



## Automatic Cyanoacrylate Fuming Chamber

- Safely Detect Quality Latent Prints and Reproducible Results



Safe FUME™ 360  
ARV-33T Chamber shown  
with optional UV Lamp and UPS



Product



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## INTRODUCTION

A member of the trusted Safe FUME™ line of automatic fuming chambers, the Safe FUME 360 is used to develop latent prints from non-porous surfaces in a controlled and safe environment. The Safe FUME 360 is available in several sizes, from small bench top units to larger walk-in chambers.

## APPLICATIONS

Using innovative filtration technology, the Safe FUME 360 cyanoacrylate fuming chamber creates a safe work environment over the widest range of applications in the industry.

State and Federal Crime Laboratories \ Crime Scene Investigation \ Law Enforcement Agencies \ Medical Examiners' Programs \ Criminal Justice Education



*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

- Optional side and rear windows for 360° view of development.
- Choose from multiple sizes, bench top to floor standing.
- Multi-chamber cabinets available.
- Caster wheels standard on all models except bench top series.
- Optional UV Lamp decontamination.
- Evidence easily positioned inside the chamber using adjustable hanging rods.
- Cyanoacrylate is placed within the chamber; starting the cycle triggers the automated system that controls the hot plate, cabinet humidity, door lock, internal circulation fan and purge cycle.
- Recirculatory design requires no ducting for setup.
- Cyanoacrylate vapors are filtered by a special carbon filter that ensures no dangerous substances are exhausted into the atmosphere.

## DUCTLESS TECHNOLOGY

### The Eco-Friendly Choice

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

**Environmental Benefits.** Air Science® Safe FUME 360 cyanoacrylate fuming chambers isolate and trap chemical vapors to prevent ecological impact through release into the environment.

**Easy to Install.** The cyanoacrylate fuming chamber 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.

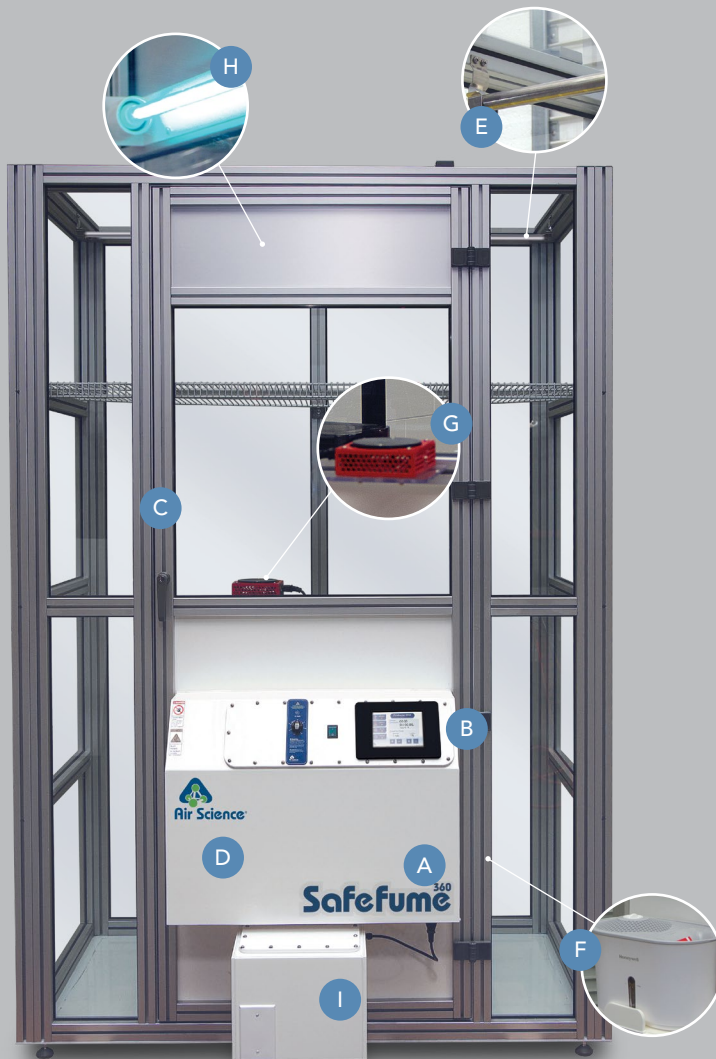
**Self-Testing.** (select models) Electronic airflow monitoring assures continuous safety. An electronic gas sensor monitors carbon filter performance.



