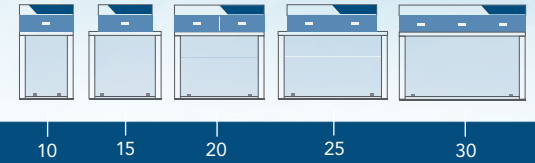
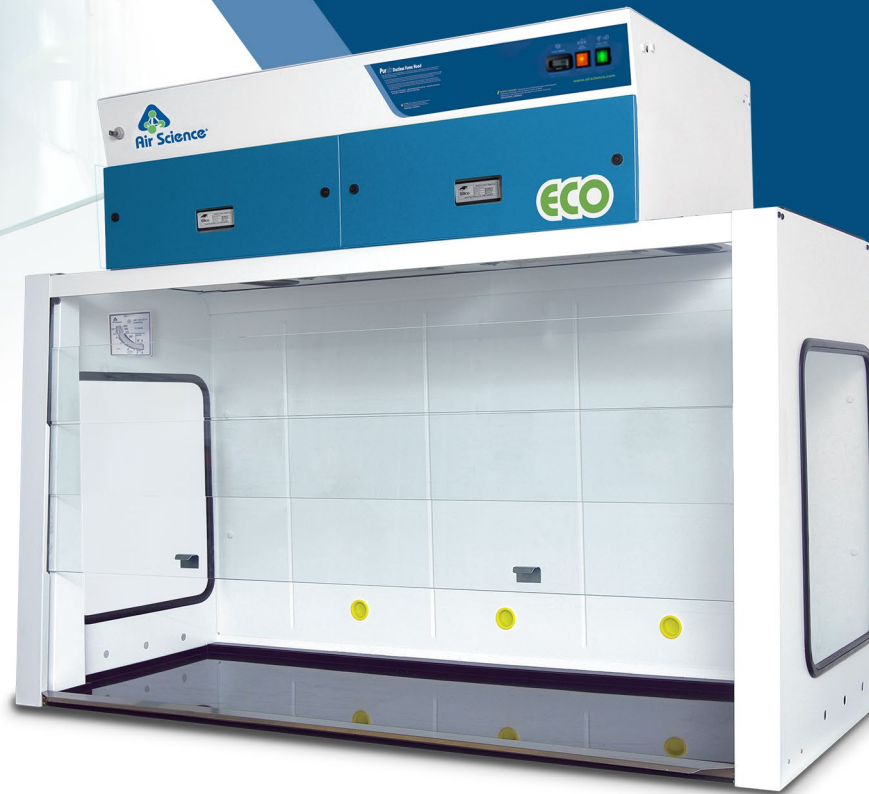


Purair^{ECO}



Green Performance Ductless Fume Hoods

- Superior Filtration Features and High Performance for Demanding Applications
- Meets or Exceeds OSHA, ANSI and other International Standards



60 watt¹ Purair model ECO-25



37-67 watt¹

The single EC blower motor assures lower cost of ownership in one of the world's most energy efficient ductless fume hoods.



Air Science

"The World's Most Extensive Selection of Ductless Fume Hoods."



Schedule
Contract GS-07F5832P



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INTRODUCTION

The Purair® ECO Series ductless fume hoods are designed to protect the user and the environment from hazardous vapors generated on the work surface.

Central to the ECO Series design is the innovative Air Science® [Multiplex™ Filtration Technology](#) and the Air Science exclusive [EFT™ Enhanced Filtration Technology](#) developed to assure universal protection in the work environment over the widest range of applications in the industry.

APPLICATIONS

Using innovative filtration technology, the Purair ECO creates a safe work environment over the widest range of applications in the industry.

Capsule Filling / Chemical Sampling / Dental /
Drug and Chemical Analysis / Forensics / Histology /
Ink Fumes / LEEDS Installations / Light Grinding /
Pharmaceuticals / Pipetting / Slide Staining /
Spray Adhesives / Weighing



Deep into its second generation, Air Science embraces the diversity and cultural heritage of the founders and co-workers who are continuing a tradition of excellence. Demonstrating a commitment to adaptation, inclusion, and quality output from a United States-based company with a domestic and global reach.



