



*Class II Type B2 biohazard safety cabinets provide product, operator and environmental protection and are suitable for general microbiological work with agents assigned to biological safety levels I, II or III. In a Class II Type B2 cabinet, all inflow and downflow air is exhausted after HEPA/ULPA filtration to the external environment without recirculation within the cabinet.*

*These cabinets are supplied with an integral exhaust collar that allows the cabinet exhaust to be ducted to the external environment via a dedicated exhaust system.*

*As they incorporate a non-recirculating total exhaust design, Class II Type B2 cabinets are suitable for work with toxic chemicals when these are present in trace amounts.*

## MAIN FILTRATION AGENTS

► **ISO Class 3 air cleanliness** within workzone as per ISO 14644.1 (equivalent to Class 1 as per the US Federal Standard 209E, **100 times cleaner** than the usual Class 100 classification on cabinets offered by the competition).

► **Minipleat separatorless H13 HEPA / U15 ULPA filter technology**, operating at the typical efficiency of **99.999% at MPPS, 0.3 and 0.12 microns** provides better operator, product and environmental protection than conventional HEPA filters.

## CABINET CONTROL SYSTEM

► **Esco Sentinel™ Microprocessor Cabinet Control System** allows the user to easily access all cabinet functions. The control system monitors and displays cabinet airflow constantly on the control LCD screen, prompting the user with audible and visual alarms in case of any unsafe condition.

► True airflow velocity sensing technology, with temperature compensation for improved sensor accuracy.

► Audible and visual alarms for low airflow, unsafe sash positions.

► Automatic warm-up cycle is enabled upon turning on the cabinet, ensuring all contaminants are purged from the cabinet workzone before the operator can use the cabinet. All menu functions are inactive during this period. Automatic post-purge cycle can be configured at shutdown, ensuring all residue contaminants are purged out of the workzone before deactivation.

► Fail-safe system ensures that in case of exhaust failure, the cabinet's main fan automatically shuts down to ensure safety to the user and the environment.

► An admin PIN can be set to restrict unauthorized access to all menu functions.

## ERGONOMIC FEATURES

► **Attractive stainless steel internal side walls and back wall** are made from a single sheet of stainless steel, which eliminates welded joints where contaminants may accumulate. The single-piece inner liner enhances the cleanability of the workzone and is non-glaring for operator comfort.

► Additional UV-interlock ensures UV lamp feature is deactivated when the sash is not fully closed.

► **Built-in 5000k fluorescent lighting** offers excellent illumination throughout the workzone. **Electronically-ballasted lighting system** is instant-start, non-flickering and energy-efficient.

► **Sloped front design and frameless front sliding sash** allow for maximum visibility into the workzone.

► **Cabinet armrest** is raised above the workzone to ensure that the operator's arms do not block the front inflow perforations.

## CABINET BODY CONSTRUCTION

► All components designed for maximum chemical resistance for long service life and durability. All cabinet components are cleanroom compatible.

► Industrial-grade main body constructed of electrogalvanised steel: with an abrasion-resistant white oven-baked powder-coated finish. Attractive single-piece stainless steel work surface is easy to remove.

► **Inherently safe design** maintains containment for protection even with work tray removed, thus ensuring safety for the operator during cleaning.

