



PCR SERIES

LAMINAR FLOW CABINETS



INTRODUCTION

Achieve precision and confidence in your DNA and RNA work with the PCR Series Laminar Flow Cabinets from AES Environmental. Designed to maintain a particle-free workspace, these cabinets use vertical laminar airflow to safeguard sensitive samples from contamination. The PCR60R™ model takes it a step further with partial air recirculation and a mild air barrier for added operator protection. For even greater peace of mind, built-in UV germicidal irradiation ensures rapid decontamination between uses. Whether in molecular biology, diagnostics, or research, the PCR Series delivers the reliability and control you need for flawless results.

PCR60 CABINETS

Designed for precision-driven molecular work, our **PCR Cabinets** provide a **biologically clean, particle-free environment** to safeguard sensitive DNA and RNA samples. With **vertical laminar airflow**, they minimize contamination risks, ensuring **reliable results** in every experiment.

Compact, efficient, and easy to integrate, these cabinets fit seamlessly onto **standard laboratory benches** or **optional floor stands**, maximizing workspace efficiency without compromising performance. **Proudly designed and manufactured in Australia**, each unit undergoes **rigorous factory testing and certification by a NATA-accredited laboratory** for quality assurance.

AES Environmental's advanced **HEPA filtration technology** ensures an **ISO Class 5 or better clean work area**, delivering **99.995% efficient, particulate-free airflow** for reliable sample protection. To further minimize contamination risks,

an **integrated UV germicidal lamp** inactivates residual DNA/RNA particles between uses, preventing **carryover contamination**. The **UV system operates only when the fan is off**, with a **safety shield required during operation** for added user protection.



PCR60R CABINETS

Building on the product protection of the PCR60™ series, the **PCR60R™** also provides **enhanced operator safety**. This is achieved through a **protective air barrier** at the work opening and **HEPA filtration of exhaust air**, ensuring a **controlled and safe working environment**.

A **continuous air barrier** is created by drawing room air into a grille at the work

opening, helping to separate the operator from the work zone. The **partial air recirculation system** further enhances performance by **reducing air turbulence** and **minimizing particle bounce** within the work zone, creating an even cleaner, more controlled environment for sample preparation. Additionally, **positive pressure areas** are fully surrounded by **negative pressure zones**, effectively containing **hazardous aerosols**.

APPLICATIONS

Ensuring **accuracy and reliability** in **clinical and diagnostic PCR work**, requires a strictly controlled, **contamination-free environment**. Particulate and biological contaminants can compromise results, while post-procedure carryover contamination must be eliminated to maintain sample integrity.

Clyde-Apac PCR60™ cabinets provide a **high-purity work space**, shielding samples and equipment from **airborne contaminants** through **vertical laminar airflow** and **HEPA filtration**. For applications where operator protection is also a concern, the **PCR60R™ model enhances safety** with a **protective air barrier** and **HEPA-filtered exhaust**, reducing exposure to potentially hazardous aerosols.



CONSTRUCTION

CABINET

The **durable steel housing** is finished with a **baked enamel coating**, specially developed for **laboratory environments** to ensure **long-lasting performance**. The **work zone and removable UV shield** are constructed from **304 stainless steel**, providing a smooth, easy-to-clean surface that enhances hygiene and simplifies maintenance.

ELECTRICAL

PCR cabinets operate on **single-phase 240V, 50 Hz power** via a **standard 10A outlet**. A **low-voltage touch control panel** is located on the front of the cabinet, with **LED indicators** displaying the status of switched functions.

The **PCR60R™ model** includes an **audible alarm** and **warning LED** to alert users of any **reduction in airflow**, ensuring safe operation.

An **integral fluorescent lamp housing** minimizes heat build-up near the operator while providing a **lighting intensity of over 800 lux** at the work surface. The **UV lamp emits 254 nm radiation**, effectively inactivating **residual DNA/RNA contaminants**.

