Purair® **PCR**

PCR Laminar Flow Cabinets | 24 • 36 • 48

"The World's Most Practical Selection of Benchtop PCR Cabinets."

— Purair® PCR-24

Provides Contaminant-Free Interior for PCR Applications
and Protects Against Cross-Contamination

Meets or Exceeds OSHA, ANSI and
other International Standards

Air Science®

Purair PCR

PCR Laminar Flow Cabinets

- *Excellent interior protection from particulate contamination.*
- *Multiple options for customized applications.*
- *Easy-to-change HEPA filtration.*
- *Vertical laminar airflow.*
- *Powerful built-in UV lamp.*
- *Choose from 2', 3' or 4' models.*

- *Purair PCR-36, shown with UV lamp on and optional mobile base.*

APPLICATIONS

These cabinets are intended for use in non-hazardous applications where biological or biohazard byproducts are not generated and user protection is not required.

- PCR Laboratories
- Forensics
- Pharmaceutical
- Sample Preparation
- General Research

INTRODUCTION

The Purair PCR laminar flow cabinet employs the Air Science Multiplex™ HEPA filtration technology to create a safe, energy-efficient contaminant-free environment. It is ideally suited for use with non-hazardous contaminants and when flexible access to the instrumentation in the cabinet is required.

PCR WORKSTATION

Polymerase chain reaction[1] (PCR) is a simple and inexpensive technique to make multiple copies of a targeted nucleotide sequence from a DNA sample, and to amplify sequences from small samples. This technique is widely used in genetics laboratories that work with DNA and RNA.

Because PCR amplification is extremely sensitive to contamination, prevention of contamination requires good laboratory practices to minimize external or cross-contamination during reagent preparation, sample preparation and sample amplification.

CONVENIENCE AND CONSTRUCTION BENEFITS

- Purair PCR cabinets are available in three model sizes with various options.

- Cabinets are shipped fully assembled with standard power cords; no installation required.

- The integral UV lamp fixtures are pre-installed.

- All filters are pre-installed, easy to access and change.

- Products are designed for desktop use, or may be installed on an optional base stand or mobile cart.

- The high capacity air handling system delivers flow velocity of 0.45 m/s (90 fpm).

- Purair® PCR cabinets are constructed of steel with a microbial powder finish coating.

The optional stainless steel work surface includes lips on all four sides to contain spills.

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

PRODUCT FEATURES:

A. Task Lighting: Fluorescent cabinet lamp located away from laminar flow area.

B. Ultraviolet Lighting: Built-in ultraviolet lamp with timer permits decontamination between PCR cycles. Includes a double-flap safety cover of 0.2" (5 mm) UV absorbing 254 nm beta radiation resistant polycarbonate; provides superior operator protection while allowing easy access to the work zone. Timer can be set over range of 0 to 60 minutes or set to HOLD.

C. Comfort: Ergonomically angled front improves reach and user comfort.

D. Decontamination Shelf: Mounted on the back wall is proximate to the UV lamp for maximum exposure.

E. Filter: Camfil Farr main HEPA filter with 99.99% efficiency for 0.3 micron particulates. The pre-filter can be changed while the unit is operating to prevent operator exposure to chemical vapors.

F. Pass Through Ports: Convenient rear-wall pass through ports for safe routing of instrument cords, cables and leads.

G. Double-Hinged Self-Locking Front Sash: With overlap closed, the cabinet sash protects samples on the work surface from contamination with 100 fpm airflow. The sash completely closes unit off when not in use and is easy to open and latch.

H. Fan: High-performance ebmpapst™ centrifugal fan.

I. Stand: Optional base stand converts to mobile cart with optional locking casters.

J. Work Surface: Large polypropylene work surface, white or black standard, with optional stainless steel work surface available.

K. Filter Door Lock: Prevents unauthorized removal or accidental exposure to dirty filters.

L. Magnetic Door Latch: Safety interlock prevents accidental operator exposure when door is opened.

OTHER FEATURES:

360 Degree Visibility: Clear back and side panels allow ambient illumination into the chamber and provide users with an unobstructed view of its contents.

