



# The Hood Filter HAND BOOK

Your Complete Guide to Commercial Kitchen Hood Filters

BUYING | MAINTENANCE | CODE COMPLIANCE | FAQs



 **HoodFilters.com**  
THE HOOD SUPPLY SUPERSTORE

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# Hood Filters 101

## What are Hood Filters and Why do you Need Them?

**H**ood filters are the first layer of protection in a restaurant's grease management and exhaust ventilation system. Their purpose is to prevent flames and flammable debris from entering the exhaust duct and to capture grease-laden vapors produced from cooking equipment. If this grease was not captured, it would build up in the ventilation system and become a major fire hazard.

Filters are not only necessary, they are required in order to meet regulations outlined by the National Fire Protection Association (NFPA), International Fire Code (IFC), insurance providers and regularly enforced by fire and health inspectors. This underscores the importance of buying the right hood filters and properly maintaining them. A well maintained set of filters provides many other benefits including lower utility costs, less strain on the exhaust system motor, and a cleaner, cooler kitchen.



**Hood filters prevent flames and flammable debris from entering the exhaust duct and capture grease-laden vapors produced from cooking equipment.**



# Hood Filter Fire Codes

## NFPA 96 Fire Codes Related to Hood Filters

**N**FPA 96 is a set of fire codes and standards for ventilation control and fire protection of commercial cooking operations. These standards are used by fire inspectors or Authority Having Jurisdiction (AHJ) throughout the country. Here are some of the hood filter standards you should be aware of in order to avoid fines and safety hazards:

- 6.1.1 – Listed grease filters, listed baffles, or other listed grease removal devices for use with commercial cooking equipment shall be provided.
- 6.1.2 – Listed grease filters and grease removal devices that are removable but not an integral component of a specific listed exhaust hood shall be listed in accordance with UL 1046.
- 6.1.3 – Mesh filters shall not be used unless evaluated as an integral part of a listed exhaust hood or listed in conjunction with a primary filter in accordance with UL 1046.
- 6.2.3.1 – Grease filters shall be listed and constructed of steel or listed equivalent material.

- 6.2.3.2 – Grease filters shall be of rigid construction that will not distort or crush under normal operation, handling, and cleaning conditions.
- 6.2.3.3 – Grease filters shall be arranged so that all exhaust air passes through the grease filters.
- 6.2.3.4 – Grease filters shall be easily accessible and removable for cleaning.
- 6.2.3.5 – Grease filters shall be installed at an angle not less than 45 degrees from the horizontal.
- 14.5.2 – If airborne sparks and embers can be generated by the solid fuel cooking operation, spark arrestor devices shall be used prior to using the grease removal device to minimize the entrance of the sparks and embers into the grease removal device and into the hood and duct system.

**More information can be found at [nfpa.org](http://nfpa.org)**



NFPA 96 is a set of fire codes and standards for ventilation control and fire protection of commercial cooking operations.



UL is an independent safety science company. UL Listing means that UL has tested samples of a product and determined that it meets UL requirements based on published and nationally recognized Standards for Safety.



# How to Choose the Right Hood Filter

When it comes to selecting the right hood filter, there are two features to compare:

**1. Material:** Stainless Steel, Galvanized or Aluminum

**2. Construction:** Welded or Riveted

Material is usually the most important consideration. Two questions that can help you decide on the right material are:

**Do you have a high volume kitchen?**

If yes, you definitely want a heavy-duty material such as stainless steel or galvanized. If no, you might be able to use a lower grade aluminum hood filter.

**Can customers see your kitchen?**

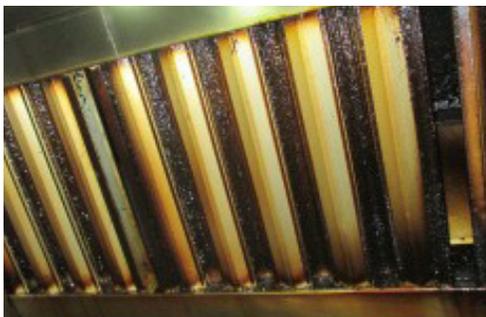
If yes, you want a stainless steel filter which offers a bright shiny finish. Aluminum can also be an option if durability and corrosion resistance isn't important.