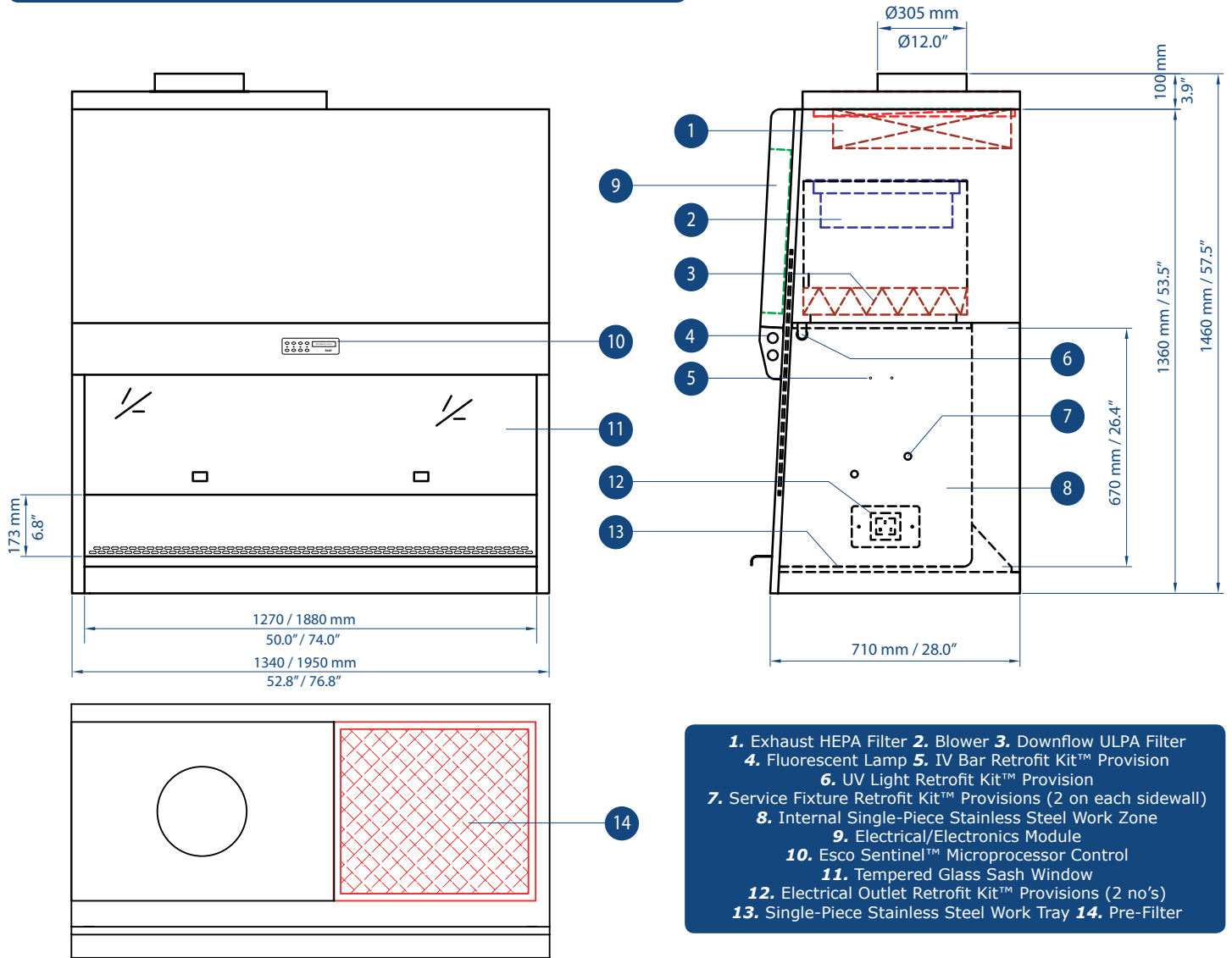
► Permanently lubricated direct drive centrifugal blower(s); **energy efficient external rotor motor** type design reduces operating costs; extremely low noise and vibration levels (less than 64dBA at working position) due to proprietary construction and mounting technology.

► Built-in solid state variable speed controller(s) (infinitely adjustable from zero to the maximum setting) with built-in RFI and noise filters is superior to conventional "step" controllers.

► **Superior electrical safety for the operator**; all electrical components are UL listed or UL recognized; all cabinets are factory tested for electrical safety after production at manufacturing site.

► Designed to meet the general safety requirements of the IEC 61010-1 / EN 61010-1 / UL 61010A-1 / CSA C22.2 No. 1010.1-92.

► Cabinet is shipped fully-assembled; simply plug the unit into a power source for operation - no local installation is required; unit is supplied with a 3-pin plug; 10 international plug types are available (specify order code when ordering).



