

SafeFume™

Automatic Cyanoacrylate Fuming Chamber

"The World's Most Advanced Cyanoacrylate Fuming Chamber."

24 • 30 • 48 • 60 • 72XL



— SafeFume™
CA30S

Safely Obtain Quality Latent
Prints and Reproducible Results

Compliant with OSHA, ANSI and
other International Standards





Safefume™

Automatic Cyanoacrylate Fuming Chamber

- The professionally designed automatic fuming chamber eliminates reliance on do-it-yourself systems that lack user-safety allowances and microprocessor controls needed for repeatable results.
- The Safefume™ system controls all functions from start-to-finish, permitting the investigator to initiate an unattended automatic cycle, establish the proper fuming intensity and duration, and to return upon completion to collect results.
- Fuming time, humidity and chamber fume evacuation can be user-set to comply with internal department criteria, lab safety protocols or best practices in evidence management.

Safefume™ CA60T, shown



INTRODUCTION

Safefume™ cyanoacrylate fuming chambers are designed to safely develop latent fingerprints using ethyl cyanoacrylate (CNA) vapor in a controlled environment for optimum effectiveness and safety where moisture and fuming time are critical factors. The tamper resistant compartment helps maintain the chain of custody. The unique Air Science Multiplex™ filtration system, together with professional design and unique construction features offer personnel protection during use.

The ductless filtration system requires no connection to an outside exhaust system. The automatic control system programs the fuming cycle. A versatile system of hanging rods and shelves allows proper positioning of items of evidence in the chamber.



Made in
the U.S.A.

This Product Exceeds OSHA, ANSI and Other International Standards.



APPLICATIONS

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

DUCTLESS TECHNOLOGY: The Eco-friendly Choice

Advanced carbon filtration technology offers a safe, high performance alternative to ducted cabinets for cyanoacrylate fingerprint development applications.

- **Environmentally Safe.** Safefume™ cyanoacrylate fuming chambers capture cyanoacrylate vapors used in the process to prevent operator exposure and eliminate ecological impact through release into the environment.
- **Versatile.** The filtration system uses the exclusive Air Science Multiplex™ filtration technology.
- **Easy to Install.** Safefume™ chambers are self-contained. 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 isolation and filtration protect users from incidental exposures to cyanoacrylate fumes.
- **Self testing.** Electronic process monitoring assures continuous safety. An optional electronic gas sensor monitors carbon filter performance.



PRODUCT FEATURES:

A. Filter I.D. Window: A strategically placed front cover window shows the installed filter part number and installation date for convenience and to encourage timely filter replacement.

B. Filter Door Key: Filter access keys prevent unauthorized removal or accidental exposure to dirty filters.

C. Track & Wheel System: An efficient filter clamping mechanism allows removal of main filter(s) directly to disposal bag with track and wheel system.

D. Electrostatic Pre-Filter: The 99.5% effective electrostatic pre-filter protects and extends the life of the main filter and can be changed without tools while unit is running to prevent operator exposure to captured contaminants.

E. Dynamic Filtration Chamber: The dynamic filter chamber prevents leakage of contaminated air by maintaining partial vacuum in the filter plenum.

F. 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.

G. 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)

H. Fan: High velocity sparkless and brushless centrifugal fan.

I. Lighting: Vapor-proof fluorescent light.

J. Color: The cabinet is white with blue door(s).

K. Hanging Rods: Removable and adjustable stainless steel hanging rod for proper orientation of evidence.

L. Water Nebulizer/Humidifier: Water nebulizer to elevate humidity in chamber.

M. Hot Plate Accelerator: Hot plate to polymerize ethyl cyanoacrylate.

OTHER FEATURES:

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

Construction: Models are available in either polypropylene and epoxy coated steel or aluminum frame with plastic wall construction. Doors are tempered glass locking doors 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).

• Safefume™ CA30T, shown

THE AIR SCIENCE PERFORMANCE ADVANTAGE

Safefume™ automatic cyanoacrylate fuming chamber includes features expressed through sound design and certified quality construction. Accessories add functional performance to meet specific applications.