Safe FUME 360 ARV-24

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Safe FUME 360 ARV-60T

## DESIGN FEATURES

- A. Dynamic Filtration Chamber:** The dynamic filter chamber prevents leakage of contaminated air by maintaining partial vacuum in the filter plenum.
- B. Control Panel:** The microprocessor control panel manages the Printbuster™ Pro operating sequence with control, oversight and display of all processing functions. The LCD display works with a touchpad data entry keypad to establish all operating parameters.
- C. Doors:** Tempered glass, keyed doors with aluminum frame and tamper-proof seal provide improved security, stability and ease of cleaning. Scratch-resistant glass for lasting optimum visibility.
- D. Fan:** High velocity sparkless and brushless centrifugal fan.
- E. Hanging Rods:** Removable and adjustable stainless steel hanging rods for proper orientation of evidence.
- F. Water Nebulizer/Humidifier:** Water nebulizer elevates humidity in chamber.
- G. Hot Plate Accelerator:** Hot plate to polymerize ethyl cyanoacrylate. Air Science also offers optional adjustable temperature hot plates to accommodate a variety of fuming techniques, including MicroBurst™ and typical Super Glue® methods. Hot plates are available with basic knob controls as well as advanced microprocessor controls with LED display.
- H. Optional UV Lamp:** Activated ultraviolet light creates light emission conditions known to permit disinfection of the interior between cases to prevent cross-contamination, ensuring integrity of the samples for DNA testing.
- I. Uninterruptable Power Supply:** Backup power supply to support all systems for one complete machine cycle in the event of power failure.

## ADDITIONAL FEATURES

**Construction:** Models are available in aluminum frame with tempered glass construction. Locking doors are tempered glass with tamper-proof seal and aluminum frame. See selection chart for specifications and dimensions. Available in 110V, 60Hz single phase electrical supply (other voltages available on request).

**Internal Chamber Cleansing:** The Internal Chamber Cleansing feature automatically activates to eliminate contamination and remove the harmful vapor from the unit. This process is especially important if the unit is used infrequently or only during certain periods of high evidence volume.

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Each Air Science Safe FUME 360 cyanoacrylate fuming chamber includes features expressed through sound design and certified quality construction. Options and accessories add functional performance to meet specific applications.

## PERFORMANCE

The Air Science filter configuration permits a customized combination of filter media for a broad range of chemical families and biological agents if required.

## DESIGN

Professional quality Safe FUME 360 cyanoacrylate fuming chambers 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 and easy to change, plus a unique filter clamping design eliminates bypass leakage outside the cabinet.



Through our partner company *Filtco Filters*, Air Science is a single source supplier of all pre-filters, carbon filters, and HEPA/ULPA filters used in our products.



## SELECTION

Safe FUME 360 cyanoacrylate fuming chambers are available in 4 specific sizes, totaling 8 standard models.

## CONTROL

### Air Science Printbuster Pro LCD Interface Technology

Printbuster Pro is the industry's first use of touchscreen technology offering a simple, easy-to-use solution delivering repeatable results every time. The automatic latent fingerprint development cycle manages the following:

- Relative humidity setpoint. Relative humidity is established via a water-filled nebulizer/humidifier.
- Cabinet temperature display.
- Door status with lock alarm.
- Circulation fan On/Off.
- Hot plate On/Off. The hot plate accelerator polymerizes ethyl cyanoacrylate for a specific time interval.
- Processing time.
- Purge cycle time. Fumes are removed from the chamber through the carbon filter; air is continuously recirculated within the chamber.
- Emergency stop and filter condition, with an optional electronic gas sensor emits an audible and visual warning when the main filter must be changed.

