



Biological Safety Cabinet Class II Type B

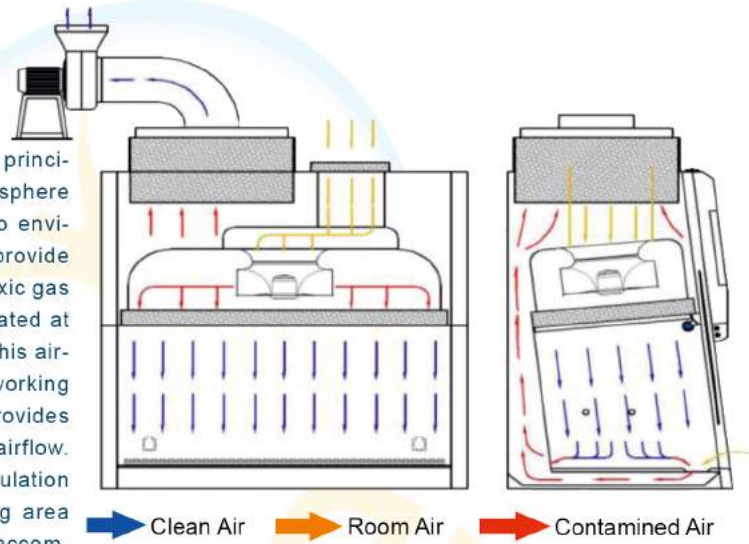
C Series

- ✓ Superior Biological Protection for Personnel, Product / Material and Environment
- ✓ Suitable for Working With Agents Assigned to Biological Risk Level 2+/3
- ✓ Validation Guaranteed Biosafety
- ✓ Ergonomic Design

EN12469  

CLASS II TYPE B BSC AIRFLOW DIAGRAM

Metisafe Class II Type B2 Biological Safety Cabinets works under principles with full exhaust of Pre/HEPA filtered fresh air to outer atmosphere without recirculation. Exhausting through HEPA filter protects also environment. Those Airflow principles of Class II Type B2 Cabinets provide safe work with biological risk level 2+/3 agents and also with cytotoxic gas & materials. The room air is pulled in through the perforations located at front of the work plate and directed to blower plenum (inflow air). This airflow direction prevents reaching dirty air to materials over the working plate. Pre/HEPA filtered air supplied through top of the cabinet provides the work area protecting the work zone under ISO-5 class laminar airflow. Total air in the working cabinet fully exhausted without recirculation through exhaust blower fan to atmosphere by keeping working area under negative air pressure. In addition to primary air barrier accomplished by negative pressure within the working zone double wall negative plenum design of the Metisafe cabinet prevents particle escape to surroundings and zero leakage is ensured.



Removable monoblock or sterilization available partitioned, high strength, non-vibrating stainless steel work plate



Isolated electrical components assembly from contaminated zones, easy to reach for servicing.



Automatic filter compensation, cruise control airflow rate. Energy efficient high performance EC fan technology



Scratch-proof stainless steel, monoblock interior cabinet surface with easy to clean continuous radiused corners



Monoblock and piston supported openable front panel for comfort sash window backside cleaning



Plenum cast design creates negative pressure around contaminated work area and ensures zero leakage



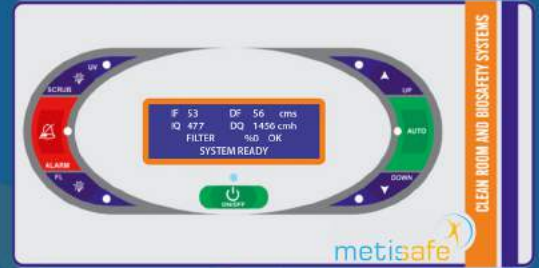
Back sloped front panel design according to anthropometric rules provides increased viewing angle, operator comfort and ergonomic for long period of works



DOP Test Ports
 Low Noise Level
 Easy Filter Change
 EN 12469 Certificated
 Low Energy Consumption
 Easy Transport and Assembly

MICROPROCESSOR CONTROL UNIT

Easy adjusted working parameters by touch pad control panel Continuous airflow velocity measuring sensors and cruise controlled automated airflow rate adjustment Audio and visual alarm activation on airflow rate changes Manually cancellable alarm Real time information available large LCD screen: Airflow velocity, Airflow rate, Total work time, UV and fluorescent lamp work time, Alarm activation memory data, Filter change periods, Filter integrity state, Alarm activation log data



- ✓ Corrosion resistant exhaust blower
- ✓ Homogenous and cruise control laminar airflow
- ✓ Advanced filter compensation system keeping steady air velocity under increased filter resistance
- ✓ Continuous work suitable HEPA Fan/Filter Unit
- ✓ Contamination proof antimicrobial coated steel main body frame
- ✓ Auto set-up available motorized sash window
- ✓ Homogenous illumination
- ✓ Timer controlled effective disinfection UV Lamp



Metisafe biological safety cabinet working chambers are dead zones free and have undisturbed laminar airflow by advanced air direction designs and sophisticated CFD analysis