KEY FEATURES

- A high capacity air handling system delivers face velocity of 100 FPM.
- The filter assembly is easy to access and easy to change.
- Improved clamping prevents bypass leakage.
- Ergonomic arm rest for user comfort.

DUCTLESS TECHNOLOGY

The Eco-Friendly Choice

Advanced carbon filtration technology offers a safe, high performance alternative to conventional ducted fume hoods for a broad range of applications.

Environmental Benefits. Air Science ductless fume hoods isolate and trap chemical vapors to prevent ecological impact through release into the environment.

Versatile. Each filtration system is selected for its specific application. Carbon filters are available in more than 14 configurations for use with vapors of organic solvents, acids, mercury, and formaldehyde. HEPA/ULPA filters can be added for biological safety.

Easy to Install. The ductless fume hood is self-contained and does not require venting to the outside. Many units are portable and may be moved with minimal downtime and without filter changes. Set-up, operation, and filter maintenance are straightforward.

Energy Efficient. Because filtered air is returned to the room, no demands are required of the facility HVAC capacity for make-up air.

Cost Effective. Facility ductwork, HVAC and construction costs are eliminated.

Safe to Use. Cabinet airflow and face velocity protect users from incidental exposures to fumes.

Self-Testing. (select models) Electronic airflow monitoring assures continuous safety. An electronic gas sensor monitors carbon filter performance.



59 watt¹ Purair ECO-20 shown with Optional Modular Utility Package.

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DESIGN FEATURES

- A. Filter I.D. Window:** A convenient, strategically placed front cover window shows the installed filter part number and installation date to encourage timely filter replacement.
- B. Steel Support Frame:** The chemical resistant epoxy coated steel frame adds mechanical strength. Optional all polypropylene construction is available if desired; see accessories.
- C. Tempered Glass Siding Sash:** When closed, the cabinet sash protects the contents from inadvertent external contact and better isolates the air from within. The sash is easy to open and close.
- D. Tempered Glass Side Walls:** Clear side panels allow ambient light into the work area and provide a less obstructed view of the work surface.
- E. Pass Through Ports:** Electrical cords and cables are safely routed into the cabinet through ports on the back.
- F. Electrostatic Pre-Filter:** The electrostatic pre-filter is accessible from inside the chamber and 91% effective down to 1-3 microns.
- G. Dynamic Filtration Chamber:** The dynamic filter chamber prevents any possible leakage of contaminated air by pressurizing the fan plenum (positive air) and depressuring the filter compartment (negative air).
- H. Internal Manual Speed Controller:** Authorized personnel may set the EC motor speed as desired.
- I. Stand:** Optional mobile cart with locking casters.
- J. Safety Filter:** The optional carbon or HEPA/ULPA safety filter adds an additional layer of protection.
- K. Track & Wheel System:** The filter glides in on a wheel and track system, then clamps tightly against the filter gasket to prevent filter tears and maintain filter integrity.
- L. Spillage Tray:** A black polypropylene spillage tray is removable for easy cleaning.
- M. Ergonomic Arm Rest:** An ergonomic arm rest improves user comfort and productivity.

ADDITIONAL FEATURES

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. See selection chart for specifications and dimensions. Specify metal or polypropylene when ordering. Available in 120V, 60Hz and 230V, 50Hz models.



59 watt¹ Purair ECO-20 shown with Optional Modular Utility Package.

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

PERFORMANCE

The Air Science [Multiplex Filtration System](#) offers a range of options for high performance protection.

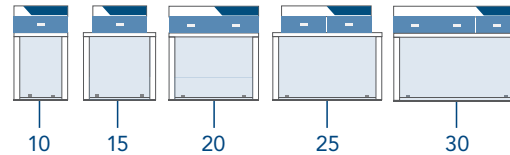
- Multiplex filter configuration permits a customized combination of filter media for a broad range of chemical families and biological agents if required.
- [EFT filtration technology](#) broadens the Air Science application for ductless fume hoods.