The **electrical system complies with AS/NZS 3100** for **electrical safety** and aligns with **IEC 61010-1**, the internationally recognized standard for laboratory electrical equipment. This ensures **compliance with both regional and global safety standards**, making the cabinets **suitable for regulated laboratory environments worldwide**.

ACCREDITED TESTING & INTERNATIONAL RECOGNITION

All performance testing is conducted by a third-party NATA-accredited laboratory (No. 1139), which is recognized under the ILAC MRA. This ensures compliance with internationally accepted standards, providing confidence in product reliability and regulatory adherence.



HEPA FILTERS

AES HEPA filters are independently tested and certified for **high-performance contamination control**. Manufactured to meet **AS 4260**, each filter achieves a **minimum efficiency of 99.995%**, passing the stringent **BS 3928 Sodium Flame Test**, and is **certified leak-free** in accordance with **AS 1807:2021**. To further enhance reliability, **positive-pressure filter seals** are surrounded by **negative-pressure zones**, ensuring containment and preventing leakage.



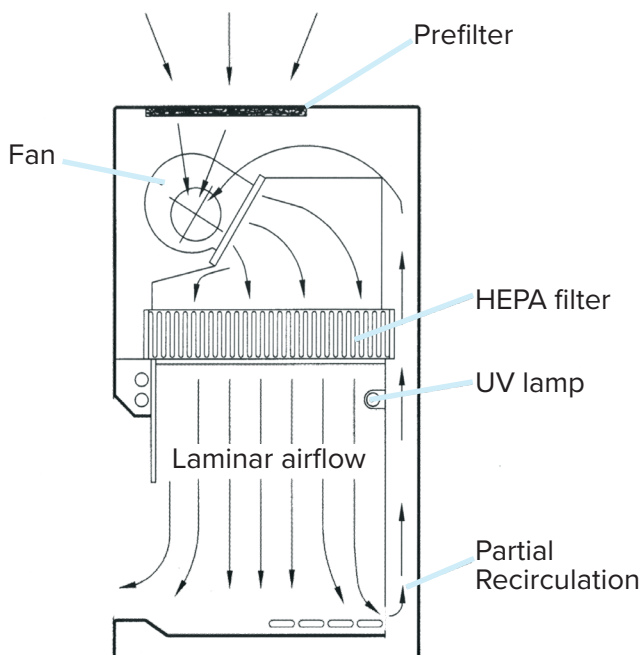
FAN

The **direct-drive fan** is regulated by a **speed controller**, ensuring **consistent airflow** throughout the filter's lifespan. Designed for **superior airflow performance**, the **fan and filter plenums** optimize **air distribution**, maintaining a **stable, particle-free work zone** for reliable contamination control.