- 1. Exhaust HEPA Filter
- 2. Blower
- 3. Downflow ULPA Filter
- 4. Fluorescent Lamp
- 5. IV Bar Retrofit Kit™ Provision
- 6. UV Light Retrofit Kit™ Provision
- 7. Service Fixture Retrofit Kit™ Provisions (2 on each sidewall)
- 8. Internal Single-Piece Stainless Steel Work Zone
- 9. Electrical/Electronics Module
- 10. Esco Sentinel™ Microprocessor Control
- 11. Tempered Glass Sash Window
- 12. Electrical Outlet Retrofit Kit™ Provisions (2 no's)
- 13. Single-Piece Stainless Steel Work Tray
- 14. Pre-Filter

General Specifications		AB2-4SX*	AB2-6SX*
External Dimensions (L x W x H)		1340 x 710 x 1460 mm / 52.8" x 28.0" x 57.5"	1950 x 710 x 1460 mm / 76.8" x 28.0" x 57.5"
Internal Work Zone (L x W x H)		1270 x 550 x 670 mm / 50.0" x 21.7" x 26.4"	1880 x 550 x 670 mm / 74.0" x 21.7" x 26.4"
Standards Compliance			
Designed to meet and exceed the requirements of: <b>EN 12469:2000 and ANSI / NSF49 Standards</b> Air cleanliness: ISO 14644.1 Class 3, IEST-G-CC1001, IEST-G-CC1002 and other equivalent requirements Filter performance: IEST-RP-CC034.1, IEST-RP-CC007.1, IEST-RP-CC001.3 and EN1822 Electrical safety: IEC 61010-1 / EN 61010-1 / UL 61010A-1 / CSA C22.2 No. 1010.1-92			
Average Airflow Velocities	Inflow	Initial setpoint: 0.53 m/s or 105 fpm	
	Downflow	Initial setpoint: 0.31 m/s or 61 fpm (uniformity is +/-20%)	
Airflow Volumes At Initial Airflow Velocity Setpoints	Inflow	419 cmh / 246 cfm	621 cmh / 365 cfm
	Downflow	897 cmh / 528 cfm	1327 cmh / 781 cfm
	Total Exhaust	1166 cmh / 686 cfm	1714 cmh / 1008 cfm
Audible/visual alarm will activate when exhaust airflow volume drops below 12% of the initial volume.			
Pressure Drop Requirements for Exhaust Ducting		440 Pa / 1.77" WG	365 Pa / 1.47" WG
Cleanliness Within Working Area			
ISO 14644.1 Class 3, US Federal Standard 209E Class 1 / M1.5, AS 1386 Class 1.5, JIS B9920 Class 3, BS5295 Class C, Class M10,000 as per KS 27030.1 and equivalent classes of VDI 2083 and AFNOR X44101			
Downflow Filter Type			
ULPA filter with integral metal guards and filter frame gaskets; Typical efficiency 99.999% at 0.3µm, 0.12µm and MPPS; fully compliant with EN 1822 and IEST-RP-CC001.3 requirements			
Exhaust Filter Type			
HEPA filter with integral metal guards and filter frame gaskets; Typical efficiency 99.99% at 0.3µm; fully compliant with EN 1822 and IEST-RP-CC001.3 requirements			
Power Supply Options			
*Choose from the following options and specify option number when ordering, (e.g. AB2-4S1 for 220-240VAC 50HZ) 1. 220-240VAC 50HZ, 1 phase 2. 110-130VAC 60HZ, 1 phase 3. 220-240VAC 60HZ, 1 phase 4. 110-130VAC 50HZ, 1 phase 5. 100-110VAC 50HZ / 60HZ			

**ESCO® Esco Biotechnology Equipment Division**

Esco Biotech is a highly focused manufacturer of laminar flow, biohazard safety and other HEPA-filtered cabinets for the laboratory with a history of quality cabinets since 1978. We are predominantly oriented towards the international marketplace, with sales in more than 70 countries and 95% of turnover exported. Our products have been independently tested to standards such as AS1807.5 and EN12469. Products are manufactured under an ISO 9001 registered quality system.

PT Esco Bintan Indonesia



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