A high capacity air handling system delivers face velocity of 100 fpm.

DESIGN

Professional quality Air Science fume hoods comply with current technical and safety regulations. The cabinet frame and work surfaces, comprised of industrial components, are durable and chemically resistant.

The Air Science filter assembly is easy to access, easy to change, plus a unique filter clamping design eliminates bypass leakage outside the cabinet.



SELECTION

Purair ECO products are available in 5 standard sizes, in metal or polypropylene construction, totaling 10 standard models.



Energy-efficient ebm-papst brand EC blowers promote long life and dependable performance of Purair ECO fume hoods.

RELIABILITY

Internal systems are isolated from fumes, extending product life.

CONTROL

The **basic control panel** is standard and includes an On/Off switch and low airflow alarm.

The optional **FSA/Autocal controller** displays the airflow and uses an electronic gas sensor to detect when the filter needs changed. Audio and visual alarms alert users to filter saturation and if the airflow reaches preset thresholds.

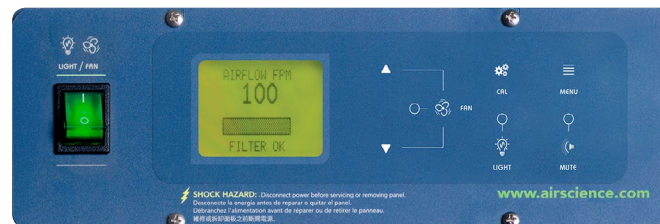
The optional **Monitair microprocessor controller** monitors and displays cabinet operating parameters, airflow, containment, and filter condition; emits audio and visual alerts if conditions become unsafe, all on an LCD display.



Basic Control Panel



FSA/Autocal Control Panel



Monitair Control Panel

¹⁾ Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.

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multiple^{eco}

FILTRATION

At the heart of the Purair product line is innovative filtration technology. **The Multiplex Filtration System** consists of a pre-filter, main activated carbon or HEPA/ULPA filter, and safety activated carbon or HEPA/ULPA filter. The system permits a customized combination of filter media and configuration for chemical and physical adsorption specific to each application need.

The Air Science **carbon filtration technique** is based on enhanced, activated carbon particle formulations from specially selected, naturally occurring raw material that is superior to wood or other organic sources. The carbon is treated to attain the proper porosity and aggregate surface area and to react with several ranges of aerosolized chemicals moved through the filter by an air handling blower.

View available filters and descriptions on [page 8](#).

safe SWITCH™

The optional SafeSwitch HEPA Filter Shutter system ensures that operators are safely separated from trapped contaminants during filter changes.

FILTER CONFIGURATION

The Multiplex feature permits one or more filtration options to be combined to meet a wider range of multiple-use applications.

The Purair ECO can be equipped with a single activated carbon main filter or with a stacked configuration which combines two main filters, each activated to adsorb one or more specific vapors or family of vapors. For safety against particulates, an optional HEPA or ULPA can also be added. When used with a HEPA/ULPA filter, the ductless fume hood may be applied as a Class I Biological Safety Cabinet.

The carbon filter is sized to fit the specified product model number and configured to optimize airflow across 100% of the filter surface area. The self-contained assembly maximizes filter efficiency, prolongs filter life, optimizes diffusion and saturation, and improves user safety.

- P. Electrostatic Pre-Filter:** Protects the main filters from aerosols, mists, dust, and particulates.
- C. Activated Carbon Main Filter:** A single, blended, or stacked filter configuration.
- H. HEPA/ULPA Filter, Optional:** Both HEPA and ULPA filters use micro-glass fiber media designed to capture fine particles and biologicals. Both filters can capture particles smaller than the micron size for which they are tested. HEPA and ULPA filter efficiencies are 99.995% at 0.3 microns and 99.9995% at 0.12 microns respectively.