- **Professional Quality.** Safefume™ automatic cyanoacrylate fuming chambers comply with current technical and safety regulations.
- **Multiplex Filtration.** The Air Science Multiplex™ Filter offers high performance and safety.
- **Industrial Components.** The cabinet frame and work surfaces are durable and chemically resistant.
- **Reliability.** Internal systems are isolated from fumes, extending product life.



Air Science Safefumes use energy-efficient ebmpapst™ brand centrifugal blowers for long life, dependable performance.

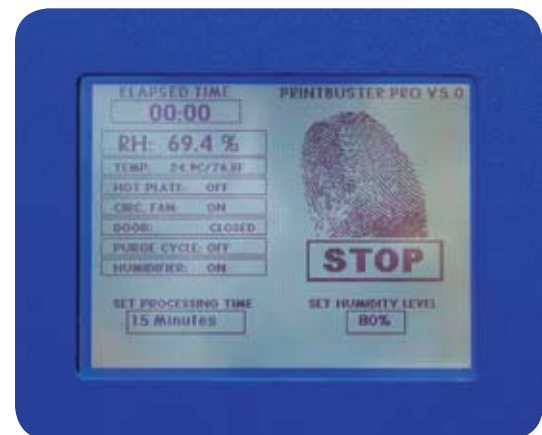


AIR SCIENCE PRINTBUSTER™ PRO LCD INTERFACE TECHNOLOGY

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 Multiplex filtration system via a carbon filter; air is safely exhausted to the room.
- Emergency stop.
- Filter condition. An optional electronic gas sensor emits an audible and visual warning when the main filter must be changed.

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.





MULTIPLEX™ FILTRATION TECHNOLOGY

Multiplex™ Filtration consists of a pre-filter and main filter to create a combination of chemical and physical architecture customized to each application. The mechanical design enhances safety, convenience and overall value.

- The electrostatic pre-filter is accessible from within the cabinet.
- A patented 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.
- The filter chamber prevents contaminated air from contacting internal cabinet mechanisms.
- The main filter number and installation date are displayed in a front-access window.

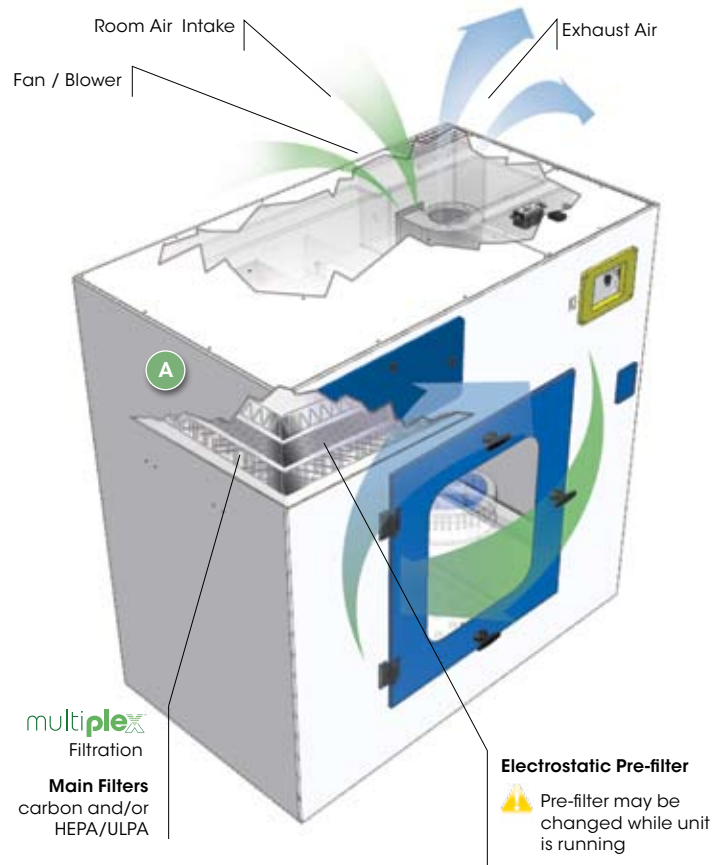
The Air Science carbon filtration technique is based on enhanced, activated carbon particle formulations from specially selected, naturally occurring raw material superior to wood or other organic sources. The carbon is treated to attain the proper porosity and aggregate surface area and to react with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

- The carbon filter is a self-contained assembly sized to fit the specified product model number, and configured to optimize airflow across 100% of the filter surface area for maximum efficiency, prolonged filter life, optimal diffusion and saturation capacity, and user safety.

