

FREQUENTLY ASKED QUESTIONS

EcoFilter™ Green Alternative to an Afterburner

Is the EcoFilter simply a wet scrubber? **NO**

VortX engineers took the basic concept of a wet scrubber and reinvented it specifically for coffee roasting. Traditional wet scrubbers interfere with airflow during roasting; the EcoFilter improves airflow and the entire roasting process.

What is the key difference between the VortX EcoFilter and an afterburner? **GREENHOUSE GAS**

Afterburners incinerate smoke and odor at extremely high temperatures requiring consumption of up to 5 times the natural gas used by the roaster itself. The EcoFilter captures smoke and odor by instantly cooling the exhaust air to condense out the contaminants and capture them in water and strip them from the exhaust air using the centripetal force of a cyclone.

What is the environmental cost of an afterburner vs. an EcoFilter? **CLIMATE CHANGE**

The process of extracting natural gas releases massive amounts of methane. Afterburners then consume that natural gas, emitting massive amounts of carbon dioxide and unburned methane. Afterburners solve the dirty air problem but, contribute to greenhouse gas. The EcoFilter burns no gas and produces zero methane and carbon dioxide. VortX and its customers are cutting back on emissions which hasten and worsen climate change.

Does VortX make an EcoFilter which will fit my roaster? **YES**

Tell us the volume of air you need filtered and we will advise which model EcoFilter will fit that need. Our current models can work for roasters up to 1200 CFM total airflow.

Does an EcoFilter require a conventional chaff cyclone? **NO**

An EcoFilter can safely filter all the chaff and dust from your roaster far more efficiently than a conventional cyclone or internal chaff collector. The wet chaff is easily compacted or bricked and can be used as a nutrient rich soil amendment.

Will installing an EcoFilter interfere with my roaster or require changes to my roast profiles? **NO**

The static pressure inside the EcoFilter is similar to other high efficiency cyclones. The duct design included with your purchase considers the fans in your roaster and the route the air must take to exit your roastery; it will include everything you need to assure ideal air flow. The cyclone and exhaust stack remain clean and therefore will not inhibit airflow over the course of many roasts.

How difficult is the installation of the EcoFilter? **EASY**

We design the ducting for you and provide a complete Bill of Materials so you may obtain multiple bids. We can also assist in obtaining bids. The use of clamp-together, positive-pressure ducting further simplifies the installation.



Safely Filter Smoke & Odor from any Roaster

FREQUENTLY ASKED QUESTIONS

EcoFilter™ Green Alternative to an Afterburner

What can I expect to see and smell at the end of my exhaust stack? WATER VAPOR +

Every installation is unique and is subject to many factors not controlled by the EcoFilter. In general, what comes out the end of the stack are:

- White water vapor which will pick up color as the roast progresses into 2nd crack; we have videos demonstrating this.
- The VortX process captures the majority of the VOCs which create the harsh and acrid odor; the remaining odor is mild and reminiscent of baked coffee/bread.

Can using the EcoFilter actually cost less than doing nothing? YES

Exhausting untreated smoke and odor increases local air pollution and risks offending your neighbors, leading to complaints and fines. Doing nothing also increases your risk of fire in your chaff collector and exhaust stack and reduces air flow during roasting unless you clean the airways. The costs of duct cleaning alone can pay for a VortX in just a few years. The peace of mind that comes from knowing you are not offending neighbors and also reducing your carbon footprint: priceless.

How safe is the VortX EcoFilter? MUCH SAFER

Every year chaff collectors and exhaust ducts catch on fire and cause millions of dollars of damage and injury. A properly installed and maintained EcoFilter prevents the rapid buildup of creosote, oils and other flammable materials inside the cyclone and exhaust duct. There is little to burn and it is wet.

The outside of the cyclone and exhaust stack stay below 140 F, reducing the risk of personal injury. Should you experience a drum fire, it cannot propagate beyond the EcoFilter inlet.

Is the EcoFilter difficult to maintain? NO

Chaff collects in a sieve and is easily emptied while you roast. At the end of the day, wastewater is drained and refilled, the filters are wiped clean, and the system is run for a few minutes to ensure the nozzles have only clean water in them. A system inspection is recommended monthly for the first several months until you see your own maintenance pattern emerge.

How durable is the VortX EcoFilter? A THOUSAND YEARS?

Type 304 stainless steel can last up to 9000 times longer than carbon steel. Therefore, the cyclone and all wetted surfaces are 304 stainless steel.

What happens if the EcoFilter stops working before I finish a roast? NOTHING

The EcoFilter is a fail-safe product. If it stops working at any time during the roast, simply finish the roast and then investigate the cause.

Safely Filter Smoke & Odor from any Roaster

FREQUENTLY ASKED QUESTIONS

EcoFilter™ Green Alternative to an Afterburner

Is it difficult to monitor the EcoFilter's performance? NO

Three line-of-sight gauges tell you if the VortX is operating correctly:

- Stack Temperature
- Water pressure
- Water volume

Are the wet chaff or wastewater hazardous? NO

The chaff is an excellent nutrient-rich soil amendment. It is compact and easy to transport or dispose of. The wastewater is not toxic or hazardous and can be used to water gardens or put down any water drain.

Can VortX help me get an operating permit? YES

VortX will help any customer apply for an operating permit from their local clean air authority by providing test data on emissions from air treated in the EcoFilter and directly answering their questions. As clean air authorities work to maintain clean air standards in the face of the need for massive reductions in emissions of methane and carbon dioxide created by afterburners, these authorities are showing tremendous interest in our solution to air pollution. While VortX cannot guarantee a permit will be issued, we will support your efforts to obtain one.

Can VortX arrange for me to learn more from your customers about using an EcoFilter? YES

At your request, we will arrange introductions to EcoFilter users who are embracing the green alternative to an afterburner. They are making their neighbors happy, operating a safer roastery and doing their part to reduce their carbon footprint.



Safely Filter Smoke & Odor from any Roaster