MULTIPLY FILTRATION SYSTEM, SUMMARY

Application	Chemical	Powder/ Biological	Chemical & Powder	Chemical within Cleanroom
Secondary/ Stacked Filter, Optional	C	H	H or C	H
Primary Filter	C	H	H C	H C
Pre-Filter	P	P	P	P

The system can be configured for the capture of acids, bases, and particulates, such as biological aerosols, when paired with HEPA or ULPA filters.

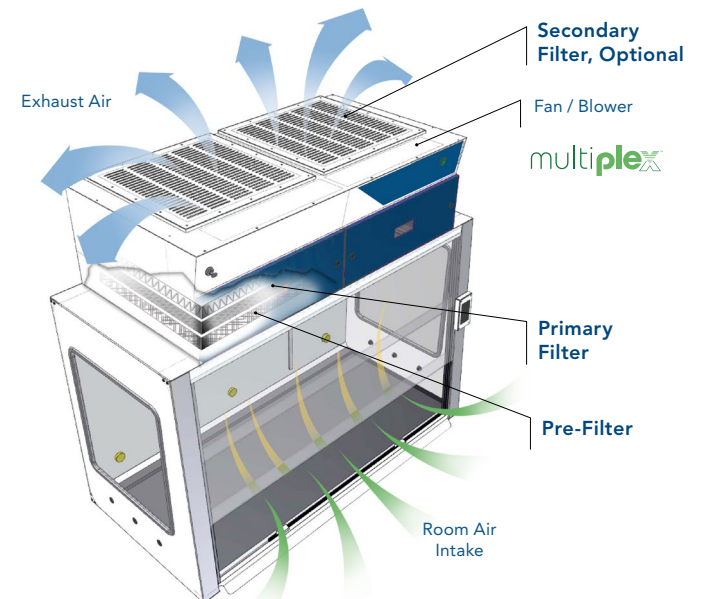
AIRFLOW

The Purair ECO ductless fume hood maintains a constant face velocity of 100 fpm in compliance with USA and international standards for safety and performance. Contaminated air is pulled through the Multiplex filtration system; clean air is returned to the room.

The main filters are easy to replace and install. The filter clamps tightly against the filter gasket to prevent filter bypass and maintain filter integrity.

⚠ The pre-filter may be replaced while unit is in operation.

The safety filter is easy to replace and enhances filter capacity of the hood.



¹⁾ Energy consumption disclosure is based on internal testing with primary filters during normal operation. Power consumption published is nominal and dependent on cabinet size.

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ENHANCED FILTRATION

The Air Science Enhanced Filtration Technology (EFT) is a universal filtration system developed for use with a wide range of core chemical families. These include organic acids, alcohols, aliphatic hydrocarbons, aromatic hydrocarbons, esters, aldehydes, ketones, ethers, halogens and others. Although the EFT system is weighted to accommodate these families, it can handle inorganic acids as well.

The Air Science EFT system is available as an option on Air Science Purair Advanced ductless fume hoods, standard on Purair Eco Series fume hoods and can be retrofitted on many Air Science ductless fume hoods already in service worldwide.

Independent Test Results Independent testing confirms that the Air Science EFT system is superior in critical areas to other “green” fume hood systems recently introduced to the industry. AFNOR NFX 15-211 requires that three chemicals (isopropanol, cyclohexane, and hydrochloric acid) be tested under very precise conditions to ascertain and establish retention capacity at 1% of the threshold limit value (TLV) for each chemical.

Retention capacity (grams) for a single module at 1% of the TLV (Threshold Limit Value)

Specification	AFNOR NFX 15-211	
	IBR	Intertek
Product Manufacturer	Air Science	Brand E
Filter Type		Green
Test Results		
Isopropanol (alcohol)	2052	673
Cyclohexane (aliphatic hydrocarbon)	1531	914
Hydrochloric acid (inorganic acid)*	1205	2729*

**Based on “core” chemical families typically used in ductless fume hood applications, the Air Science EFT filter offers significant advantages over filters marketed as “universal” filters. With moderate to heavy acid applications, all ductless fume hoods made of metal are subject to corrosion and rust. On inorganic acids, the EFT filter provides a lesser, but more realistic, usable capacity.*



Avoid Revolving Filters Air Science strongly discourages the unsafe practice of revolving secondary backup filters into the primary filter compartment. All Air Science units are designed to avoid this false sense of security.