## RELIABILITY

Internal systems are isolated from fumes, extending product life.





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## FILTRATION

At the heart of the cyanoacrylate fuming chamber is innovative filtration technology. The filtration system consists of a pre-filter and a main 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 cyanoacrylate vapors moved through the filter by an air handling blower.

View available filters and descriptions on [page 7](#).

## FILTER CONFIGURATION

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

The Safe FUME 360 can be equipped with a single activated carbon main filter to adsorb cyanoacrylate vapors.

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:** Designed for cyanoacrylate containment.

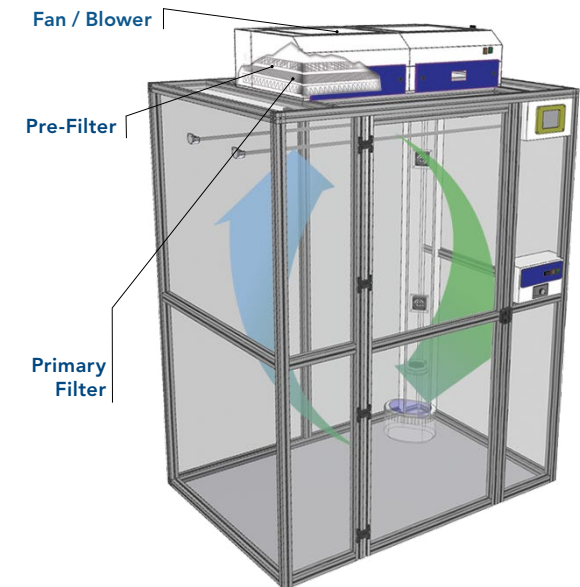
### FILTRATION SYSTEM SUMMARY

Application	Chemical	Powder/ Biological	Chemical & Powder	Chemical Within Cleanroom
Primary Filter	C	--	C	C
Pre-Filter	P	P	P	P

## AIRFLOW

The Safe FUME 360 fuming chamber maintains a constant internal airflow, creating uniform conditions within the chamber. Contaminated air is pulled through the filtration system.

