Manual | INSTALLATION, OPERATION, AND MAINTENANCE

STREIVOR™ AIR SYSTEMS

STRIVING FOR EXCELLENCE

Streivor Air Systems' (Streivor) Installation, Operation, Service and Maintenance Manual (Manual) is for Streivor's hoods only, as all hoods are not the same. This manual should be read and understood in its entirety prior to receipt, installation, operation, maintenance or service is performed on a Streivor Hood.

Streivor Air Systems manufactures listed and non-listed hoods. Streivor's Hoods that are listed are listed by Underwriters Laboratories (UL) to the UL 710 Standard when installed in accordance with the National Fire Protection Association Standard 96 (NFPA 96) and the prevailing codes. All of Streivor's listed Hoods will have a label attached to the hood designated it as a listed product.

Warning: It is essential that the hoods be installed in compliance to the NFPA 96 and the prevailing codes. Improper installation, adjustment, alteration, service or maintenance can result in injury or death, property damage or loss, and void the warranty of the hood. If any information in this manual is not in alignment with the prevailing code(s) the prevailing code should be adhered to. The Authority Having Jurisdiction should be consulted before, during and after the installation of the Hood to assure the Hood is installed, operated, serviced and maintained in compliance with the prevailing codes.

Some hood accessories (lights, internal hood fans, control panels) require electrical wiring. All electrical wiring and connections should be performed by a qualified electrician and be in accordance with the prevailing codes, the national electric codes, and ANSI/NFPA 90.

Note: Due to a continuous program of product improvement, Streivor reserves the right to make changes in design and specifications without prior notice.

Table of Contents

PRE-INSTALLATION

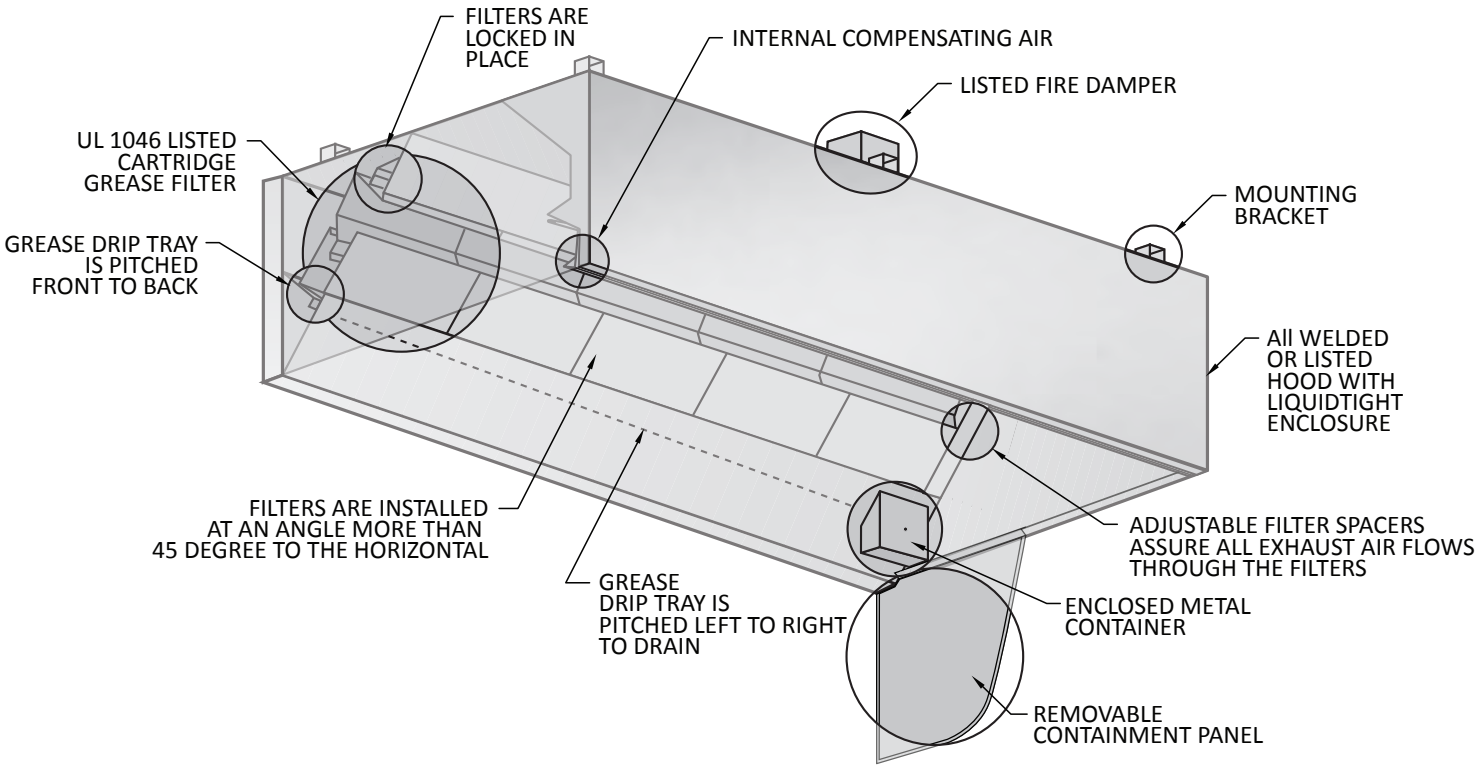
Prior to designing, purchasing and/or installing (installing) a hood Streivor recommends that the designer, purchaser, installer (installer) obtain copies of all of the prevailing codes and standards that will govern the installation and operation of the hood. Streivor's engineering staff is available to answer questions the installer may have in regard to if a Streivor hood will meet the requirements of the prevailing standards and codes.