In a revolving filter system, users are instructed to rotate the secondary backup filter into the primary filter position after non-permissible exposure levels of chemicals are detected within the monitoring chamber.

Depending on when the unit can be properly shut down, the secondary filter can be loaded to the point of saturation itself, thereby creating a safety hazard if the filter is considered new.

If a new spare filter is not immediately available, a user may inadvertently (or knowingly) re-install a contaminated primary filter into the secondary location permitting the system to operate without protection.

Additionally, the secondary filter can become contaminated as it ages, sometimes for years, on top of an operational cabinet, losing filter efficiency by the time it is installed.

Either practice puts both personnel and the environment at risk, even though some manufacturers provide stickers to label the filters as “used.”

The Air Science non-revolving filter practice ensures that only a new filter is fitted into the primary filter compartment and permits the secondary filter to remain installed for at least twice the change-out period, resulting in a 50% savings in filter change-out costs.



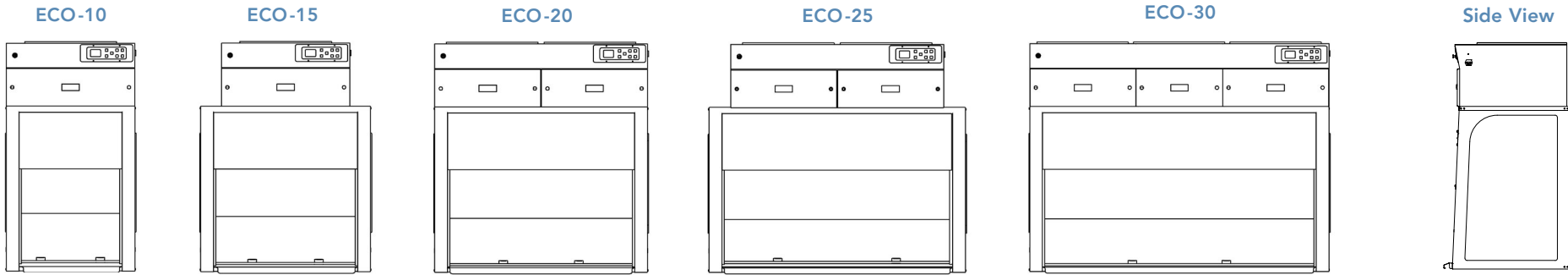
SECUR.
safe disposal service



Filter disposal services are available in selected markets providing responsible destruction or recycling of saturated filters in authorized facilities.

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MODEL	DIMENSIONS			WEIGHT (LBS/KG)		
	Metal	Internal Height	External (W × D × H)	Shipping (W × D × H)	Net	Ship
Purair ECO Model						
ECO-10	38" / 965 mm	30" × 28" × 53" / 762 × 711 × 1346 mm	50" × 40" × 60" / 1270 × 1016 × 1524 mm	161 / 73	214 / 97	
ECO-15	38" / 965 mm	40" × 28" × 53" / 1016 × 711 × 1346 mm	40" × 50" × 60" / 1016 × 1270 × 1524 mm	193 / 87	265 / 120	
ECO-20	38" / 965 mm	49" × 28" × 53" / 1244 × 711 × 1346 mm	55" × 60" × 60" / 1397 × 1524 × 1524 mm	276 / 125	375 / 169	
ECO-25	38" / 965 mm	59" × 28" × 53" / 1498 × 711 × 1346 mm	40" × 67" × 60" / 1016 × 1702 × 1524 mm	305 / 138	387 / 175	
ECO-30	38" / 965 mm	69" × 28" × 53" / 1752 × 711 × 1346 mm	40" × 80" × 60" / 1016 × 2032 × 1524 mm	405 / 183	466 / 211	