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



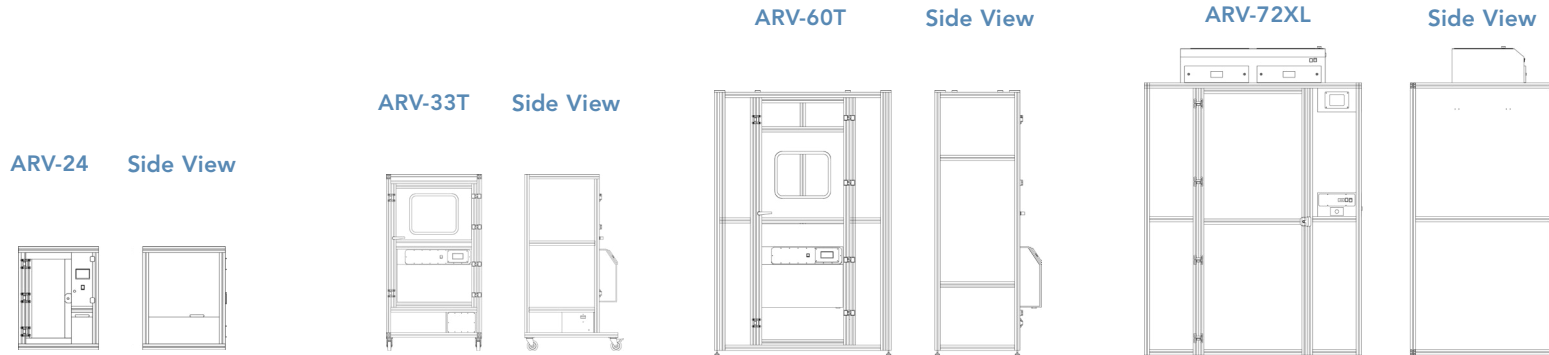
**SECUR.**  
safe disposal service



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)	
	Internal Height	External (W x D x H)	Shipping (W x D x H)	Net	Ship
ARV-24	27.5" / 699 mm	24" x 25" x 30" / 610 x 635 x 762 mm	30" x 34" x 38" / 762 x 864 x 965 mm	83 / 38	125 / 57
ARV-33T	50" / 1270 mm	33" x 34" x 70" / 838 x 864 x 1778 mm	39" x 43" x 78" / 991 x 1092 x 1981 mm	291 / 132	331 / 150
ARV-60T	82" / 2083 mm	60" x 29" x 87" / 1524 x 737 x 2210 mm	66" x 44" x 95" / 1676 x 1118 x 2413 mm	390 / 177	449 / 204
ARV-72XL	80" / 2032 mm	72" x 48" x 86" / 1829 x 1219 x 2184 mm	80" x 54" x 95" / 2032 x 1372 x 2413 mm	825 / 374	968 / 439

Specifications are subject to change without notice.

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**PRODUCT SPECIFICATIONS**

Construction	ARV-24	ARV-33T	ARV-60T	ARV-72XL
Finish	<... Aluminum frame with tempered glass and door with key locks and tamper-proof seals. Hanging rail. ...>			
Blower	<... Centrifugal blower. ...>			
Controls	<... Main On/Off. ...>			
Monitoring	<... Complete monitoring of all functions. ...>			
Shelves	1	1	3	-
Hanging Rods	1	2	2	2

**FILTER SPECIFICATIONS**

Safe FUME 360 Model	ARV-24	ARV-33T	ARV-60T	ARV-72XL
Primary Filter(s)*	1	1	1	1
Pre-Filter*	1	1	1	1

\* For specific examples refer to 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.

\*Other formulas may be available.

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## OPTIONS & ACCESSORIES

Safe FUME 360 Model		ARV-24	ARV-33T	ARV-60T	ARV-72XL
Evidence Baskets	Hanging wire baskets to place evidence.	BASKET	BASKET	BASKET	BASKET
Advanced Hot Plate	Advanced hot plates heat up to 400°C and offer microprocessor controls and LED display with enhanced safety features. Low profile design has a maximum capacity of 600 mL. All aluminum construction. Available in 110V or 230V configurations.	AHOTPLATE110 or AHOTPLATE230	AHOTPLATE110 or AHOTPLATE230	AHOTPLATE110 or AHOTPLATE230	AHOTPLATE110 or AHOTPLATE230
Automatic Lock-Out System	Safety supplement to standard key lock system. Automatic lock-out system is interconnected to the main control system to prevent premature or unauthorized access to interior chamber.	E-LOCK	E-LOCK	E-LOCK	E-LOCK
Uninterruptable Power Supply	Capable of supporting all systems for one complete machine cycle in the event of power failure.	UPS	UPS	UPS	UPS
UV Lamp*	Creates light emission conditions known to permit 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-CA	UV-CA	UV-CA	UV-CA

\*Includes timer and door microswitch. Safety precautions must be followed.



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## WARRANTY

This product is protected by the Air Science Legacy Limited Lifetime Warranty™.



For details visit the [Warranty section](#) of our website.

## STANDARDS AND COMPLIANCE

Quality Management Systems	ISO 9001:2015
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. This product may assist you with compliance or as part of your chemical hygiene plan. Please consult your Safety Officer and/or Industrial Hygienist.
Environment	ISO 14001:2015 ENERGY STAR® Partner



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