Air Science is the single source supplier for all pre-filters and carbon filters used in its products, plus those of many other manufacturers.



SAFEFUME™ AIRFLOW PATTERN



Safefume™ C48S, shown with Multiplex Filtration System.

A. The main filter (activated carbon, selected for capture of cyanoacrylate vapors), is easy to replace, no tools required. The filter clamps tightly against the filter gasket to prevent filter bypass and maintain filter integrity.

STANDARDS & COMPLIANCE

Quality Management Systems	ISO 9001
Chemical Fume Containment	ANSI/ASHRAE 110 1995
Carbon Filter Efficiency	BS 7989-2001 SEFA Standard 9 ANFOR NFX 15-211
Electrical Safety	UL-C-61616A ROHS Exempt under EEE Category 9
Product Design	ANSI Z 9.5-2003 ANSI Z 9.7-1998
OSHA, Occupational Safety and Health Administration	OSHA Standard -29 CRF, 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 Energy Star Partner

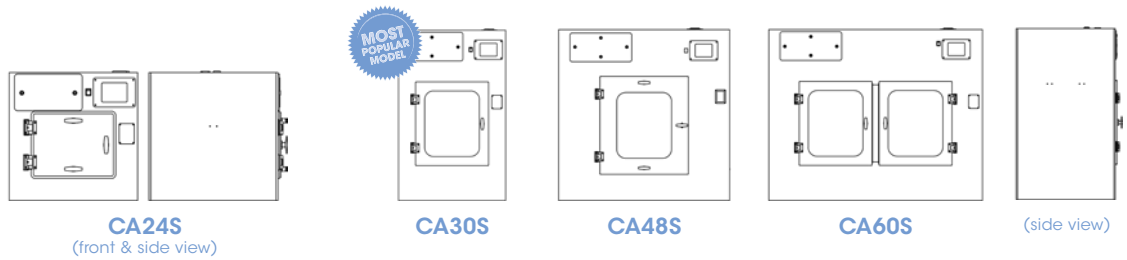
SAFEFUME™ SERIES FEATURES & BENEFITS

The Air Science automatic Safefume™ cyanoacrylate fuming chambers safely and automatically develop latent fingerprints on most non-porous surfaces using the proven technique of exposure to ethyl cyanoacrylate vapor. Evidence is positioned in the chamber with a flexible system of hanging rods and shelves. A fully automatic system controls and monitors the process.

- Choose from multiple sizes, from bench top to floor standing.
- Multi-chamber cabinets available.
- Caster wheels standard on all models except bench top series.
- Optional UV Lamp decontamination.
- Optional side and rear windows for 360° view of development.