When choosing the right filter, corrosion resistance should be a primary concern. Between high heat, humidity, grease, air particles and cleaning chemicals – hood filters are under constant bombardment that leads to corrosion over time. Materials such as stainless steel or galvanized steel will resist corrosion, last longer and have to be replaced less frequently.

Now that we know the two deciding factors for choosing the right hood filter, let's look at both in more detail on the following pages.

**NOTE:** *If you are replacing only a few filters, it's best to pick new ones that match the filters you already have. This is especially important in open kitchens to preserve a consistent and attractive appearance. If you are installing a new hood system, or replacing all the filters at once, your choices are wider.*

**Between high heat, humidity, grease, air particles and cleaning chemicals – hood filters are under constant bombardment that leads to corrosion over time.**



## When to Replace Hood Filters

There isn't a standard replacement time line for hood filters. It all depends on the type of filters being used, the type of operation they are used in, and how well they are maintained. In some kitchens they could last for a couple years. In others, they could last 6 to 8 months.

The most important thing to do is inspect your hood filters on a regular basis for dents, corrosion, holes or warped metal. When a filter is damaged or worn, it cannot perform its job effectively, and becomes a fire and safety hazard.

When a filter is not operating at full capacity, it can allow grease and/or embers into the ventilation system, which can cause a fire. It could also make you kitchen hotter, smokier and inflate your utility bills. If a filter is worn, damaged, clogged or has excessive build up – it should be replaced right away.



# Hood Filter Material

Material is the most important consideration in choosing the right hood filter. The good news is, there are only three material types to pick from: Stainless Steel, Galvanized or Aluminum. Let's look at each one.

## Stainless Steel

Stainless steel filters are the most durable, easiest to clean and the best choice for high-volume operations. With its combination of strength, attractive shiny finish and ability to stand up to harsh chemicals and frequent cleanings, stainless steel is by far the best selling hood filter material.

Stainless steel filters are popular for their resistance to corrosion, and they will

retain their shiny finish even after applying degreasers. This makes them very popular for open cooking environments where the kitchen is visible to patrons.

Of the three materials, stainless steel is the more expensive option. If you're on a tight budget, it may not be the best fit. However, they will last the longest and cost less over time.



**Flame Gard Stainless Steel Hood Filter**

## Hood Filter Magnet Test

When choosing a stainless steel filter, keep in mind that all stainless steel is not created equal. There are varying grades of metal that impact corrosion resistance – which is one of the most important features of any hood filter.

To determine stainless steel quality, all you need is a common refrigerator magnet.

Simply place the magnet on the front of the steel surface and see if it sticks. If it does, then that filter is constructed of a lower quality stainless steel, which is less resistant to corrosion. If it does NOT stick, then you know it's a premium quality steel that will last longer and not corrode easily.

**[Learn more by watching the video](#)**





# Hood Filter Material

## Galvanized

Galvanized filters are strong, long-lasting and provide excellent performance for an affordable price. Galvanized steel can stand up to degreasers and cleaning chemicals, but the metal can become discolored after you use them.

For this reason, and also due to its dull finish, galvanized filters are the least attractive option and typically not used in open kitchens where patrons have clear view of the ventilation hood.



**Kason Galvanized Hood Filter**

## Aluminum

Aluminum filters are lighter weight and less expensive than stainless steel, but more prone to corrosion and damage. Their shiny finish makes them a good fit for open kitchens with lower cooking volume. Their lighter weight also makes them easier to handle.

Although aluminum filters may cost less in the short-term, they will need to be replaced much sooner than stainless

steel or galvanized filters. Another issue to consider is that they are incompatible with harsh degreasers and other caustic cleaning chemicals. If these compounds are applied to aluminum, the metal will begin to corrode almost immediately.



**Trine Aluminum Hood Filter**



# Hood Filter Construction

Once you've selected a material type, the next step is to select the construction. This choice is even easier as it comes down to two options: Welded or Riveted.