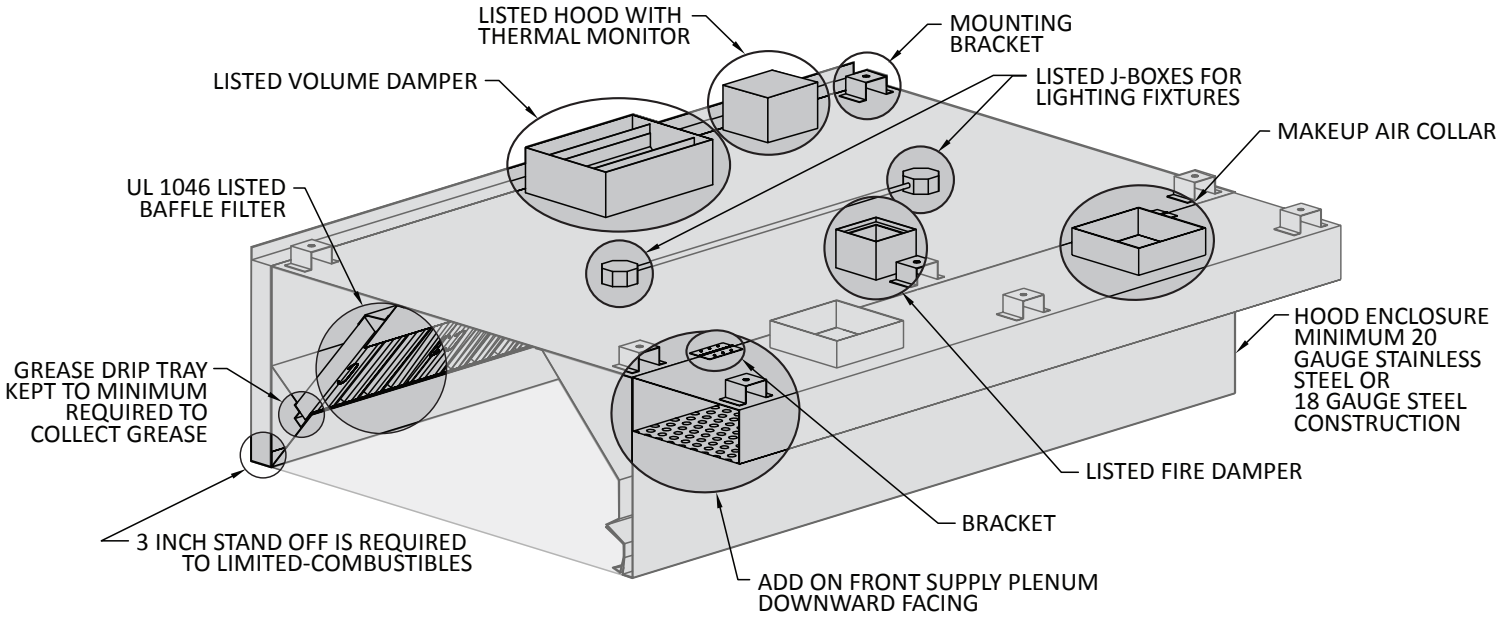
Streivor recommends that architects, engineer's and/or hood specialist with years of experience in the field be included in the design and integration of the hood into the hood system and building.

Streivor also recommends that the installer obtain a copy of Streivor's white paper titled; Specifying and Inspecting Commercial Kitchen Hoods available at www.Streivor.com/WhitePaper. The white paper provides valuable information on the standard and code requirements for the design, installation and operation of a hood.

Examples of hood clearances taken from the white pages can be found in the pre-installation section pages 08-10.

HOOD AND HOOD ACCESSORIES





RECEIVING, INSPECTING, & UNLOADING INSTRUCTIONS

Streivor Air Systems manufactures products of various shapes, sizes and weights.

It is extremely important that the receiver communicate with the delivery company prior to the delivery schedule.

A delivery time that is acceptable to the receiver and the delivery company should be established. Logistics of the unloading the freight should be discussed, i.e. the availability or unavailability of loading docks and ramps, forklifts or other approved lifting devices, lift gates, manpower etc.

INSPECTION

The receiver should visually inspect all of the freight for damage prior to unloading the container. If any damage is observed the receiver should immediately notify the deliverer. The receiver should then make a determination to the extent of the damage. The receiver should not unload the products from the container if he believes that the product has been damaged to such extent that it is not acceptable to him.

UNLOADING

Streivor Air Systems products maybe heavy, top heavy, out of balance, large, bulky or all of the above.

Streivor Air Systems ships products F.O.B. (Freight On Board) origination. This means that the receiver is responsible for providing the means (i.e. equipment and labor) for unloading the product. It is extremely important that the receiver has ample equipment and trained personnel to unload the product safely and without damage.

RE-INSPECTION

The receiver should re-inspect the freight after unloading the freight to make sure that there is no damage to the freight before they sign for the shipment.

UNCRATING & VERIFICATION

The receiver should uncrate the products as soon as possible and again inspect the shipment for damage. If internal concealed damage is found the delivery company should be contacted immediately. If the product is going to be stored or not used immediately the receiver may choose to leave the products in their protective crates to avoid job site damage.