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PRODUCT SPECIFICATIONS

Filtration	ECO-10	ECO-15	ECO-20	ECO-25	ECO-30
Airflow	145 cfm	220 cfm	295 cfm	365 cfm	440 cfm
Face Velocity	100 fpm	100 fpm	100 fpm	100 fpm	100 fpm

Construction	ECO-10	ECO-15	ECO-20	ECO-25	ECO-30
Finish	<... White epoxy coated steel frame and head unit. Clear sides and back panel. Polypropylene spill tray. ...>				
Blower	<... ebm-papst EC blower. ...>				
Controls	<... Main On/Off. ...>				
Electrical	<... 120V, 60Hz or 230V, 50Hz voltages available. Specify when ordering. Other voltage options available. ...>				
Monitoring	<... Low airflow alarm, standard. ...>				

Efficiency	ECO-10	ECO-15	ECO-20	ECO-25	ECO-30
Power Consumption ¹	37 watt	39 watt	59 watt	60 watt	67 watt
Lighting	<... LED. ...>				
Noise, dBA ²	< 55	< 55	< 58	< 57	< 56

¹ All measurements are with Filter Type ASTM-030.


² Measured 12" (30 cm) from the cabinet front and 15" (38 cm) above the work surface plane.

FILTER SPECIFICATIONS

Purair Model	ECO-10	ECO-15	ECO-20	ECO-25	ECO-30
Safety Filter, Optional*	(1)	(1)	(1)	(2)	(2)
Primary Filter(s)*	(1)	(1)	(1)	(2)	(2)
Pre-Filter*	(1)	(1)	(1)	(2)	(2)

* For specific examples refer to Multiplex filtration system summary on [page 5](#).

FILTER SUMMARY

Formula	Description
GP Plus!	The most widely used filter in the range, primarily for solvent, organic, and alcohol removal.
ACI Plus!	Neutralizes volatile inorganic acid vapors.
ACR	Iodine and methyl iodide vapors as well as low level radioactive iodine.
ACM	Mercury vapor.
AMM	Removes vapors from dilute ammonia solutions and to remove low molecular weight amines.
SUL	Designed to remove hydrogen sulphide and low molecular weight mercaptans.
CYN	Removal of hydrogen cyanide. Many cyanide compounds will evolve HCN gas if acidified, so this filter is normally specified if working with any cyanide compound.
FOR	Designed to oxidize formaldehyde and glutaraldehyde fumes. It is widely used in hospital pathology laboratories.
EDU	Designed to handle chemicals normally used in a university level chemistry curriculum.
MIL	Designed for military applications involving war gasses.
HEPA/UPLA	Powders, particulates, and biologicals.
 EPT	Universal filtration.