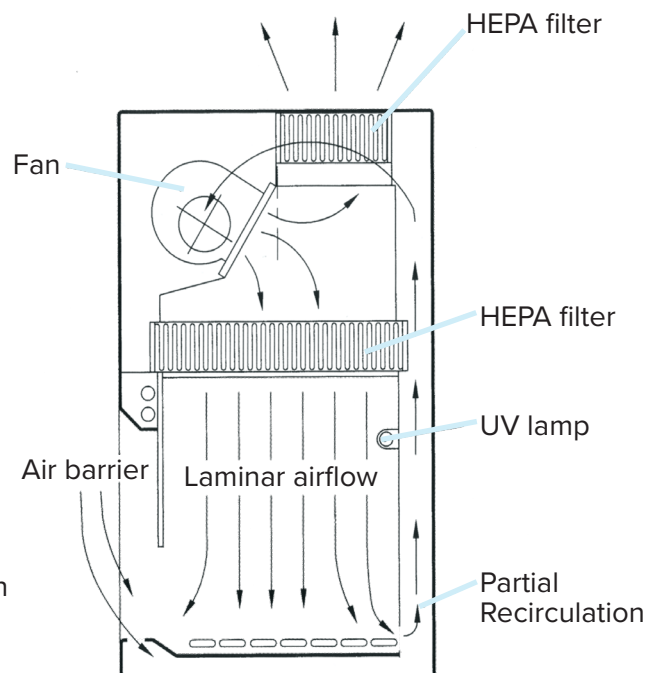
PRE-FILTERS

On **PCR60™ cabinets**, an **easily accessible, washable pre-filter** located on top of the unit captures **at least 90% of particles 5 microns and larger**. This reduces the particulate load on the HEPA filter, **extending its lifespan** and **minimizing maintenance requirements**.

PCR60



PCR60R



SPECIFICATIONS

| Model | Catalogue No | Overall Dimensions (mm) | | | Work Zone Dimensions (mm) | | | Weight (kg) |
|--------|--------------|-------------------------|------|-----|---------------------------|-----|-----|-------------|
| | | W | H | D | W | H | D | |
| PCR60 | 2015800 | 676 | 1000 | 690 | 576 | 575 | 525 | 70 |
| PCR60R | 2015810 | 676 | 1055 | 690 | 576 | 575 | 525 | 86 |

Note: PCR60R cabinets have top exhaust. The minimum exhaust discharge clearance recommended is 500 mm.

FEATURES

STANDARD FEATURES

- ISO Class 5 airflow performance
- Germicidal UV lamp with safety shield for rapid decontamination
- Glare-free fluorescent lighting (>800 lux at the work surface)
- Low-voltage touch control panel with LED function indicators
- 304 stainless steel work area for easy cleaning and durability
- Airflow alarm and warning LED (PCR60R) for user safety
- Comprehensive operation & maintenance manual for ease of use

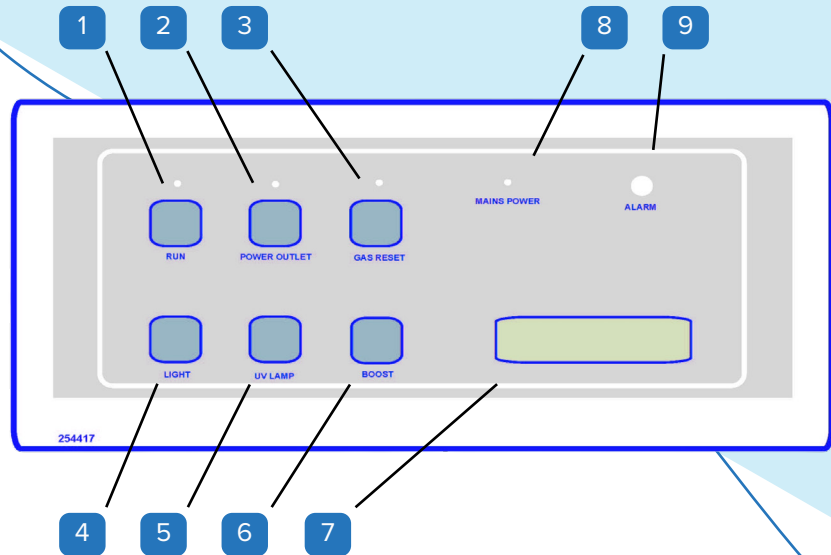
OPTIONAL EXTRAS

- Hourmeter for monitoring cabinet usage
- Manometer (differential pressure gauge) for HEPA filter monitoring
- Internal power outlet for laboratory equipment
- Service taps for air, gas, and vacuum integration
- Floor stand (Fixed or Electronically Adjustable) or mobile trolley for flexible placement
- Fumigation adaptors (PCR60R) for enhanced decontamination

OPERATION

Control Panel

1. Fan/post-use over-run switch
 2. Power outlet switch
 3. Gas reset switch*
 4. Fluorescent light switch
 5. UV lamp switch*
 6. Boost mode switch
 7. Display panel
 8. Mains power indicator
 9. Alarm indicator
- *optional function



The intuitive, low-voltage touch-control panel ensures seamless operation of essential cabinet functions. Designed for efficiency and ease of use, it features membrane-style toggle switches—a single touch activates or deactivates the selected function.

