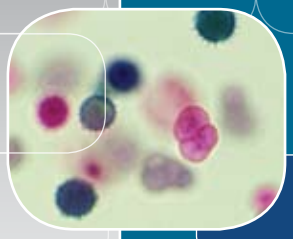


Streamline®

Esco Streamline PCR Cabinet, Model SCR-2A_.

Streamline Polymerase Chain Reaction Cabinets

Introduction

Polymerase Chain Reaction* (PCR) is a process where millions of copies of DNA are amplified from a single copy, or low copy number template. This reaction is fundamental to almost all applications requiring high copy number of starting material and is used in all laboratories working with DNA and RNA.

Because of the high copy number that is generated during PCR, it is absolutely essential to prevent contamination of the PCR reaction.

In addition to good laboratory practice, the ideal PCR laboratory should consist of three areas, each isolated from the other. Reagents should be prepared in the reagent preparation area and transferred to the sample preparation area, through a pass box, or inside closed containers. After preparation of the final reaction mix, the tubes should be transferred to the amplification area, again through a pass box or in a closed container. The PCR amplification and results analysis takes place in this area.

To guarantee contaminant-free samples, it is essential to work in an environment where the air quality is controlled, such as a PCR clean bench, vertical laminar flow or biological safety cabinet.

Designed and Built for Enhanced Usability

Esco PCR cabinets are designed for high performance operation and comfort to ensure enhanced productivity.

- The ergonomically designed sloped front and side glass walls provide the operator with a high level of visibility into the work zone.
- A double-flap safety cover, constructed of 5 mm (0.2") UV-absorbing beta radiation resistant polycarbonate, provides superior operator protection while allowing easy access to the work zone.
- The built-in 5000K fluorescent lighting provides superior illumination of the work zone. The zero flicker electronically ballasted lighting system is reliable with instant start.
- The decontamination shelf is placed on the back wall, closer to the UV lamp, for most effective sterilization.

Built-In UV Decontamination

Esco PCR cabinets are specifically designed for use in polymerase chain reaction applications and incorporate a number of unique features.

- Each unit is fitted with a powerful built-in 253.7 nanometer, 15-watt UV lamp.
- The UV lamp is located to eliminates "dead zones" ensuring all exposed interior surfaces are effectively decontaminated.
- The Esco SCR-2A model features an adjustable UV-timer for UV lamp control giving you precise control of the decontamination cycle.
- A reliable interlock safety system on all models prevents activation of the UV lamp unless the safety cover is closed and will deactivate the lamp if the cover is opened.

**Polymerase chain reaction (PCR) is a patented process owned by Hoffman La Roche*

	Cabinet Performance	Air Quality	Filtration	Electrical Safety
Standards Compliance	IEST-RP-CC002.2, Worldwide	ISO 14644.1 Class 3, Worldwide AS 1386 Class 1.5, Australia JIS B9920 Class 3, Japan	IEST-RP-CC034.1, Worldwide IEST-RP-CC007.1, Worldwide IEST-RP-CC001.3, Worldwide EN1822 (H 13), Europe	IEC 61010-1, Worldwide EN 61010-1, Europe UL 61010-1, USA CAN/CSA-22.2, No.61010-1

Enhanced Filtration System

True vertical laminar airflow covering the entire work zone within the cabinet offers greater protection against contamination from the ambient environment and cross-contamination within the main chamber compared to conventional dead-air boxes.

- An improved mini-pleat separation technique maximizes filter surface area, improves efficiency and extends the life of the filter.
- Mini-pleat separatorless HEPA filter technology operates at a typical efficiency of >99.99% at 0.3 microns.
- Esco PCR cabinets provide ISO Class 4 air cleanliness within the work zone (as per ISO 14644.1, equivalent to Class 10 as per US Federal Standard 209E).
- An additional pre-filter traps larger particles, prolonging the life of the main filter.