Although they differ in how they are constructed, welded and riveted filters share common characteristics. First, they are both available in all three material types and second, they both share the same design relying on a series of vertical baffles to trap and keep grease away from the duct system.

## Welded Hood Filters

Welded filters have baffles that are made out of the same single piece of metal as the frame, with the front and back being welded together. This offers a more rigid and durable design that won't easily bend or give. Most importantly, there aren't any rivets to come loose or fall out, which is a common issue with riveted filters.

If you want a heavy duty filter that will last longer, but typically costs a little bit more, then welded construction is the way to go.



Welded Hood Filter

## Riveted Hood Filters

Riveted filters are composed of a multi-piece frame that is held together by rivets with a series of individual baffles that are enclosed inside. Because of these rivets, the filter is somewhat flexible and it's possible for the rivets to loosen over time. If the filters are frequently handled or dropped, these rivets can also come out and require repair or replacement.

Typically, riveted filters are less expensive but less durable over time.



Riveted Hood Filter

## Fire Code Compliance

When choosing a hood filter, it's always wise to choose one that is UL Listed. That ensures it will pass all fire codes, insurance requirements and safety standards. If the filter isn't advertised as UL Listed, or doesn't have a UL stamp on the side of the filter, it is not code compliant.

Many dealers sell non-UL Listed filters (and so do we), but they are never recommended. They are considerably cheaper, because they didn't pass UL safety standard testing, but open up liability and compliance issues.



# Specialty Hood Filters

## Spark Arrestor Hood Filters

Cooking environments that use solid fuel like charcoal, mesquite, hardwood or briquettes require spark arrestors for safety. Spark arrestors are steel screens attached to a baffle filter, that prevent embers and airborne sparks from entering your hood system and starting a fire.

Not only are spark arrestors a necessity for fire-safety; they are required under NFPA 96 fire code standards.

Spark arrestor filters come in all standard sizes.

## Hinged Hood Filters

The Franklin hinged filter allows the filter to open up for the easiest and

most thorough cleaning. It's made of heavy duty stainless steel and provides superior grease collection.

## Captrate Hood Filters

Captrate filters are designed specifically for CaptiveAire hood ventilation systems. It's an extra heavy duty filter and captures 2-4 times the weight of grease compared to standard baffle filters. This means cleaner duct work, exhaust fans and roofs.

Because of its unique design and particulate capture ability, this filter can also be used as a spark arrestor for use in kitchens that cook with solid fuels such as charcoal, mesquite, hardwood, etc.



Spark Arrestor Hood Filter



Franklin Hinged Hood Filter

## How to Install and Remove Hood Filters

When installing filters, always make sure the baffles are running in a vertical (up-and-down) position. This allows the grease to be drawn down by gravity and into the collection system. Next, lift the top edge of the filter up so that it goes into the hood opening and then lower the filter into place. The filter should fit snugly.



Captrate Hood Filter



# How to Measure Hood Filters

Now that you know what type of filter you need, the next step is to determine the correct size. If you're purchasing filters for a new hood system, you will also need to figure out how many filters are required to fill the open hood space. These are the most common questions we get at HoodFilters.com so we've created several tools to make this as simple as possible.

## Measuring Existing Hood Filters

Industry standard sizes are stated with the vertical (top to bottom) dimension first and the horizontal (left to right) dimension second. The baffles should run up and

down (vertically) when taking these measurements (see examples below).

**Remember – Height First, Width Second.**



10 x 16 hood filter



25 x 16 hood filter

## Trade Size vs. Actual Dimensions

It's important to know that the actual size of hood filters will always be about 1/2 inch less than the size it is listed as. Since there isn't an exact standard for filter dimensions, you will find that each brand is slightly different. When calculating how many filters you need to fill an opening, be sure to look at the exact dimensions of the filter.