LED indicators provide real-time feedback on switchable functions, pre-filter status, and mains power, keeping users informed at a glance. The general-purpose power outlet (GPO) and UV lamp controls are conveniently integrated for streamlined workflow management.

For added safety, the PCR60R™ model includes an alarm indicator to alert users of airflow reduction, ensuring continuous protection.

PERSONNEL PROTECTION

PCR60™ cabinets are designed to protect products and experiments by maintaining a particle-free work environment, but they do not provide operator protection against aerosols containing hazardous materials.

For PCR applications requiring both product and personnel protection, the PCR60R™ safety cabinets incorporate an air barrier and HEPA-filtered exhaust system, reducing exposure to potentially harmful aerosols.



TESTING AND SERVICE

AES Environmental, through its NATA-accredited laboratory (No. 1139), offers comprehensive on-site maintenance, testing, and certification services for safety cabinets, laminar flow workstations, cleanrooms, and HEPA filter installations. These services are available through fully equipped laboratories in major Australian centres, with appointed service agents providing similar support in other regions.

AUSTRALIAN STANDARDS

PCR Series cabinets are manufactured to AS 2252.6, the Australian standard for laminar flow clean workstations, ensuring a controlled, particle-free environment for PCR sample preparation. This standard defines:

Cabinet design and construction – Built for durability, reliability, and easy decontamination

Cabinet performance – Maintaining an ISO Class 5 or better clean work zone

Air filter performance – Featuring AES HEPA filters tested to AS 4260 for high-efficiency particulate removal

While PCR cabinets provide product protection, they are not designed for personnel safety when working with hazardous aerosols. For applications requiring both product and operator protection, refer to AS 2252.2, which outlines the intended use of biological safety cabinets

CERTIFICATION

PCR Series cabinets are factory tested and certified by a third-party NATA-accredited laboratory (No. 1139), recognized under the ILAC MRA, ensuring compliance with AS 2252.6. For optimal performance and contamination control, additional testing and certification are recommended:

- Before first use (on-site validation)
- After maintenance or filter replacement
- After cabinet relocation
- At least annually as part of routine compliance testing
- In special circumstances, such as significant changes
- In the work program or suspected compromised performance

Regular testing ensures the clean work environment's integrity, supporting compliance with industry standards and maintaining reliable, contamination-free conditions for PCR applications.



AES Environmental maintains an ISO 9001:2015 quality management system to ensure process and product conformance.

Please note: PCR cabinets comply with AS 2252.6, which covers laminar flow clean workstations designed for product protection. Specifiers and intending users should refer to AS 2252.2 when assessing requirements for biological safety cabinets, which provide both product and personnel protection for handling hazardous materials.

GET TO KNOW US

AES Environmental is a family-owned engineering and manufacturing company, delivering market-leading solutions in Air Filtration, Pollution Control, and Life Sciences. Our brands are recognized across these industries, making AES Environmental a trusted, integrated source for air filtration, cleanroom, and pollution control needs.

No matter your industry, effective air filtration and pollution control are essential to protecting your products, processes, and people. That's why we manufacture all our products in Australia, backed by nationwide installation and service support you can rely on.

Our operations include:

- Head office & manufacturing – Sydney, NSW
- Manufacturing & service operations – Perth, WA & Adelaide, SA
- Service operations – Melbourne, VIC
- International manufacturing facilities – Bangkok, Thailand & Newcastle upon Tyne, UK

With expertise spanning industrial, commercial, and laboratory filtration, AES Environmental is committed to delivering proven solutions and hands-on support to help you build a cleaner, safer future.





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In keeping with our policy of continuing product improvement, we reserve the right to alter specifications without notice.


GET IN TOUCH!

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