



Biological Safety Cabinet Class II Type A

C Series

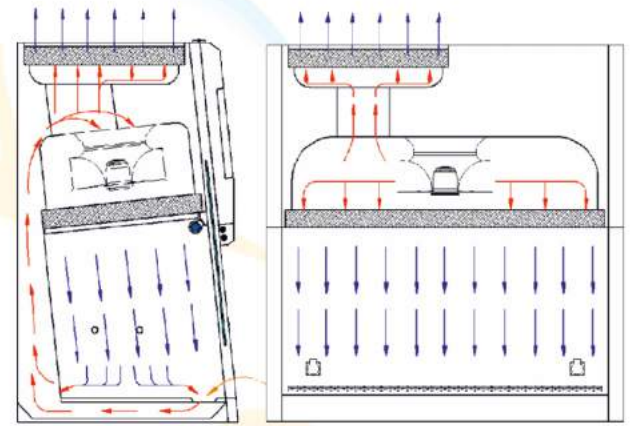
- ✓ Superior Biological Protection for Personnel, Product / Material and Environment
- ✓ Ergonomic Design
- ✓ Spacious Work Area
- ✓ Class 100 < (FED209E) / ISO 5 < (EN14644)
Cleanliness Class work area

EN12469



CLASS II TYPE A BSC AIRFLOW DIAGRAM

Metisafe Class II Type A Biological Safety Cabinets works under principles of air circulation, air filtration and keeping working area under negative air pressure. In BSC, 70% (+/-5%) of total air is recirculated and filtered through main HEPA filter located at work zone top. The rest of the air, 30% (+/-5%), is exhausted to surrounding area environmentally protected after passing through exhaust HEPA filter. The room air is pulled through the perforations located in front of the work plate and directed to blower plenum (inflow air). This air flow direction prevents reaching dirty air to materials over the working plate. Inflow air together with recirculated air is mixed at the blower plenum then pass through the main HEPA filter and laminarizer and reaches into the work area protecting the work zone under ISO-5 class laminar airflow. 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.



→ Clean Air → Room Air → Contaminated Air



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



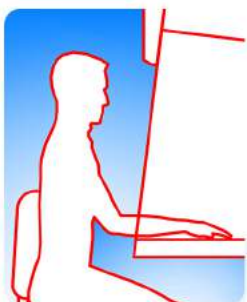
Scratch-proof stainless steel, monoblock interior cabinet surface with easy to clean continuous radiused corners



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

Easy Filter Change

EN 12469 Certificated

Easy Transport and Assembly

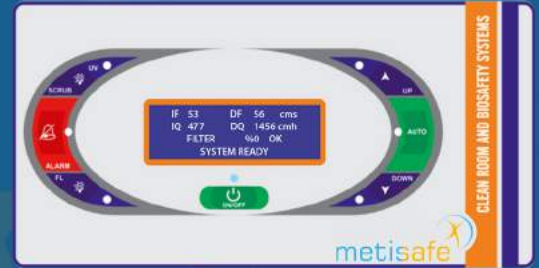
Field Performance Qualification

Series/Models Range with Cost/Benefit Options

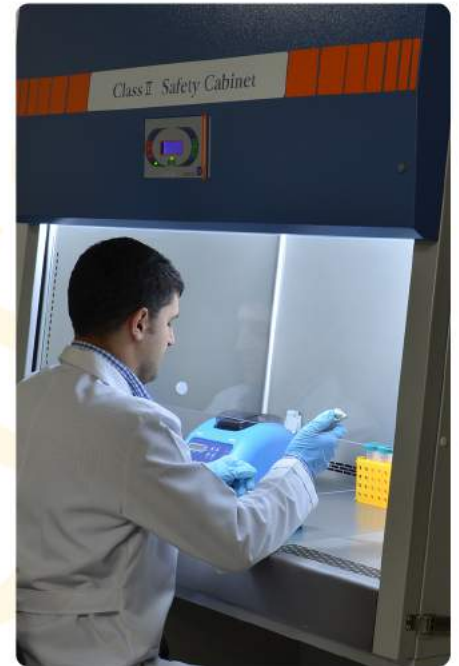


MICROPROCESSOR CONTROL UNIT

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



- ✓ Homogenous and cruise control laminar airflow
- ✓ Advanced filter compensation system keeping fixed airflow rate under increased filter resistance
- ✓ Continuous work suitable fan motor
- ✓ Contamination proof antimicrobial coated steel main body frame
- ✓ Auto setup 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 partitioned working table



Hanger Apparatus



Pre-Filter

Carbon Filter

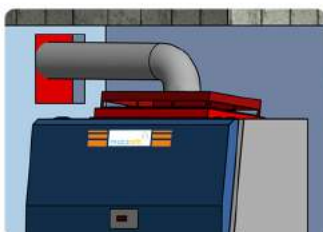
Adjustable LED illumination

Key/Lock Mechanism

Manual Decontamination / Fumigation

High Capacity HEPA/ULPA Filter

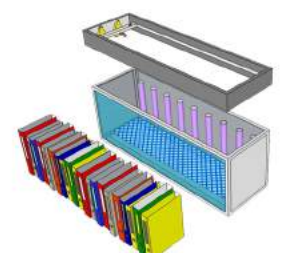
Heater & Microscope Assembly Base



Exhaust Canopy Connection



Acrobat Document Holders



Document / Equipment Cleaning Module

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

MODEL		MSC-IIA-C90	MSC-IIA-C120	MSC-IIA-C150	MSC-IIA-C180
Internal Dimensions (WxLxH) mm		875x520x746	1250x610x675	1480x520x746	1785x520x746
External Dimensions (WxLxH) mm		995x735x1440	1370x843x1445	1600x735x1478	1905x735x1467
Support Stand (WxLxH) mm		995x735x745	1370x843x745	1600x735x745	1905x735x745
Working table-floor height		840 mm			
Airflow (m/s)	Inflow	0.50 ± % 5			
	Downflow	0.38 ± % 5			
Filter Types (EN 1822)	Main Filter	H14 HEPA, 0.3 µm particle %99.995 filtration efficiency			
	Exhaust Filter	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		1100x970x1690	1480x1070x1720	1700x970x1690	2000x970x1690
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, HEPA/ULPA Filter, Carbon Filter, Canopy connection, 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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