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OPTIONS & ACCESSORIES

Purair Model		ECO-10	ECO-15	ECO-20	ECO-25	ECO-30
Safety Filter*	An additional carbon, HEPA or ULPA safety filter exceeding ANSI/AIHA Z9.5 requirements can be installed after the main filter.	<... Safety filters for vapor or particulate protection are available for all models. ...> Contact Air Science for ordering information.				
Monitair Controller*	Microprocessor controller monitors cabinet operating parameters, airflow, containment, and filter condition; emits audio and visual alerts if conditions become unsafe. Not TUV compliant.	MON-P	MON-P	MON-P	MON-P	MON-P
FSA/Autocal Control Panel*	Includes blower and light On/Off switch, hour counter, and low airflow and filter saturation alarms.	FSA	FSA	FSA	FSA	FSA
Spill Tray (Stainless Steel)	Removable for easy cleaning.	TRAY-P10-SS	TRAY-P15-SS	TRAY-P20-SS	TRAY-P25-SS	TRAY-P30-SS
SafeSwitch HEPA Filter Shutter System*	Minimizes exposure to filter contaminants when removing used HEPA filters for insertion of new filters.	ASTM-030-SS	ASTM-030-SS	ASTM-030-SS	ASTM-030-SS	ASTM-030-SS
Base Stand, Mobile, With Casters	Provides a lower storage shelf; accommodates wheelchair access. Locking casters fix the hood in place.	CART-30	CART-40	CART-50	CART-60	CART-70
Base Cabinet, Fixed (Metal)	Provides storage space below.	CART-MCC-30	CART-MCC-40	CART-MCC-50	CART-MCC-60	CART-MCC-70
Base Cabinet, Fixed (Polypropylene)	Provides storage space below.	CART-SSC-30	CART-SSC-40	CART-SSC-50	CART-SSC-60	CART-SSC-70
Fire Safety Cabinet Base	Flame resistant safe storage for combustible and flammable liquids.	CART-FSC-30	CART-FSC-40	CART-FSC-50	CART-FSC-60	CART-FSC-70
Remote Control**	Wired controller, provides lower access height to comply with ADA requirements.	RC-P	RC-P	RC-P	RC-P	RC-P
Polypropylene Construction	Ductless fume hoods are available in all polypropylene construction.	ECO10-PP	ECO15-PP	ECO20-PP	ECO25-PP	ECO30-PP
Duplex Electrical Outlet	Two NEMA-1420R receptacles with ground fault interrupter. 120V service standard; international fixtures available.	AS-GFI	AS-GFI	AS-GFI	AS-GFI	AS-GFI
Service Fitting*	Cabinets can be fitted with service fixtures such as petcocks, faucets or valves.	<... SF-X. Specify service fitting type (faucet, valve, petcock) and location when ordering. ...>				
Stainless Steel Hanging Rod*	Hanging rod spans the width of the cabinet.	HANGR-P10	HANGR-P15	HANGR-P20	HANGR-P25	HANGR-P30
Equipment Rack	Lattice framework suitable for storing glassware and other laboratory apparatus.	RACK	RACK	RACK	RACK	RACK
Cup Sink, Mounts into Tray*	Polyethylene cup sink (3" x 5" x 9") is fitted into the base tray. Other sizes, materials available. Contact to order.	SINK	SINK	SINK	SINK	SINK
UV Lamp***	For decontamination of interior surfaces. Includes a timer, door microswitch, fully closing front sash, and UV filtering clear polycarbonate panels. The UV operation must comply with local codes and facility safety practices.	UV-ECO10	UV-ECO15	UV-ECO20	UV-ECO25	UV-ECO30
Utility Module****	Side mounted module	<... Includes (3) gas fixtures with remote knpb on front (1) GFCI outlet ...> Specify left or right hand side mounting when ordering.				

* Factory installed; specify when ordering.

** Handheld box connects via cable to head unit. Includes On/Off switch and blower speed control. Can be placed inside work zone.

*** Includes timer, door microswitch and fully closing front sash, all clear panels polycarbonate (UV filtering). Safety precautions need to be followed.

**** Option increases external width by 4".

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WARRANTY

This product is protected by the Air Science **Legacy Lifetime Warranty**™ which starts on the date of shipment from our factory. This limited warranty is the result of thousands of successful Air Science production applications in pharmaceutical, laboratory, forensic, industrial, and educational applications.

This warranty covers defects in materials and workmanship. Our liability under the Legacy Lifetime Warranty is, at our option, to repair or replace any defective parts of this equipment if you document that these parts were defective at the time we sold the product to you. Normal conditions apply.



For details visit the [Service section](#) of our website at www.airscience.com.

STANDARDS & COMPLIANCE

Quality Management Systems	ISO 9001:2015
Chemical Fume Containment	ANSI/ASHRAE 110 1995
Carbon Filter Efficiency	BS 7989-2001 AFNOR NFX 15-211
Biological Safety Filter Efficiency HEPA and ULPA	IEST-RP-CC007.1 IEST-RP-CC001-4 EN 1822
Product Design	ANSI Z 9.5-2003 ANSI Z 9.7-1998
OSHA, Occupational Safety and Health Administration	OSHA Standard -29 CFR, Safety and Health Regulations for General Industry, 1910.1450: Occupational exposure to hazardous chemicals in laboratories. Part B, definition, laboratory type hood. All Air Science products meet this definition.
Environment	ISO 14001:2015 ENERGY STAR® Partner



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