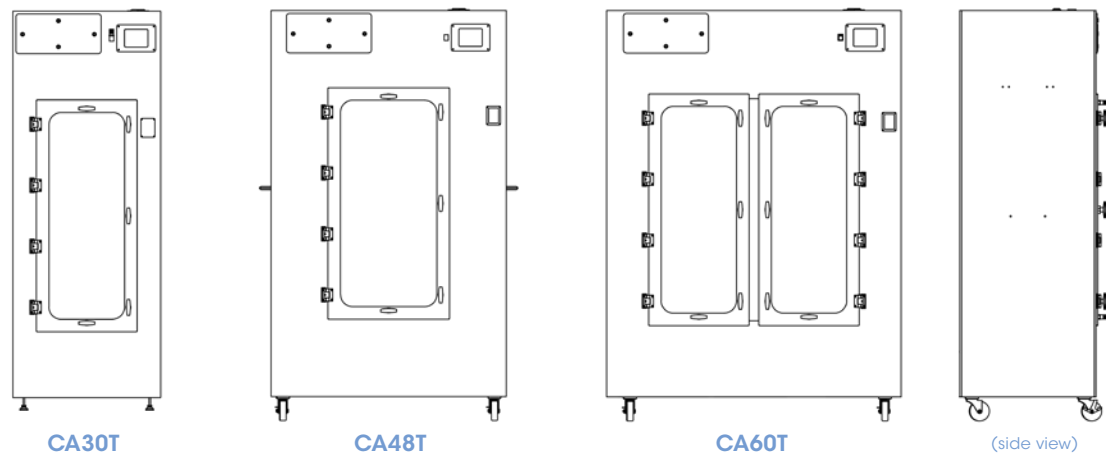


For DNA sterilization or PCR applications the UV kit offers a safe and effective improvement to manual chamber decontamination. The UV ON/OFF function is managed by the control panel. See Accessories.



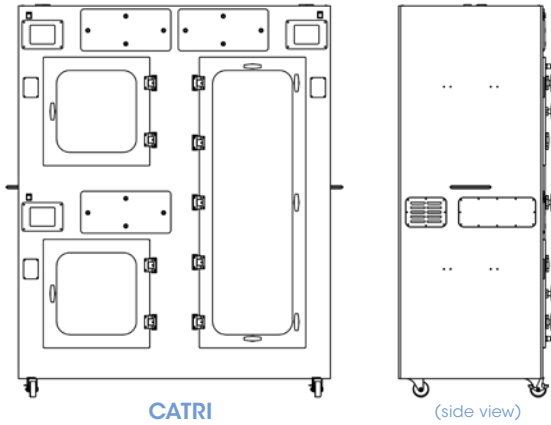
MODEL	DIMENSIONS			WEIGHT (lbs/Kg)	
	Internal Height	External (W x D x H)	Shipping (W x D x H)	Net	Ship

Benchtop Models					
CA24S	12.75" 325 mm	24" x 17.25" x 24" 610 x 441 x 610 mm	40" x 40" x 55" 1016 x 1016 x 1397 mm	156 / 71	200 / 91
CA30S	36" 914 mm	30" x 28" x 48" 762 x 711 x 1220 mm	40" x 40" x 55" 1016 x 1016 x 1397 mm	175 / 79	215 / 98
CA48S	36" 914 mm	48" x 28" x 48" 1219 x 711 x 1220 mm	58" x 40" x 55" 1473 x 1016 x 1397 mm	306 / 139	346 / 157
CA60S	36" 914 mm	60" x 28" x 48" 1524 x 711 x 1220 mm	65" x 40" x 55" 1651 x 1016 x 1397 mm	369 / 167	407 / 185



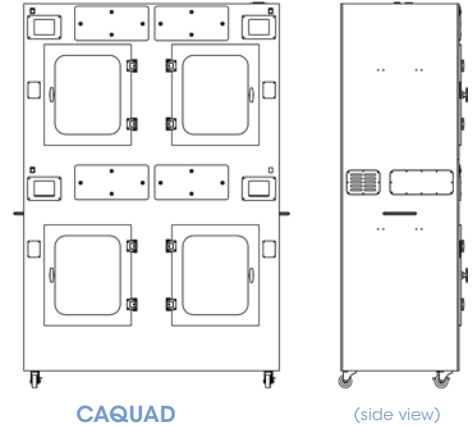
Tall Models					
CA30T	65.75" 1668 mm	30" x 28" x 82.25" 762 x 711 x 2090 mm	40" x 40" x 91" 1016 x 1016 x 2311 mm	271 / 123	316 / 143
CA48T	65.75" 1668 mm	48" x 28" x 82.25" 1219 x 711 x 2090 mm	58" x 40" x 91" 1473 x 1016 x 2311 mm	327 / 148	367 / 166
CA60T	65.75" 1668 mm	60" x 28" x 82.25" 1524 x 711 x 2090 mm	70" x 40" x 91" 1778 x 1016 x 2311 mm	382 / 173	447 / 203

Specifications are subject to change without notice.



