

PCR Series Laminar Flow Cabinets



Sterile airflow • UV radiation control contamination in PCR work



Applications

In order to obtain reliable results in clinical and diagnostic PCR work, it is necessary to maintain an ultra-clean work environment that is free from biological and particulate contamination. Additionally, UV radiation is needed to destroy post-procedure contaminants. Clyde-Apac PCR60™ cabinets provide a high degree of protection for products and apparatus in PCR applications.

The PCR60R™ is a variant of the basic PCR cabinet, and provides protection for both personnel and products.

Description

PCR60 Cabinets

Cabinets are vertical laminar flow workstations designed for installation on standard laboratory benches, or on optional floor stands. Their compact dimensions reduce the need for bench space.

They are designed and manufactured in Australia, and each unit is factory-tested and certified by a NATA-registered laboratory. Please refer to our Standards page.

Vertical laminar airflow in the work zone creates a biologically-clean, particle-free work environment that reduces cross contamination during sample preparation.

Partial recirculation of air leaving the work zone reduces air turbulence and extends HEPA filter life.

A short-wavelength UV lamp inactivates residual DNA/RNA particles, thus reducing carryover contamination. The UV operates only with the fan switched off, and the UV shield should be fitted whenever the UV lamp is in use.

PCR60R Cabinets

In addition to the product protection afforded by PCR60 cabinets, the PCR60R provides protection for personnel. This is achieved by an air barrier at the work opening and HEPA filtration of the exhaust air.

An air barrier between the operator and the work zone is maintained by a flow of room air into a grille in the work opening. All positive pressure zones are surrounded by negative pressure zones, so as to contain hazardous aerosols.



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



Construction

Cabinet

The sturdy steel housing is finished in a durable baked enamel that has been developed for laboratory equipment. The work zone and the removable UV shield are constructed in easy-to clean 304 stainless-steel.

Fan

A direct-drive fan is regulated by a speed controller to enable airflow to be maintained through filter life. The fan and filter plenums are designed to provide ultra-quiet, low-vibration operation.

HEPA Filters

Clyde-Apac Microseal™ HEPA filters, which are certified by Quality Assurance Services under Licence No.2515 to carry the SAA Standards Mark for compliance with AS 4260.



Each filter is individually certified to achieve efficiency of not less than 99.995% to the stringent BS 3928 Sodium Flame test, and to be leak-free in accordance with AS 1807.6.

Testing is conducted in a NATA registered laboratory and a NATA-endorsed test label, being an extract of the test report, is affixed to each filter. Positive-pressure filter seals are surrounded by negative pressure zones, thus enhancing the reliability of the filter installation.

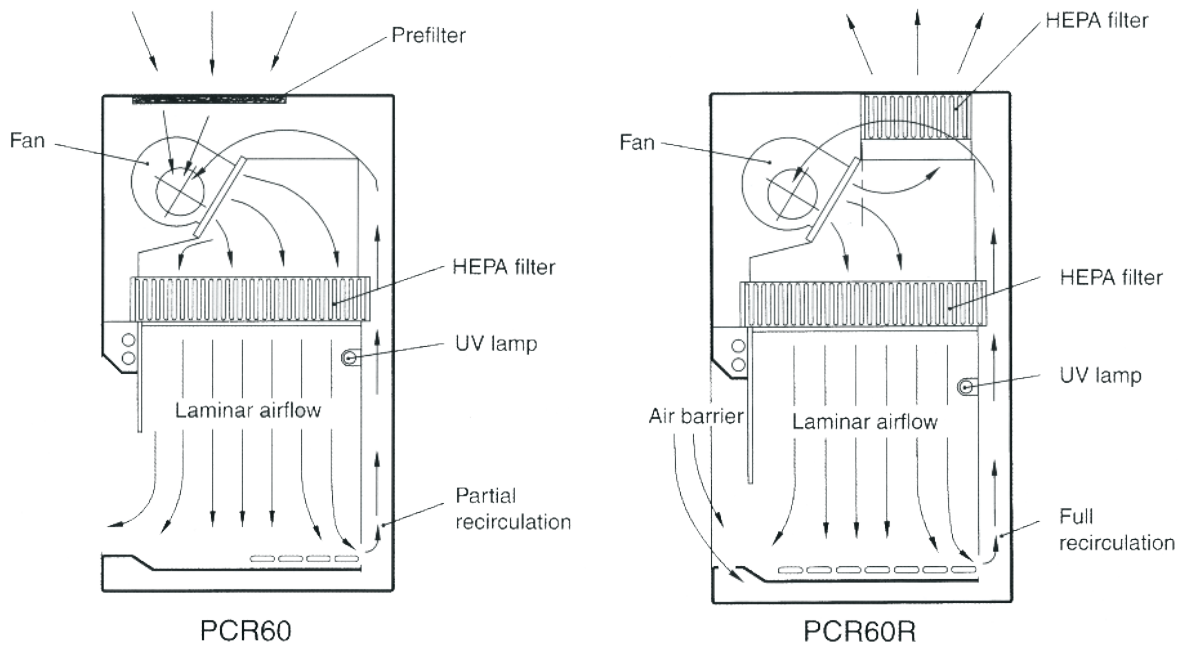
Pre-Filters

On PCR60 cabinets, an easily accessed, washable pre-filter on top of the unit arrests not less than 90% of particles 5 micron and larger, thus prolonging HEPA filter life.

Electrical

Cabinets operate on single-phase 240V, 50 Hz power via a 10A outlet. A low voltage touch control panel is located on the front of the cabinet with the status of switched functions indicated by LEDs. The PCR60R has an audible alarm and warning LED to signify reduction of airflow. An integral fluorescent lamp housing reduces heat build-up near the operator and provides lighting intensity of >800 lux at the work surface. The UV lamp produces radiation at 254 nm wavelength. The electrical system of the cabinet complies with Australian Standard AS 3100.





