



Indoor Air Filtration

Using high-efficiency HVAC filters, portable air cleaners (PACs), and do-it-yourself (DIY) air cleaners, alone or in combination, can reduce smoke levels indoors. You will want to choose a filtration option for your home *before* a smoke event occurs, if possible, because they may be difficult to get during a smoke event. This fact sheet explains the options for filtering your home's indoor air to reduce exposure to wildfire smoke.

Filtration Options

PACs and DIY air cleaners are intended to deliver cleaner air to a single room, while HVAC filters (sometimes called in-duct air cleaners) can deliver cleaner air to the whole home. However, two or more well-placed PACs and/or DIY air cleaners can be just as effective and may cost less than operating a central air system continuously with a high-efficiency filter. The table on the next page compares these three filtration options.

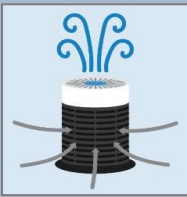
Types of Air-Cleaning Technologies

Use only [California Air Resources Board \(CARB\)-certified air cleaners](#) because they produce little or no ozone, a harmful air pollutant.

A single air cleaning product may use one or more air-cleaning technologies. These technologies usually remove particles in one of the following ways:

- **Mechanical air cleaners and filters** pull air through a filter that traps particles. For example, HEPA filters and other pleated filters are mechanical filters. **Mechanical air cleaners and filters, especially higher-efficiency filters, effectively trap particles from smoke and do not produce ozone.**
- **Electronic air cleaners** use electric fields to remove particles from the air. This category includes ionizers, electrostatic precipitators, and other electronic air-cleaning technologies. **Electronic air cleaners are not recommended for smoke removal** because it is not clear that they can effectively remove smoke particles from the air and they may produce ozone.

Other air cleaning technologies—such as photocatalytic oxidation (or PCO), hydroxyl generators, and devices with UV light components—are not recommended for smoke removal because they are not designed to remove particles from the air and may produce ozone or other harmful air pollutants.

	High-Efficiency HVAC Filter 	Portable Air Cleaner (PAC) 	Do-It-Yourself (DIY) Air Cleaner 
A good option when...	You have a forced air furnace or air conditioner and the system fan can be run continuously.	You do not have a forced air furnace or air conditioner or to supplement forced air system filtration. PACs are a suitable option in most circumstances.	Portable air cleaners are not available or affordable.
If I choose this option, how do I know what to buy?	Choose a filter marked with a minimum efficiency reporting value (MERV) of 13 or higher. You may need to consult with an HVAC technician or the manufacturer of your system to find out the highest-efficiency filter that will work with your system.	Choose a PAC with a clean air delivery rate (CADR) for smoke that is at least two-thirds of the room area in square feet. Use a CARB-certified air cleaner so you know it makes little to no ozone. Look for models with low noise ratings or those that are rated by a reputable reviewer as quiet. Consider the size and weight of the PAC, especially if you plan to move it around. Consider the cost of replacing the filters and running the device.	DIY air cleaner designs that use more filters, thicker filters, and a cardboard shroud are usually more cost-effective. Different designs may have different advantages in terms of initial cost, size, or ease-of-assembly. For instructions about how to build a DIY air cleaner, see: EPA DIY Air Cleaners EPA Research and Infographics Use high-efficiency filters, preferably rated MERV 13 or higher. Use a box fan made since 2012 with a UL or ETL logo to reduce the risk of overheating.
How should I use and maintain this option?	Make sure the filter fits snugly in the filter slot. Run the system's fan as often as you can (e.g., turn the fan switch on the thermostat from "Auto" to "On"). Check the filter often and change it when it gets dirty or starts to smell.	Use a PAC or DIY air cleaner where you spend the most time. Run it continuously on the highest fan setting. Make sure air can flow freely around the air cleaner. To maximize effectiveness, use the air cleaner in a room with doors and windows closed, when it is safe to do so. Check the filter(s) often and clean or change it when it gets dirty or starts to smell.	

Filter graphics from Santa Barbara County Air Pollution Control District

Resources

Scan the QR code to the right to access an online version of this fact sheet and the additional resources below.



Information on Air Quality

Check out the AirNow Fire and Smoke Map, your state air quality website, or your local news for air quality information. Access these resources using the links below!

- [AirNow Fire and Smoke Map](#)
 - [IOS App](#)
 - [Android App](#)
- [Wildfire Guide Fact Sheets](#)
- [Resources and Information on Wildland Fires and Smoke](#)
- [Infographics on Staying Safe Before, During and After Fires](#)

Additional Resources

- [EPA's Guide to Air Cleaners in the Home](#)
- [CARB-Certified Air-Cleaning Devices](#)
- [Association of Home Appliance Manufacturers \(or AHAM\) Verifide® Directory](#)
- [ENERGY STAR–Certified Room Air Cleaners](#)
- [EPA's DIY Air Cleaners Webpage](#)
- [EPA's DIY Air Cleaner Research and Infographics](#)



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