### EXAMPLE:

Here are the varying dimensions for a 20 x 20 x 2 hood filter:

### FLAME GARD:

19 5/8" x 19 5/8" x 1 3/4"

### KASON:

19 1/2" X 19 1/2" X 1 5/8"

### TRINE:

19 9/16" X 19 9/16" X 1 3/4"



# How to Order the Right Size & Quantity

The most difficult part of buying hood filters is determining the correct size and quantity needed when the hood system doesn't have filters, or there is a specific open area.

Fortunately, we've created a simple online calculator that gives you all the information you need by just entering two measurements – the height and width of the hood opening.

Here's a snapshot of the calculator that you can find at: [www.hoodfilters.com/sizingcalculator](http://www.hoodfilters.com/sizingcalculator)

This easy-to-use calculator will help you determine the size and quantity of filters needed to fill your hood system opening. Just 3 easy steps...

**1. Select Filter Type:**

**2. Enter the Horizontal Width of Your Hood Opening:**  inches.  
Measure from the INSIDE far left (where the filters appear to slide in) to the INSIDE far right.

**3. Choose the Vertical Height of Your Hood Opening:**

Measure from the INSIDE bottom (where the filters appear to slide in) to the INSIDE top.

**CALCULATE**

**Here's What You Need...**

- 1 - 20 x 16 filters
- 1 - 20 x 20 filters
- 1 - 20 x 25 filters

Horizontal Width of Hood Opening: 60"  
Total Horizontal Width of Hood Filters: 60"  
Leftover Space: 0"

If you have more than 1.5" of leftover space, you can purchase [hood filter spacers](#) to cover the area. Filter spacers are available in custom widths up to 6" wide.

**VIEW THESE FILTERS**

**BROWSE ALL FILTERS**

To use the calculator, first enter the type of filter you are ordering followed by the width of your hood opening in inches. Then choose the height from the pull-down menu. The calculator will then list the filters you need including sizes and quantity. It's that simple.

**EXAMPLE:** A hood opening that is 60 inches wide and 19.5 inches tall will need 1 - 20 x 16 filter, 1 - 20 x 20 filter and 1 - 20 x 25 filter leaving no leftover space. If you happen to have leftover space (6 inches or less), you can use a hood filter spacer to fill in the gap. That is a much more affordable option than buying expensive custom sized filters.



# Hood Filter Accessories

## Filter Hooks for CaptiveAire® Hoods

Is your kitchen equipped with a CaptiveAire® hood system? If so, you will need to install hooks to the bottom of your hood filters to keep them locked in place. Rest assured, this doesn't limit your purchasing options since Snap-On Filter Hooks (also called "clips") are available for most Flame Gard hood filters.

If you prefer Kason filters, there is a Hanging Hook Kit that can be purchased. However, a pop rivet gun is required for installation.

## Hood Filter Spacers

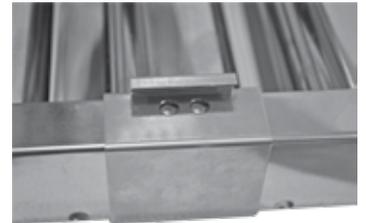
Have a hood system that doesn't quite fit standard filter sizes? There's no need to spend more money on expensive custom filters if you don't have to. In most cases, filter spacers can fill in the extra space safely and easily. Spacers are available in galvanized, aluminum or stainless steel to match your type of filters and can be ordered in sizes of 1.5 inches to 6 inches wide.

Here's an example of how you would use filter spacers: Say you have a hood width of 80 inches so you order four 20-inch filters. Because filter sizes are  $\frac{1}{2}$ " less than their stated size, the 20" filters are actually 19  $\frac{1}{2}$ " wide, giving you 78 inches of coverage.

Spacers should be installed at the ends of the hood, where there is minimal heat and airflow. This maximizes the filtered space at the center of the hood.

## Baffle Boss

A popular tool used to install and remove filters is the Baffle Boss Hood Filter Lifting Tool. This makes the job of reaching and removing hood filters safe, simple, and hassle-free. Most importantly, it provides a safer work environment. The Baffle Boss can be adjusted to 5 different positions to conform to any hood angle and accommodates most filter brands and sizes.