Standards Compliant: Performance specifications and construction meet or exceed OSHA, ANSI and relevant international standards to assure operator safety.

Construction: All models are available in either metal or polypropylene construction, specify when ordering. Available in 120V, 60Hz or 220V, 50Hz models.

Steel Support Frame: The chemical resistant epoxy coated steel frame adds mechanical strength. Optional all polypropylene construction is available if desired.

Purair PCR-24, shown with optional mobile cart.

The integrated control panel features an On/Off switch for the fan, light and UV lamp timer.

THE AIR SCIENCE PERFORMANCE ADVANTAGE

Each Air Science fume hood includes features expressed through sound design and certified quality construction. Options and accessories add functional perform-ance to meet specific applications.

Professional Quality.
Air Science fume hoods comply with current technical and safety regulations.

Multiplex Filtration.
The Air Science Multiplex Filter offers a range of options for high perform-ance protection.

Industrial Components.
The cabinet frame and work surfaces are durable and chemically resistant.

Reliability.
Internal systems are isolated from fumes, extending product life.

Purair PCR cabinets incorporate energy-efficient ebmpapst™ permanently lubricated direct drive centrifugal blowers for maximum operational savings, low noise and minimal vibration.
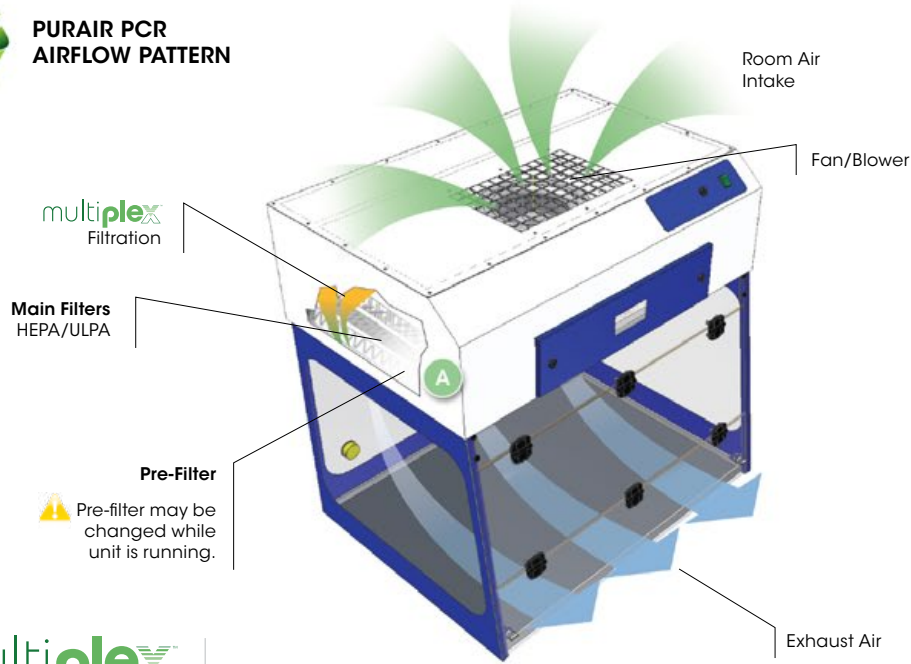
Air Science uses long-life Camfil Farr HEPA filters without aluminum separators to increase filter efficiency, mini-mize the potential for leakage and increase filter life.
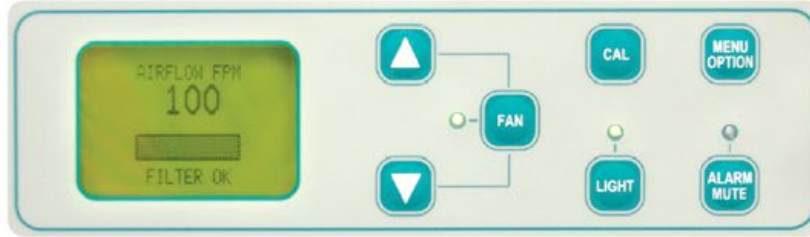
> *The optional **Monitair** microprocessor controller monitors and displays cab-inet operating parameters, airflow, containment, and filter condition; emits audio and visual alerts if condi-tions become unsafe, all on a LCD display.*

PURAIR PCR AIRFLOW PATTERN

Room Air Intake

Fan/Blower

multi**plex** Filtration

Main Filters HEPA/ULPA

A

Pre-Filter
⚠ Pre-filter may be changed while unit is running.