VERIFICATION

As soon as the freight is removed from the crate(s) the receiver should verify that the product(s) dimensions, specifications and / or U.L. nameplate concur with the job site plans and conditions. Any discrepancies should be brought to the immediate attention of the job site supervisor and if necessary Streivor Air Systems prior to installation.

Locate and verify all hood accessories, such as filters and exhaust collars (when shipped loose), are present and accounted for. Any discrepancies should be brought to the immediate attention of Streivor, Inc.

CLEARANCES

"The minimum clearance from the Hood Enclosure to combustible material is 18 inches."

What is the minimum clearance requirement from a Hood Enclosure to a combustible surface?

There is a consensus between NFPA 96, CMC, IMC and UMC that there must be a minimum clearance of 18 inches (457.2 mm) from the Hood Enclosure to any combustible material.

Some codes offer options for reducing the minimum clearance to combustible material. Examples of such options are provided on page #11.

- Example of an Acceptable Hood Enclosure Clearance From Combustible Material -

- Acceptable -

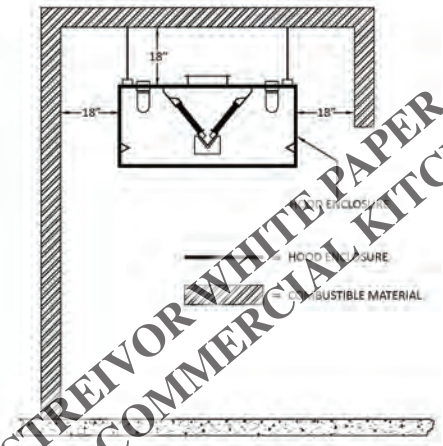


Figure #5

- Example of a Not Acceptable Hood Enclosure Clearance From Combustible Material -

- Not Acceptable -

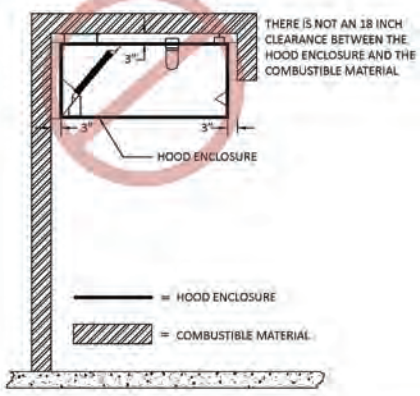


Figure #6

"Some standards and codes offer or allow exceptions to reduce the Hood Enclosure clearance from combustible material"

What is a combustible material?*

Any material that will burn regardless of its auto ignition temperature.

SUMMARY: There is an 18 inch minimum clearance requirement from the Hood Enclosure to all combustible materials.

*Definition of a combustible material as per NFPA 96, 2011.

"The minimum clearance from the Hood Enclosure to limited-combustible material is 3 inches"

What is the minimum clearance requirement from a Hood Enclosure to a limited-combustible surface?

There is a consensus between NFPA 96, CMC, and UMC that there must be a minimum clearance of 3 inches (76.2 mm) from the Hood Enclosure to any limited-combustible material. The IMC does not specifically address this issue.

Some codes may offer options for reducing the minimum clearances to combustibles. Examples of such options are provided on page #12.

- Example of an Acceptable Hood Enclosure Clearance From Limited-Combustible Material -

- Acceptable -

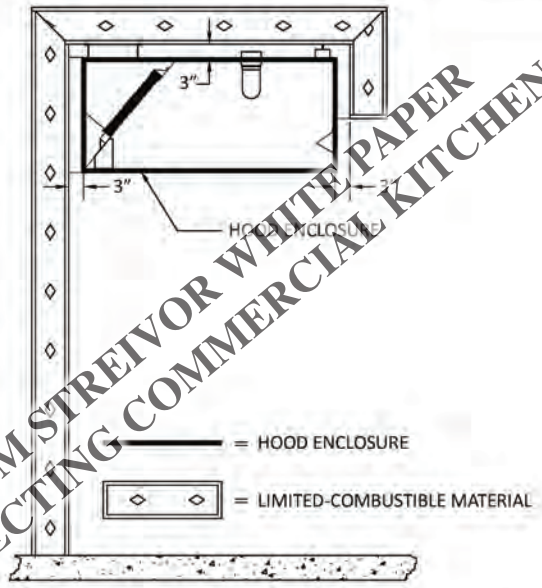


Figure #7

What is a limited-combustible material?*

A building construction material that does not comply with the definition of noncombustible material, that, in the form in which it is used, has a potential heat value not exceeding 3,500 Btu/lb. (8141 kJ/kg), when tested in accordance with NFPA 259, *Standard Test Method for Potential Heat of Building Materials*, and includes either of the following:

A. Materials having a structural base of noncombustible material, with a surface not exceeding a thickness of 1/8 inch (3.2 mm), and with a flame spread index not greater than 50, and

B. Materials in the form and thickness used, having neither a flame spread index greater than 25 nor evidence of continued progressive combustion, and of such composition that surfaces that would be exposed by cutting through the material on any plane would have neither a flame spread index greater than 25 nor evidence of continued progressive combustion, when tested in accordance with ASTM E 84, or UL 723.

Materials subject to an increase in combustibility or flame-spread rating beyond the limits herein established through the effects of age, moisture, or other atmospheric conditions shall be considered combustible.

*Definition of a limited-combustible material as per NFPA 96, 2011.

