Down flow:** Dynamically & statistically balanced aluminum centrifugal impeller driven by single phase, 130 W, 1 ph., 1360 – RPM & connected to the filter chamber.

**Blower-Motor Assembly- exhaust:** Constant flow fan. This fan deliver constant exhaust flow velocity across the filter face throughout the life span of the HEPA filter. This constant flow technology not allow any reduction in exhaust flow throughout the life span of the HEPA Filter as per the initial settings during the first-time installation of the new equipment.

The fan is impeller forward curved blades, directly mounted on a brushless, permanent magnets, DC external rotor motor with capacity 1 KW drive sensor integrated active PFC and thermal derating protection 230V, 2800 CMH, 62 SP & 1630 Rpm.

**Universal Service fittings:** Universal Service fittings for gas / air: 1 no.

**Tumble hood:** Airtight duct exhaust tumble Hood.

**Base Stand** Support stand castor wheels for mobility with levelling screws adjustable from 30 mm.

**Duct** PVC duct of 200 dia as per the site requirement for approximate length 2 mtrs with one elbow & bird screen.

**Warranty:** 1 year

**ISO 9001 : 2015 & CE Certified Company:** An ISO 9001 : 2015 & CE Certificates is given\_

**CE Marked:** CE marked product

**Cleanliness:** confirms to Class 5 of ISO 14644 – 1

**Applicable Standards:** EN ISO 14971:2012, EN ISO 13485 : 2012 , EN 980:2008 , EN 1041 : 2008 , EN 61010-1:2010, EN 61326-1:2013, EN 12469:2000

**Fluorescent tube light positioned at the front side**

**System provided with fitting for gas & vacuum**

**System provided with electrical socket**

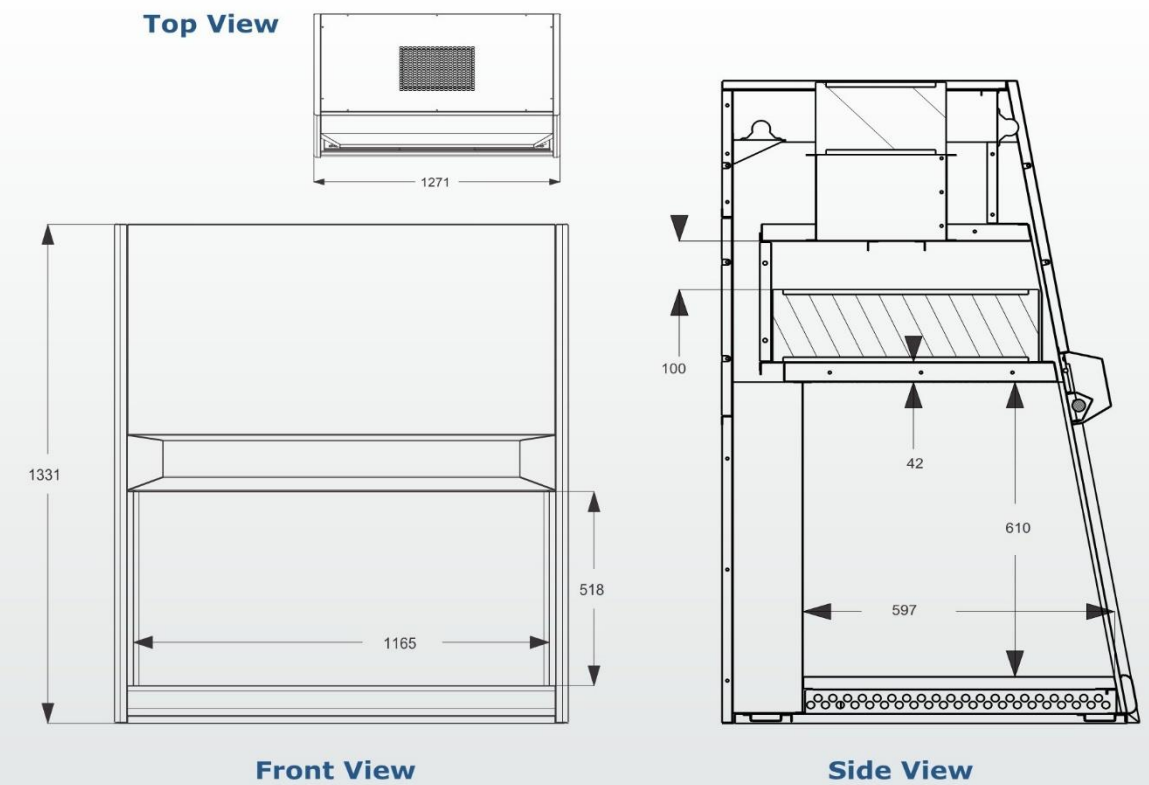


CE Marked Product



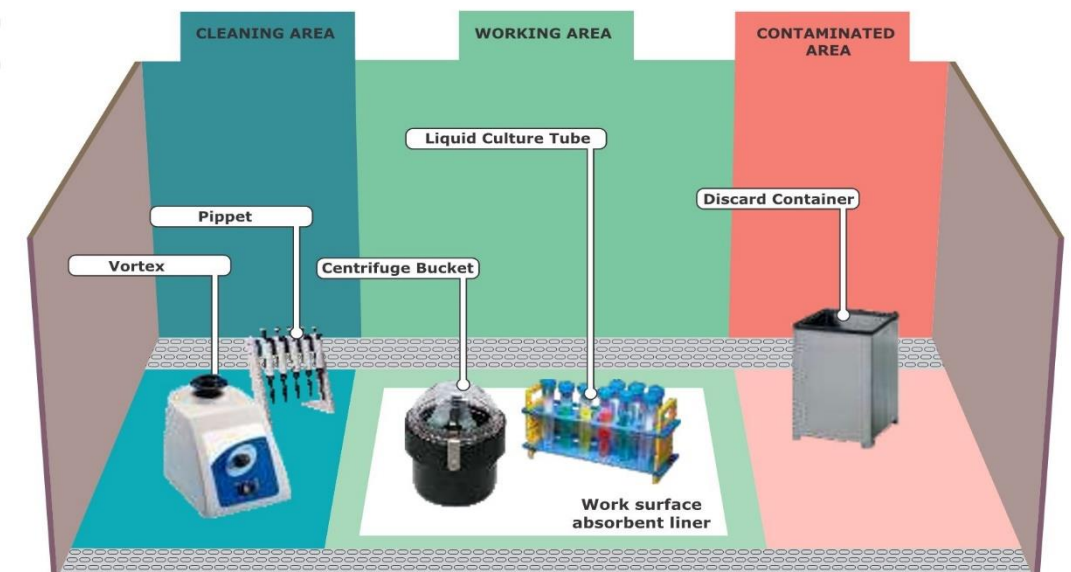
ISO 9001 : 2015 Certified Company

## SCHEMATIC DRAWING - MAXI SAFE SERIES (Fig. 1)



(Figure 1)

## LAYOUT FOR WORKING WITHIN BIOSAFETY CABINET (Fig. 2)



(Figure 2)