Exhaust Air

multi**plex**™

AIR SCIENCE MULTIPLEX FILTRATION TECHNOLOGY

The Multiplex filtration consists of a pre-filter and main HEPA filter. The mechanical design enhances safety, convenience and overall value.

- The disposable pre-filter is accessible from the exterior top of the cabinet.

- A filter clamping mechanism allows for the filter to be easily installed and ensures an even seal at the filter peripheral face at all times to prevent bypass leakage.

> *Purair® PCR-36 shown with Multiplex filtration system.*

> *Room air enters from the top of the cabinet through the disposable pre-filter where larger particles are trapped, increasing the service life of the main HEPA filter.*

> *Air is forced evenly across the HEPA filter to deliver a flow of pure, uniform air within the work zone to dilute and flush airborne contaminants from the work area.*

> *A nominal filter face velocity of 0.45 m/s (90 fpm) ensures that there is sufficient number of air changes within the work zone to eliminate cross-contamination and to maintain optimum cleanliness.*

> *Purified air travels across the work zone to the work surface in a vertical, unidirectional downflow stream, and then exits the work zone across the front area of the cabinet.*

> *A. The main filter is easy to replace; no tools required. The filter clamps tightly against the filter gasket to prevent filter bypass and to maintain filter integrity.*

MULTIPLEX FILTRATION SYSTEM SUMMARY

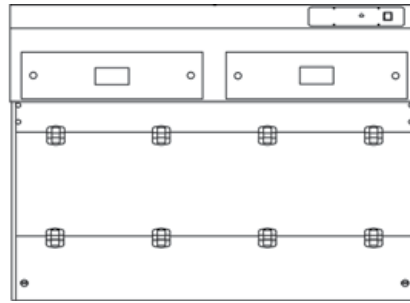| Pre-Filter	Disposable polyester fibers with 85% arrestance.
HEPA	A self-contained filter designed to physically capture particles larger than 0.3 microns (HEPA) or 0.12 microns (ULPA).

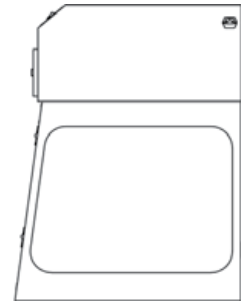This Product Exceeds OSHA, ANSI and Other International Standards.
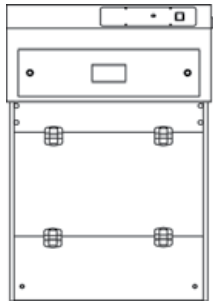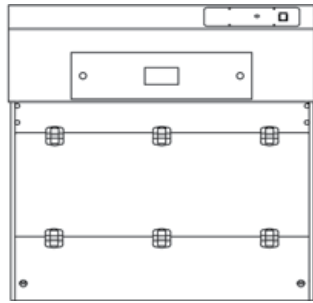
Purair® PCR-24   **Purair® PCR-36**   **Purair® PCR-48**   **Side View**

MODEL	DIMENSIONS					WEIGHT (lbs/Kg)	
	Nominal Width	Internal Height	Internal Depth	External (W x D x H)	Shipping (W x D x H)	Net	Ship
PCR-24	24" 610 mm	24" 610 mm	26.75" 679 mm	24" x 27" x 35" 610 x 686 x 889 mm	40" x 40" x 40" 1016 x 1016 x 1016 mm	72 / 33	129 / 59
PCR-36	36" 914 mm	24" 610 mm	26.75" 679 mm	36" x 27" x 35" 914 x 686 x 889 mm	40" x 40" x 40" 1016 x 1016 x 1016 mm	99 / 45	157 / 71
PCR-48	48" 1219 mm	24" 610 mm	26.75" 679 mm	48" x 27" x 35" 1219 x 686 x 889 mm	52" x 45" x 40" 1321 x 1143 x 1016 mm	138 / 63	195 / 88