"Some standards and codes offer or allow exceptions to reduce Hood Enclosure clearance from limited-combustible materials"

- Examples of Not Acceptable Hood Enclosure Clearance From Limited-Combustible Material -

- Not Acceptable -

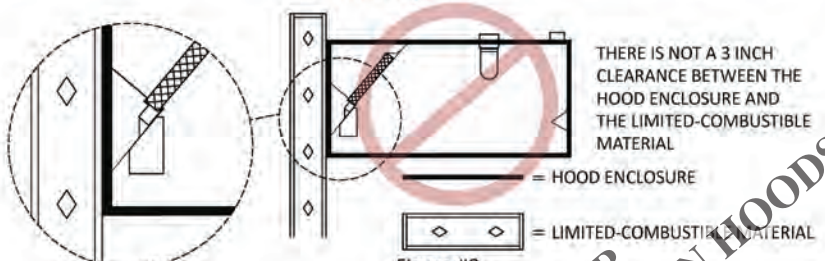


Figure #8

- Not Acceptable -

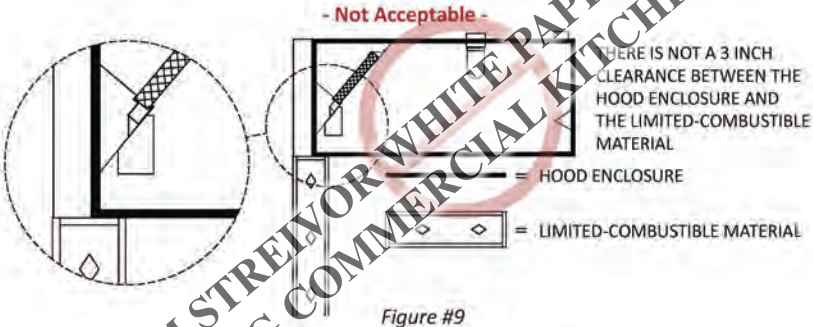


Figure #9

- Not Acceptable -

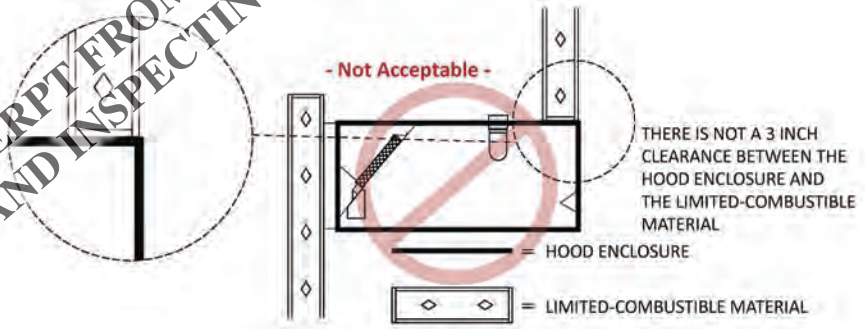


Figure #10

- Not Acceptable -

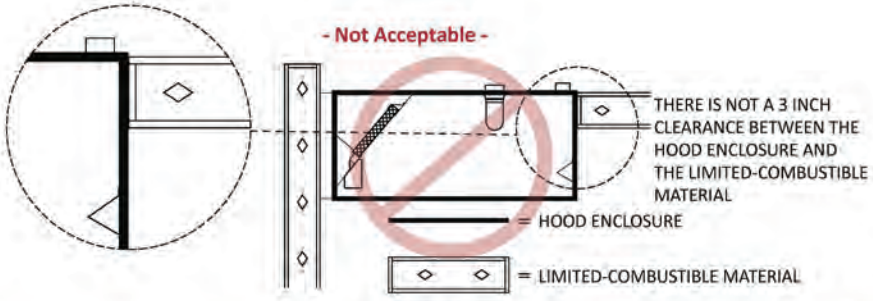


Figure #11

HOOD INSTALLATION

HOOD INSTALLATION INSTRUCTIONS

The area in which the hood is to be installed should be in a clean and safe working condition before installation begins.

It is recommended that the hanging rods be installed prior to the installation of the ducting system. It is the responsibility of the installer to communicate with an architect and/or engineer to the suitability of the structural support(s) of the 1/2" steel hanging rods. The hanging rods should be a minimum of 1/2" steel all thread material. The locations of the hanging rods are provided on the Streivor Air Systems hood drawings prior to the hood fabrication, if possible.

It is recommended that the exhaust and (supply air if required) ductwork be installed prior to the installation of the hood, if the installation of the hood will block the installation of the ducting system.

The installer should pre position a 1/2" bolt approximately 3" up the all thread rods.

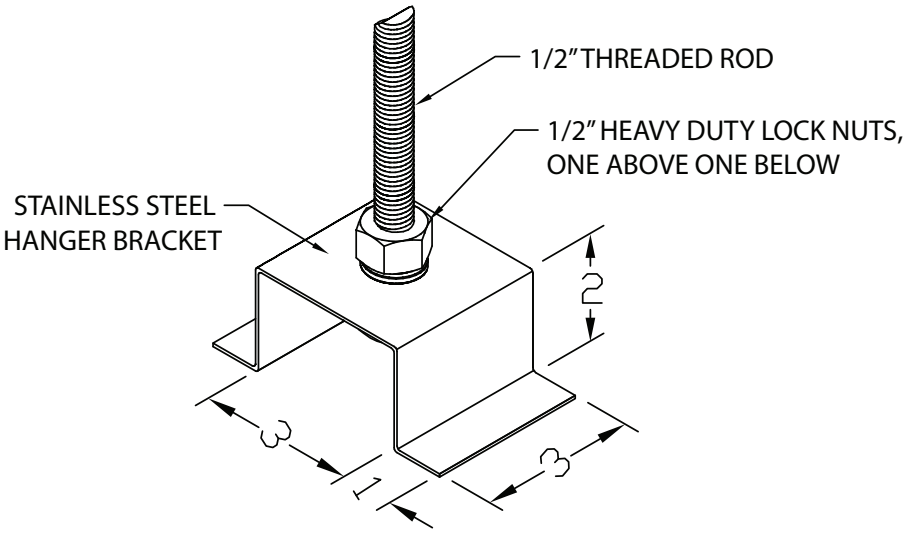
The hood should be placed on an approved lifting device and elevated to the height specified on the Streivor Air Systems hood drawings.