The Highest Quality Cabinet Construction

- All Esco products are manufactured to the highest quality using the finest materials.
- All components are designed for maximum chemical resistance for durability and a long service life.
- The cabinet main body is constructed of industrial-grade electrogalvanised steel and is superior to less durable plastic cabinets offered in the market.
- All cabinet components are cleanroom compatible.
- The external structure is coated with Esco Isocide™ antimicrobial coating to protect against contamination and inhibit bacterial growth, eliminating 99.9% of surface bacteria within 24 hours of exposure.
- Tempered UV-resistant glass sides provide additional operator protection.

Blower Efficiency

- Esco PCR cabinets incorporate permanently lubricated direct drive centrifugal blowers.
- An energy efficient external rotor motor design reduces operating costs and has extremely low noise and vibration levels.

Designed and Built to Exceed Safety Criteria

All components used in Esco products meet or exceed all applicable safety requirements.

- Each cabinet is individually factory tested for safety and performance in accordance with the latest clean air standards and is shipped with a detailed factory commissioning report.
- All electrical components are UL listed or UL recognized, ensuring superior electrical safety for the operator.

Warranty

Esco PCR cabinets are covered by a 12 month warranty, excluding consumable parts and accessories. Contact your local Sales Representative for specific warranty details.

Airflow

- During operation, room air is drawn through the top of the cabinet via a pre-filter, with 85% arrestance, trapping larger particles and increasing the life of the main filter.
- The air is then forced evenly through the main HEPA filter resulting in a unidirectional stream of clean air that is projected vertically over the internal work zone. All airborne contaminants are flushed and diluted, resulting in a particulate-free work environment.
- The purified air then leaves the main work chamber across the open front of the cabinet.
- The average airflow velocity of 0.30m/s (60fpm) in the SCR-2A ensures that cleanliness is maintained in the work zone.