PRODUCT SPECIFICATIONS

Purair® Model	PCR-24	PCR-36	PCR-48
Airflow Pattern		<··· Vertical downflow. ···>	
Airflow[1]		<··· 0.45 m/s (90 fpm) ···>	

Filter Specifications

Pre-Filter		<··· Disposable polyester fibers with 85% arrestance. ···>	
Main Filter[2]		<··· HEPA efficiency, 99.99% at 0.3μm. ···>	
Clamping		<··· Screw compression clamp. ···>	
Lighting		<··· Compact fluorescent bulb, removed from air stream. ···>	
UV Lamp		<··· 1 x 253.7 nanometer 15 watt. ···>	

Side Windows

Construction		<··· Polycarbonate. ···>	
Visible Opacity		<··· Transparent, colorless. ···>	
UV Opacity		<··· UV absorbing. ···>	

Construction

Color		<··· White epoxy-coated steel frame with blue legs on cabinet sides. ···>	
Work Surface		<··· Standard, white or black polypropylene. Optional, stainless steel. Specify when ordering. ···>	
Pass Through Ports		<··· Two standard, tear-drop style. ···>	
Shelving		<··· Decontamination shelf on rear wall. ···>	
Night Door/Cover		<··· Standard, hinged door cover with safety interlock. ···>	
Blower		<··· ebmpapst™ centrifugal fan. ···>	
Electrical		<··· 120V, 60Hz or 220V, 50Hz voltages available. Specify when ordering. Other voltage options available. ···>	
Electrical Controls		<··· Main On/Off switch for fan and lighting. Solid-state fan speed control with RFI filter maintains blower uniformity. UV timer, safety interlock shut-off. ···>	

[1] *Average airflow measured 6" (150 mm) from filter face. Uniformity is +/- 20%.*

[2] *Camfil Farr filters; HEPA efficiency, 99.99% at 0.3μm.*

Specifications are subject to change without notice.

OPTIONS AND ACCESSORIES

Purair® Model		PCR-24	PCR-36	PCR-48
Base Stand	Floor-standing base for cabinet. Available with leveling feet or locking casters. Optional motorized height adjustment.	P5-CART	P15-CART	P20-CART
Polypropylene Construction	Cabinets are available in all polypropylene construction. Contact Air Science® for information.	PCR-24-PP	PCR-36-PP	PCR-48-PP
ULPA Filter	ULPA filter efficiency 99.999% at particle sizes between 0.1 to 0.3µm.	PCR-24-ULPA	PCR-36-ULPA	PCR-48-ULPA
Work Surface	Optional stainless steel work surface available.	SS-TRAY-P5-24	SS-TRAY-P5-36	SS-TRAY-P5-48
Monitair® Controller	Microprocessor controller monitors cabinet operating procedures, airflow, UV and filter condition. Emits audio and visual alerts if conditions become unsafe.	MON-P	MON-P	MON-P

STANDARDS AND COMPLIANCE

Quality Management Systems	ISO 9001:2008
Environment	ISO 14001:2004 ENERGY STAR® Partner
Cabinet Performance	IEST-RP-CC002.2 AS 2252.6
Air Quality	ISO 14644-1, Class 4
Filtration	IEST-RP-CC034.1 IEST-RP-CC001.3 IEST-RP-CC007.1 EN 1822
Electrical Safety	UL-C-61010-1 CE Mark RoHS Exempt under EEE Category 9

Air Science®

120 6th Street • Fort Myers, FL 33907
T/239.489.0024 • Toll Free/800.306.0656 • F/800.306.0677
www.airscience.com

ENERGY STAR PARTNER

GSA Schedule
Contract GS-07F5832P

CERTIFIED
ISO 9001:2008
ISO 14001:2004
COMPANY
Certificate No EQS.1562 A / B