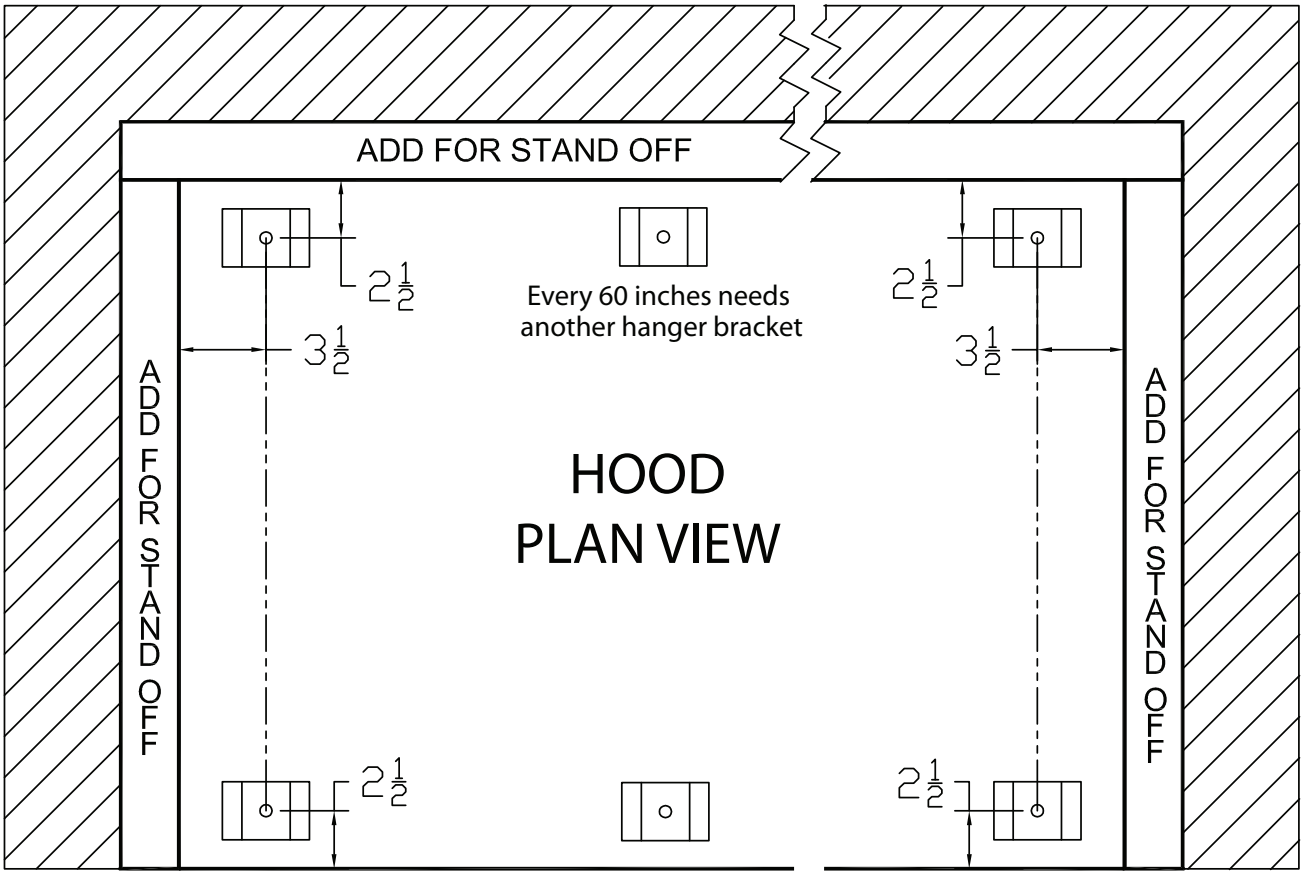
The 1/2" steel all thread rods should be inserted into the holes in the top of the hanger brackets welded to the top of the hood.

The installer should install a 1/2" lock washer and 1/2" bolt to the bottom of all the hanger rods. The installer should level the hood by turning the lower bolts up or down on the all thread rod. The installer should then turn the top bolts down and tighten them against the top of the hanger bracket with a wrench.

If the hood is a wall mounted design, the rear air space will be turned up in the back of the hood. The installer should screw through the turned up section of the airspace into the wall backing to secure the hood to the wall.