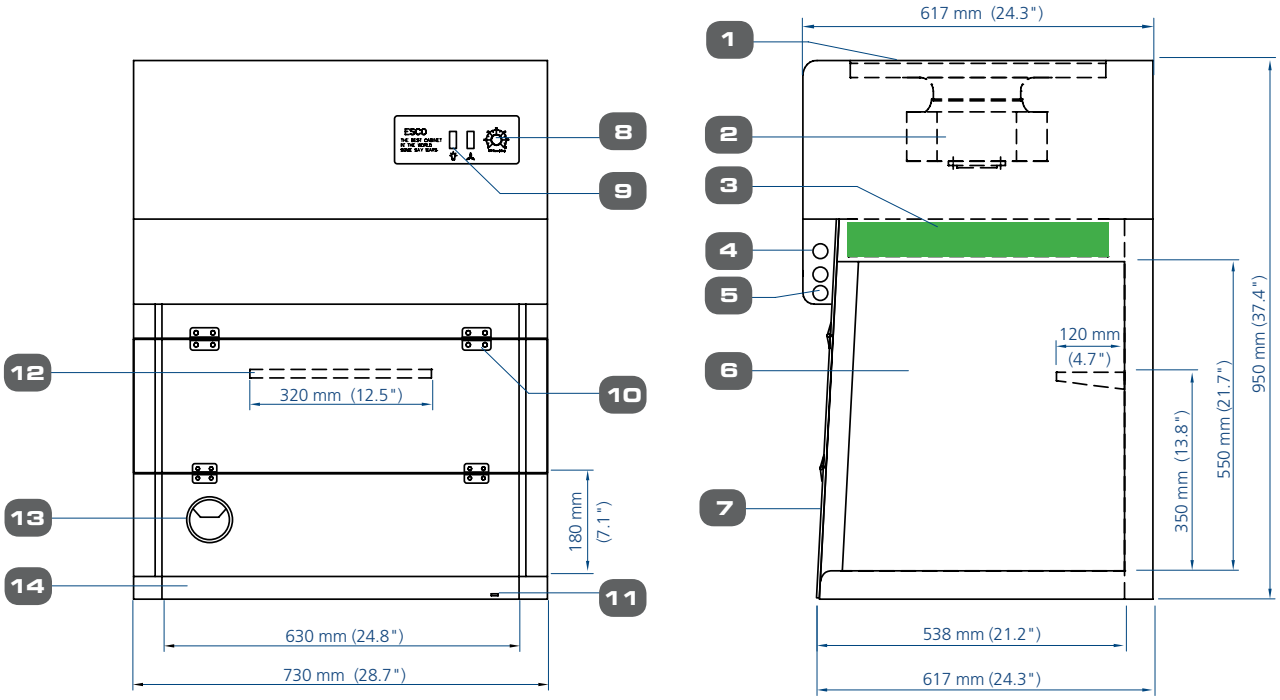
Streamline Series Control Panel

General Specifications, SCR Vertical Laminar Flow Cabinets

Note to customer: Choose from the following options and specify option number when ordering, (e.g. SCR-2A1 for 220-240VAC 50HZ)

Model		SCR-2A_
External Dimensions (L x W x H)		730 x 617 x 950 mm (28.7" x 24.3" x 37.4")
Internal Dimensions (L x W x H)		630 x 538 x 550 mm (24.8" x 21.2" x 21.7")
Laminar Airflow Velocity		Average of 0.55 m/s (110 fpm)
Pre-Filter		Washable polyurethane fibers with 85% arrestance
Sound Emission		<64 dBA
Fluorescent Lamps Intensity		>800 Lux (>75 foot candles)
UV Lighting		253.7 nanometer 15-watt UV lamp
Construction	Main Body	Electrogalvanised steel with white oven-baked epoxy powder-coated finish. Coated with Esco Isocide antimicrobial coating
	Work Zone	1.2mm (0.05") 18 gauge stainless steel grade 304
Shipping Dimensions, Maximum (L x W x H)		825 x 725 x 1120 mm (32.5" x 28.5" x 44.1")
Shipping Volume, Maximum		0.67 m^3 (24 ft^3)
Shipping Weight, Maximum		97 kg (214 Lbs)
Electrical	Model	Voltage
	SCR-2A1	220-240V, AC, 50Hz, 1Ø
	SCR-2A2	110-130V, AC, 60Hz, 1Ø
	SCR-2A3	220-240V, AC, 60Hz, 1Ø

Model SCR Vertical Laminar Flow Cabinet Technical Specifications



1. *Pre-filter*
2. *Blower*
3. *HEPA filter*
4. *UV lamp*
5. *Fluorescent lamps*
6. *Tempered glass side panel*
7. *Hinged window, polycarbonate*
8. *UV timer*
9. *Operating switches*
10. *Spring-loaded hinge*
11. *UV Interlocking switch*
12. *Powder coated steel shelf*
13. *Pass-through flap*
14. *Stainless steel worktop with curved front edge*

Esco Containment, Clean Air and Laboratory Equipment Products

Biological Safety Cabinets, Class II, III
Fume Hoods, Conventional, High Performance, Ductless Carbon Filtered
Laminar Flow Cabinets, Horizontal, Vertical, PCR
Animal Containment Workstations
Hospital Pharmacy Isolators, Cytotoxic Safety Cabinets
Specialty Workstations: *In-Vitro* Fertilization, Powder Weighing
PCR Thermal Cyclers, Conventional, Real-Time
Cleanroom Fan Filter Units, Modular Rooms, Air Showers, Pass Thrus

Since 1978, Esco has emerged as a leader in the development of controlled environment, laboratory and cleanroom equipment solutions. Products sold in more than 100 countries include biological safety cabinets, fume hoods, ductless fume hoods, laminar flow clean benches, animal containment workstations, cytotoxic cabinets, hospital pharmacy isolators, and PCR cabinets and instrumentation. With the most extensive product line in the industry, Esco has passed more tests, in more languages, for more certifications, throughout more countries than any biosafety cabinet manufacturer in the world. Esco remains dedicated to delivering innovative solutions for the clinical, life science, research and industrial laboratory community. us.escoglobal.com.

NSF / ANSI 49 Biological Safety Cabinets • Animal Containment Workstations • Fume Hoods • Clean Benches

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