Filter Hook



Hood Filter Spacer



Baffle Boss



# Hood Filter Cleaning

Fire code regulations require that kitchen hood filters be kept clean and in safe working condition. That requires a regular cleaning schedule conducted daily, weekly, or monthly depending on the type and volume of cooking operation. This is absolutely necessary to ensure hood filters are free of grease and able to provide maximum filtering capabilities.

If filters are neglected, they can't do their job, and this can cause a number of problems. Common issues include smoky air inside your cooking establishment, excess heat in the kitchen, extreme fire hazards, increased utility costs, and strain on the exhaust system. To keep your kitchen safe and your bills manageable, make filter cleaning a regular item on your kitchen cleanup list.

There are three common options for cleaning hood filters:

## Hand Washing

Often, the most effective way to remove grease and grime from hood filters is to hand wash them. Use hot, soapy water and a non-abrasive scrubber or sponge. Avoid using bleach or harsh chemical, as these can cause corrosion. Dry your filters immediately after washing. You can also take filters out to power wash.

## Dishwasher

You can also save hands-on time by running the filters through your commercial dishwasher. Run your washer at its highest temperature with soap and water. Avoid harsh cleansers and bleach, as they will quickly corrode the filters and shorten their life. Ensure that all residue is removed from filters before drying.

## Soak Tank

A soak tank for your filters is an investment that can save time and labor. At the end of the night, simply fill the soak tank with water and add a metal-safe, non-corrosive cleaner. Allow the filters to soak overnight. During morning prep, remove the filters from the tank, rinse them and reinstall

Hood Filter Soak Tank





# Common Questions About Hood Filters

## How do I measure my hood filters?

When measuring a hood filter to find the right replacement size, measure the vertical (up and down) dimensions first, then the horizontal dimensions (side to side) and round up to the nearest inch. If you have a hood filter that measures 19 1/2 inches high and 24 1/2 inches wide, the replacement filter will be listed as 20 x 25 inches.

## How do I choose the right size of hood filters?

Hood filters should fit the exhaust hood snugly; there should be no gaps between them. Gaps between filters can allow grease and debris into your system, creating a significant fire hazard.

Use our [Hood Filter Sizing Calculator](#) to help figure out what size filters you need and how many to buy. Simply enter the size of your kitchen hood, and our calculator will determine the sizes and quantity you need. Fill any space between 1 1/2 inch and 6 inches with hood filter spacers.

## What are locking handles?

Locking handles are required for certain styles of hoods. These hoods are most commonly found in Maryland and surrounding areas. Therefore, these handles are sometimes referred to as "Maryland Handles". If your current filters have locking handles then you will want to make sure to order handles for your new filters. If you are not sure if you need them, you can tell by looking at your hood. If your hood has a frame for each filter to fit into you will need locking handles.

The locking handles are installed on the lower left and upper right sections of the hood filter. We recommend having us install the locking handles on your hood filters before shipping. We also have kits for those who wish to do the installation themselves; two handles are included in each kit.

## How often should I clean my hood filters?

In a busy restaurant, hood filters should be cleaned on a daily or weekly basis. The best method for cleaning is hand washing, but filters

can also be pressure-washed, cleaned in the dishwasher or submerged overnight in special soak tanks to remove built-up grime.

## When do hood filters need to be replaced?

Inspect your hood filters every time they are cleaned. Filters need to be replaced when they become corroded, warped, dented or develop holes. How long filters will last depends on how heavily they are used, the ambient humidity in your kitchen and how the filters are cleaned. For instance, harsh cleansers can cause corrosion and significantly reduce the lifespan of your hood filters.

## Why can't I use mesh hood filters?

Mesh hood filters are no longer allowed under current fire codes. To comply with NFPA 96 Fire Codes, your kitchen hood needs baffle filters made of approved materials like stainless steel, galvanized metal or aluminum, plus spark arrestors, if required.