HANGER BRACKETS

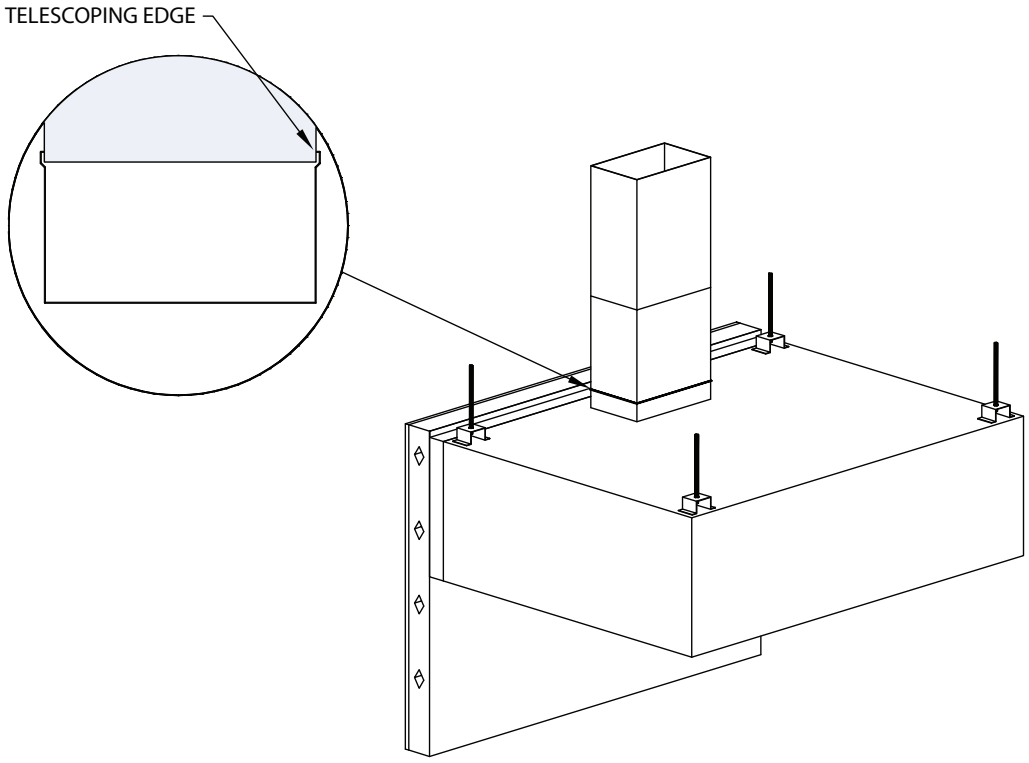




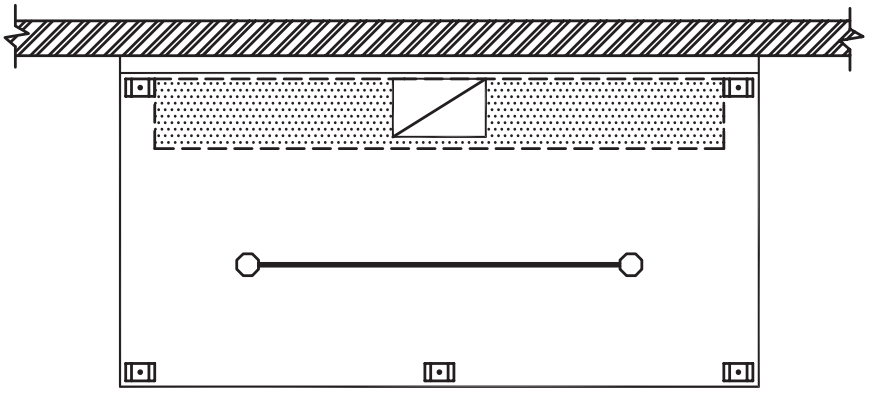
DUCT CONNECTIONS

The exhaust and supply air ducts should be constructed and installed in accordance with the code of the Authority Having Jurisdiction. The exhaust duct should be welded liquid tight to the exhaust collar of the hood or attached by other approved means of the Authority Having Jurisdiction.

Streivor Hoods with factory welded exhaust collars.