CATRI

(side view)



CAQUAD

(side view)

MODEL	Internal Height		DIMENSIONS		WEIGHT (lbs/Kg)	
	External (W x D x H)	Shipping (W x D x H)	Net	Ship		
Standard Triplex Model (3 Chambers*)						
CATRI	2 @ 36" 914 mm	1 @ 65.75" 1668 mm	60" x 28" x 82.25" 1524 x 711 x 2090 mm	70" x 40" x 91" 1778 x 1016 x 2311 mm	402 / 182	467 / 212
Standard Quad Model (4 Chambers*)						
CAQUAD	4 @ 36" 914 mm		60" x 28" x 82.25" 1524 x 711 x 2090 mm	70" x 40" x 91" 1778 x 1016 x 2311 mm	418 / 189	476 / 216
Aluminum Frame Walk-in Model						
CA72XL	1 @ 80" 2032 mm		72" x 48" x 86" 1829 x 612 x 2184 mm	80" x 54" x 95" 2032 x 1372 x 2413 mm	825 / 374	968 / 439



The Safefume™ CATRI three-chamber, floor model fuming chamber includes three individual compartments with independent controls and ductless carbon filters.



The Safefume™ CAQUAD four-chamber, floor model fuming chamber includes four individual compartments with independent controls and ductless carbon filters.



The Safefume™ CA72XL is a high volume, stand alone, fingerprinting chamber designed for departments that must process large amounts of evidence on a regular basis. Large items such as automobile doors, tires, bicycles, etc. can be easily processed in this unit.

This model offers the same functionality as our smaller versions including the Printbuster™ Pro control system.

PRODUCT SPECIFICATIONS

Safefume™ Models	CA24S CA30S CA48S CA60S	CA30T CA48T CA60T	CATRI	CAQUAD	CA30SMF CA60SMF CA72SMF
Airflow CFM	145	145	145	145	145
Noise, dBA, 1 meter	< 50	< 50	< 50	< 50	< 50
Construction	White polypropylene and epoxy coated steel.			Aluminum frame with glass walls.	
Lighting	<... (2) 15 watts ...>				
Blower	<... ebmpapst™ centrifugal fan. ...>				
Electrical Switches	<... Main On/Off ...>				
Monitoring	<... Complete full monitoring of all functions. ...>				

Filter Specifications

Pre-Filter	Electrostatic, 1 lb/ .45 kg (nominal)
Main*	(1) 22 lbs / 9.6 kg

OPTIONS & ACCESSORIES

Safefume™ Model		CA24S	CA30S	CA48S	CA60S
Option	Description	Part Number			
Heavy Duty Base Stand	Provides a lower storage half shelf; accommodates wheelchair access. Locking casters fix the chamber in place. 34" tall.	P5-CART	P10-CART	P20-CART	P25-CART
Enclosed Base Cabinet	Provides storage space below the chamber. (Specify: yellow, blue or white color and wheels or leveling feet)	P5-ENCB	P10-ENCB	P20-ENCB	P25-ENCB
UV Decontamination Kit for PCR Applications	Useful for DNA preparation in advance of PCR (polymerase chain reaction) processes. Attaches to chamber interior. ON/OFF function is managed by the control panel.	CA-UV	CA-UV	CA-UV	CA-UV
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.	EM-LOCK	EM-LOCK	EM-LOCK	EM-LOCK
Side/Rear Windows	Optional side and rear windows to permit ambient lighting into the interior to optimize visibility	WIN	WIN	WIN	WIN
Hot Plate Door	Optional external access door adjacent to hot plate to permit safe addition of cyanoacrylate during fuming cycle.	HDOOR	HDOOR	HDOOR	HDOOR



CA30S shown with UV decontamination, automatic door lock-out, hot plate access door, and side and rear window options.



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