*(Continued on page 14)*



# Common Questions About Hood Filters

## Why can't I find my filter size?

It's important to know that the actual size of hood filters will always be about a half inch less than the size it is listed as. For example, if a filter is listed as a 20" x 20", the actual size will be approximately 19.5" x 19.5". Some brands will be exactly 19.5". Some will be 19 5/8" and another might be 19 9/16". Usually those slight variations in sizes won't matter to you. Most hoods have enough extra room or trim on the ends of the filter track that will allow for an extra inch or two. However, if your hood does not, you should make sure to get the filters that best match your current ones. The actual size of a filter will be listed next to its picture on the product page of our site. If you don't currently have filters, or don't know what size you need, please see our Hood Filter Calculator on page 10.

## Why are my filters getting sucked up into my hood?

In almost all cases where filters are being sucked up into a hood is due to the exhaust fan being turned up too high. This can cause the entire

exhaust system to not work properly and also upset the air balance in the kitchen and other rooms. It will also have a negative effect on the heating and cooling systems. If this is happening, a local professional will need to test the system and adjust to the correct setting. It will also have a negative effect on the heating and air condition systems as well. If this is happening you will need to have a local professional test your system and adjust it to the correct setting.

Another possibility would be if you replaced heavy filters with lightweight aluminum filters. However, if your new aluminum filters are UL listed then they have passed testing to be used in commercial kitchens. You should be able to have the air balance retested and adjusted to make them work. Chances are you were just able to get away with having your fan set too high due to the weight of the filters you were using before.

In very rare cases filters may become clogged and not enough air is passing through the filter, which may cause them to suck up into the hood.

## Don't see the answer to your question?

Give us a call or shoot us an email.

We are happy to help with any of your hood filter and kitchen exhaust needs.

**877.394.9731**  
**[Info@HoodFilters.com](mailto:Info@HoodFilters.com)**



# Hood Filter Videos

**How To Measure Baffle Hood Filters**



[Watch the video](#)

**Hood Filter Material Comparison**



[Watch the video](#)

**How To Use Spacers and Avoid Custom Filters**



[Watch the video](#)

**The Hood Filter Magnet Test**



[Watch the video](#)

**Flame Gard Type II Baffle Filter**



[Watch the video](#)

**Trine Baffle Grease Filter**



[Watch the video](#)

**Trine Aluminum Hood Filter – Overview**



[Watch the video](#)

**Hood Filter Locking Handles Installation Tips**



[Watch the video](#)

**How to Remove Exhaust Hood Filters Safely**



[Watch the video](#)

**Aluminum Hood Filter Comparison**



[Watch the video](#)

**Galvanized Hood Filter Comparison**



[Watch the video](#)

**Welded vs Riveted Hood Filters**



[Watch the video](#)

**Trine Stainless Steel Hood Filter Overview**



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**Spark Arrestor Hood Filters Overview**



[Watch the video](#)

**Types of Commercial Hood Filters**



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See more restaurant ventilation videos at [youtube.com/hoodfilters](https://youtube.com/hoodfilters).





# About HoodFilters.com

North America's #1 Choice for Commercial Kitchen Hood Filters and Ventilation Products

**H**oodFilters.com is your trusted source for commercial kitchen ventilation products. Since 2005, we have served thousands of satisfied customers from small restaurants and service providers to large chains and government facilities.

## Why do customers choose HoodFilters.com?

**SERVICE:** Commercial kitchen ventilation is all we do and our expert staff is here to help. If you need a unique product, we'll find it. If you have a difficult question, we'll get the answer. No matter what the situation, we'll help you solve the problem.

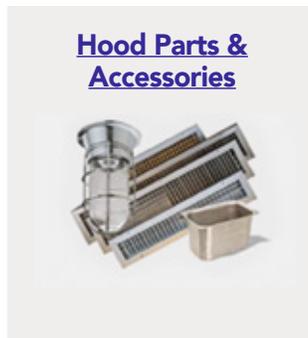
**SELECTION:** With over 2000 items to choose from, you can be assured to find the product you need. And if you can't, we'll go to work and help you find it.

**VALUE:** Our 100% Lowest Price Guarantee ensures you never pay too much, while getting quality products and unmatched customer service.

## "Experts with High Integrity"

Excellent company for hood filters and supplies. Excellent support as well.

Daniel Haigh – Hoodz of Greater Knoxville



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