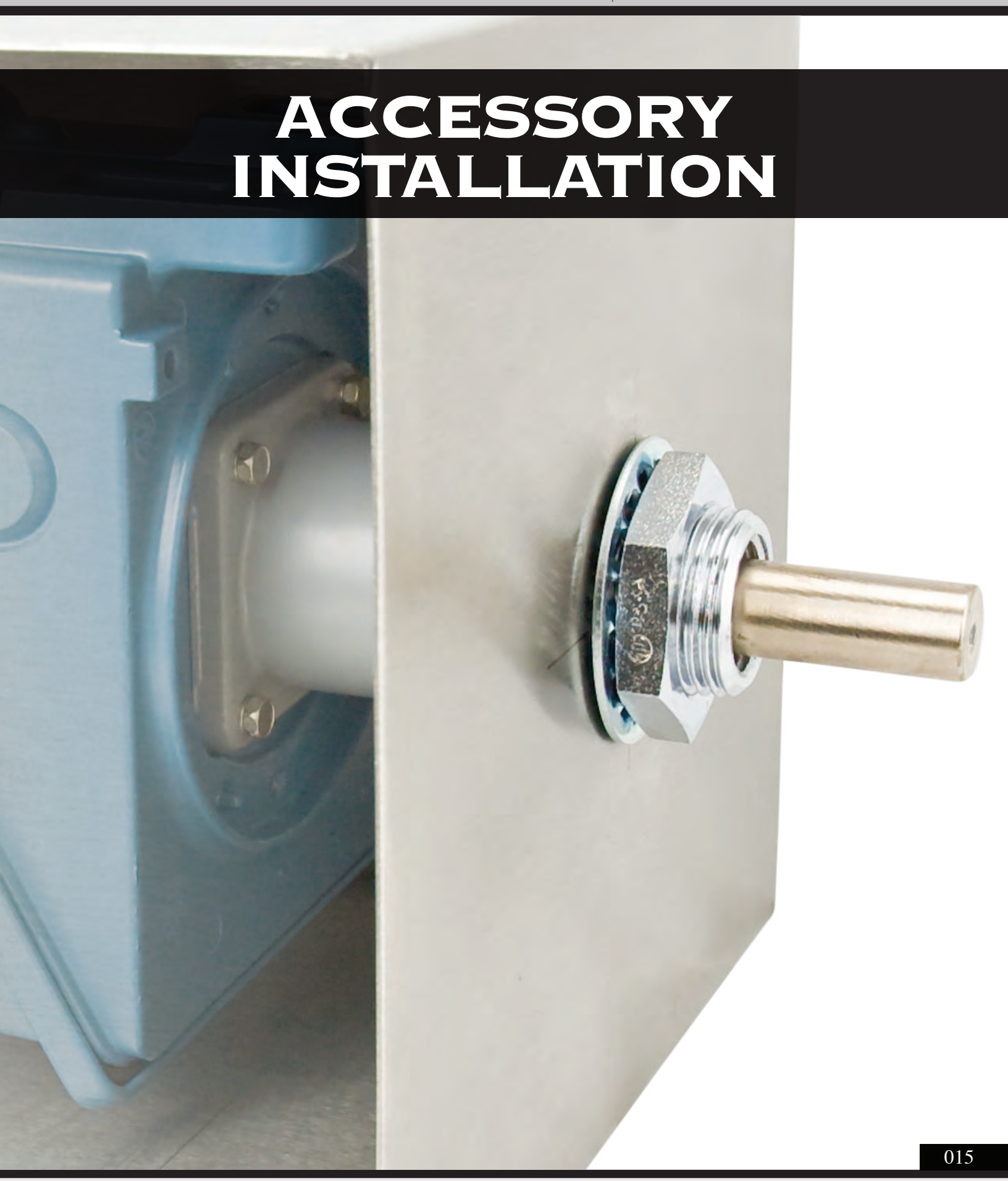


Streivor hood with exhaust collars shipped loose.



When a Streivor hood is supplied with the exhaust collar (not factory welded) the installer must obtain an engineered hood drawing of the hood from Streivor. The engineered hood drawing will have a plan view of the hood. The plan view will show the top of the hood and the hood's exhaust plenum. There will be a shaded area in the exhaust plenum that denotes where the exhaust collar must be installed. Once the exhaust collar is installed to the prevailing code, follow the instructions above for installing the exhaust duct to the hood exhaust collar.

ACCESSORY INSTALLATION



HOOD ACCESSORIES

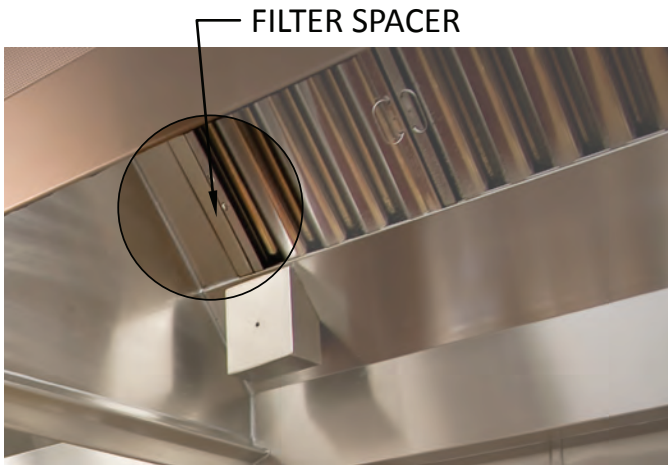
The hood accessories should be installed at the appropriate time and in accordance with their installation instructions.

FILTER/ADJUSTABLE FILTER SPACERS

The hood will be supplied with either cartridge filters or baffle filters. The filters should be installed after the hood is installed. After the filters are in place in the hood the installer should adjust the adjustable filter spacers located at both ends of the hood.

With a wrench the installer can loosen the two nuts located behind the filter spacers. The filter spacers should be moved in or out to eliminate any open space in the filter track. Retighten the nuts after the adjustment has been made.

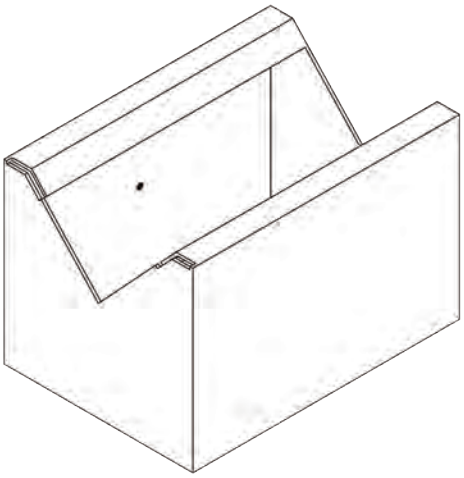
See filter installation, servicing and cleaning sheets for more information on filters. See ExtractAire™ Installation section.



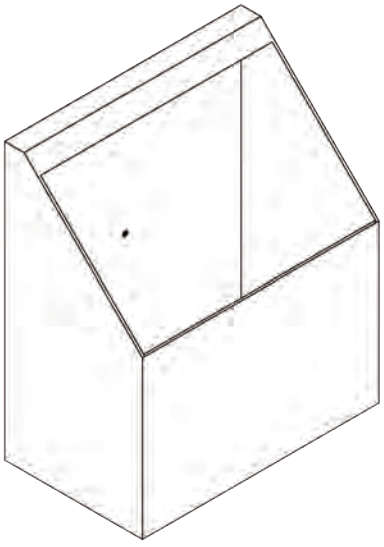
GREASE COLLECTORS

The installer should install the Grease Collectors on the hood by inserting the front top edge down onto the grease cup hanger bracket installed on the hood.