OPTIONALS



Height adjustable support stand



Anti-vibration weighing balance table



Monoblock or partited working table



Pre-Filter



Acrobat Document Holder



Special Production S series



Hanger Apparatus

High Capacity HEPA/ULPA Filter

Carbon Filter

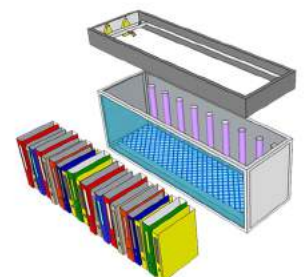
Adjustable LED illumination

Key/Lock Mechanism

Manual Fumigation

Heater & Microscope Assembly Base

High Capacity Exhaust Fan Motor



Document / Equipment Cleaning Module

METISAFE CLASS II TYPE B BIOLOGICAL SAFETY CABINET C SERIES TECHNICAL SPECIFICATIONS

MODEL		MSC-IIB-C90	MSC-IIB-C120	MSC-IIB-C150	MSC-IIB-C180
Internal Dimensions (WxLxH) mm		875x520x746	1250x610x675	1480x520x746	1785x520x746
External Dimensions (WxLxH) mm		995x735x1600	1370x843x1700	1600x735x1590	1905x735x1590
Support Stand (WxLxH) mm		995x735x745	1370x843x745	1600x735x745	1905x735x745
Working table-floor height		840 mm			
Exhaust Fan Motor Capacity		Suitable up to 10 m horizontal & 3 m vertical duct length			
Airflow (m/s)	Inflow	0.50 ± % 5			
	Downflow	0.38 ± % 5			
Filter Types (EN 1822)	Main Filter	High Capacity H14 HEPA, 0,3 µm particle %99.995 filtration efficiency			
	Exhaust Filter	High Capacity H14 HEPA, 0,3 µm particle %99.995 filtration efficiency			
	Pre Filter (optional)	G4/F5			
Clean Area Class	EN14644	< ISO 5			
	FED209E	< Class 100			
Working Table	Standard	304 Stainless Steel			
	Optional	316L Stainless Steel			
Sash Window Aperture (mm)	Preset/Std	200 ± % 10 mm			
	Max Height	530 ± % 10 mm			
Sash Window		≤ 6 mm Laminated			
Electrical socket voltage and frequency		220 - 240 VAC / 16A			
Supply Voltage / Frequency / Power / Current		230 VAC / 50 Hz / 2500W / 16A			
Working Area Illumination (Lux)		850 - 1250 Lux			
Noise Level	Normal Mode	≤ 56 dB(A)	≤ 56 dB(A)	≤ 58 dB(A)	≤ 62 dB(A)
	Eco (Stand by) Mode	≤ 50 dB(A)	≤ 50 dB(A)	≤ 50 dB(A)	≤ 52 dB(A)
Power Consumption	Fan Filter	105 W	200 W	170 W	200 W
	Illumination	50 W	50 W	50 W	50 W
	UV Lamp	30 W	30 W	30 W	30 W
Pack/Palette Dimensions (WxLxH) mm		1270x875x1840	1645x980x1840	1875x875x1840	2175x875x1840
Weight (kg), without support stand/storage cupboard		190	220	260	310
Main Body & Design Parameters		Antibacterial Epoxy Powder paint Coated Steel, 30° Openable Front panel for easy working chamber cleaning, < 7° angle sloped front panel for work comfort and increased working chamber vision, easy reachable electronic control & electrical part protection inside at front panel isolated from working chamber, UV Resistant tempered glass			
Microprocessor Control Unit & Display Parameters		One key touch on-off, Timer setting, Inflow/Downflow Air Velocity/Airflow Rate, System Ready/Not-Ready message/warning, Normal/Stand-by option button, Automated airflow rate and velocity compensation system, HEPA Filter Life (percent), Total working Time, UV and FL Lamp working times, Automatic Stand-by status at sash window closure, Motorized sash window level position setting, One key sash window preset position, Automatic UV Lamp-Off protection at sash window opening, Sash window position message, Servicing records, Password protected technical service key			
Audio-Visual Alarm Parameters		Audible and Visual Alarms for Air Flow/Rate System ready/not-ready information, Filter/Lamps replacement warning, Service need warning, Alarm cancel button, Unproper sash window position warning			
Quality and Certificates		CE, Management certificate of ISO9001, Biological Safety Cabinets EN 12469, ISO 14644 Clean Room class compatibility, EN61010 Electrical and Electronic safety compatibility, Accredited test company validation guarantee (When installation made by Metis or by its certified technical personnel)			
Optionals		Pre Filter, High Capacity HEPA Filter, ULPA Filter, Carbon Filter, Manual decontamination/fumigation, Biocidal surface coating material, Height adjustable support stand, Key-lock protection switch, Lux adjustable illumination, Working chamber Inside/Outside temperature measurement, Active noise control system, Foot pedal control, Work chamber Hanger apparatus, Heater & Microscope Assembly Base, Anti-vibration weighing balance table, Document / Equipment Cleaning Module, Sensor integrated Sash Window safety mechanism			

ACCESSORIES



Microincinerator



Gas / Vacuum Valves



IP 54 Electrical Socket

- Solenoid / Backflow Valve ✓
- Cleanroom Chair ✓
- Voltage Regulator ✓
- Arm Rest Apparatus ✓
- Disinfection dispenser ✓
- Acrobat Document Holder ✓
- IR Sensored Bunsen Burner ✓
- Portable Germicidal UV lamp ✓
- Height adjustable support stand ✓
- Mechanical Airflow Velocity Sensor ✓
- UPS (Uninterruptible Power Supply) ✓
- BSC Microbiological Test Equipments ✓

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Also available from METISAFE

Hygienic air cleaners with climatization, Ceiling type HEPA Filtration Units, Laminar Air Flow Cabinets (LAF), Biological Safety Cabinets (BSC), Chemical Fume Hoods, Mobile Air Extraction Units, Modular Clean Room and Biological Safety Units, Mobile Biosafety Labs, Air-Shower, Air-Lock and Pass-Boxes...



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