Physical Data

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

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

Standard Features

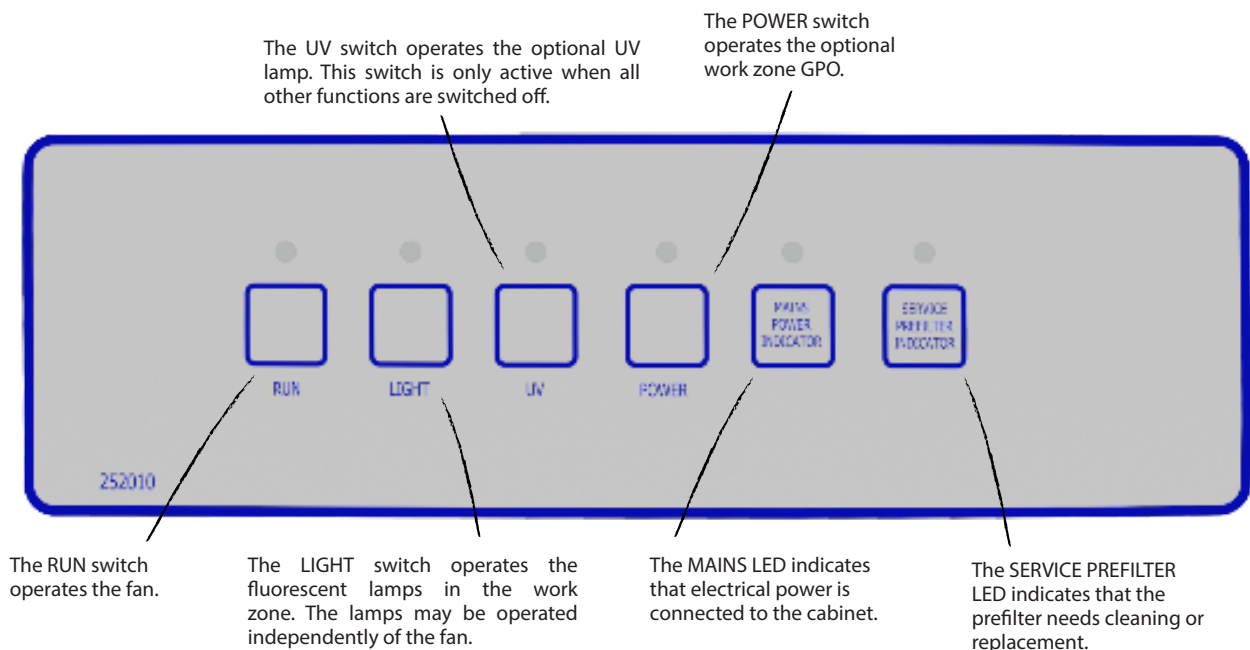
- › Germicidal UV lamp and safety shield
- › Glare-free fluorescent lighting
- › Low voltage touch controls
- › Easy to clean stainless steel work area
- › Airflow alarm (PCR60R)
- › Comprehensive operation and maintenance manual
- › Made in Australia with 2 year warranty

Options

- › Hourmeter
- › Manometer
- › Power Outlet
- › Service taps for air, gas and vacuum
- › Floor Stand
- › Trolley
- › Fumigation Adaptors (PCR60R)



Operation



PCR Series cabinets are fitted with a low-voltage, touch-control panel to operate standard cabinet functions a general purpose power outlet (GPO) and ultraviolet (UV) lamp.

Light-emitting diodes (LEDs) indicate the status of switchable functions, the prefilter and mains electrical power.

Switches are of the membrane type with a toggle action. A momentary touch on the switch pad will switch the selected function on or off.

Personnel Protection



PCR60 cabinets provide protection for products or experiments, but do not protect personnel from aerosols of hazardous materials that may be handled in the cabinet. For PCR applications where protection for products and personnel is required, PCR60R safety cabinets should be considered.



Other Products

- › HWS Series™ horizontal laminar flow cabinets.
- › VWS Series™ vertical laminar flow cabinets.
- › BSC2000™ Class I biological safety cabinets.
- › BH2000™ Class II biological safety cabinets.
- › Recirculating fume cabinets.
- › TFP™ Series HEPA filter clean room modules.
- › Exhaust Capture Hood for Cytotoxic Suite.
- › Pass through hatches.



On-Site Testing

PCR Series cabinets are factory tested and certified by a NATA-Accredited laboratory. Additional testing and certification is recommended as follows:

- › On site prior to use
- › After maintenance
- › After filter replacement
- › After re-location
- › At least annually
- › In special circumstances, e.g. if faulty operation is suspected.

NATA Registered

AES Environmental, a NATA registered laboratory, provides comprehensive on-site maintenance, testing and certification services for safety cabinets, laminar flow work stations, clean-rooms and HEPA filter installations.

The Company

AES Environmental manufactures products under Clyde-Apac, Email Air Handling and IFC brand names for industries that are as varied as industrial plants, commercial buildings, power stations, food processing, healthcare, science and electronics. AES Environmental began in Australia, providing its products to government, pharmaceutical and HVAC operators and has since expanded in to Asia and the UK. AES considers international standards ISO 14644 and ISO 16890 along with regional standards, such as EN 1822, as a core component of its product mix and has developed an export market in 25 countries, promoting quality standard based manufacturing, engineering and critical solutions. AES Environmental, a trusted manufacturer capable of delivering reliable product solutions to highly-critical applications, where the control of hazardous airborne contamination is often critical to process and personnel.

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



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