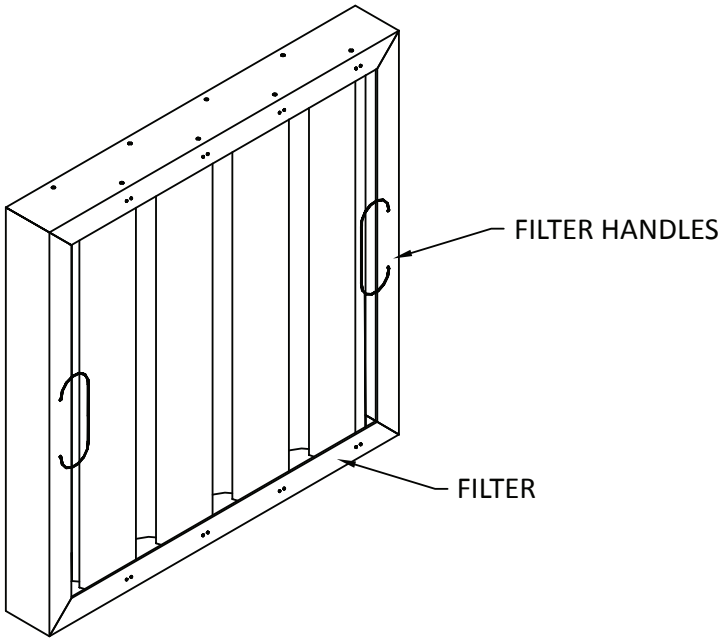
Island Canopy Grease Collector



Wall Canopy Grease Collector



BAFFLE FILTER



DO NOT ATTEMPT TO REMOVE OR ADJUST THE FILTER WHEN:

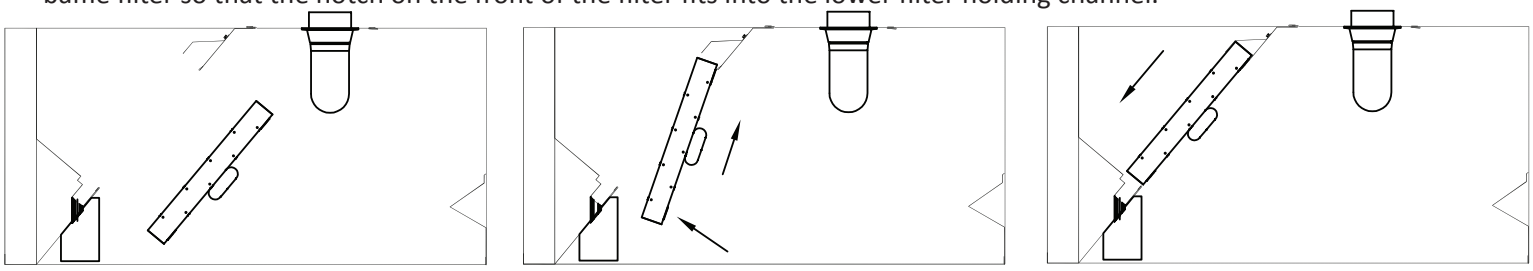
1. the exhaust fan is on.
2. the filters are hot.
3. the filters are over hot equipment.

PRIOR TO INSTALLATION OR REMOVAL:

Turn off the exhaust fan for the ventilation hood. Turn off the cooking equipment under the hood. Clear an area under hood, to allow the installer to place a ladder (or another approved form of elevating device) that will raise the installer to a level where he can easily install or remove the Baffle Filters.

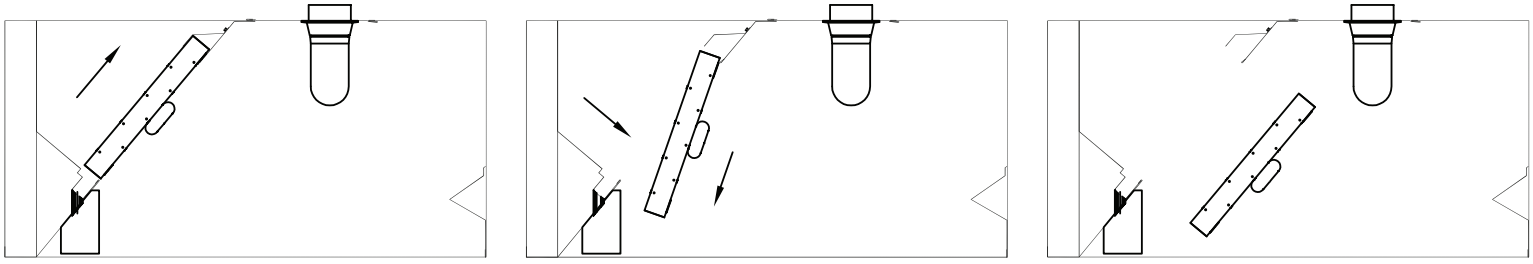
TO INSTALL:

Hold the baffle filter firmly by the filter handles and insert the upper section of the filter into the upper filter holding track within the hood. Swing the baffle filter towards the back of the hood until it clears the lower filter track holder. Lower the baffle filter so that the notch on the front of the filter fits into the lower filter holding channel.

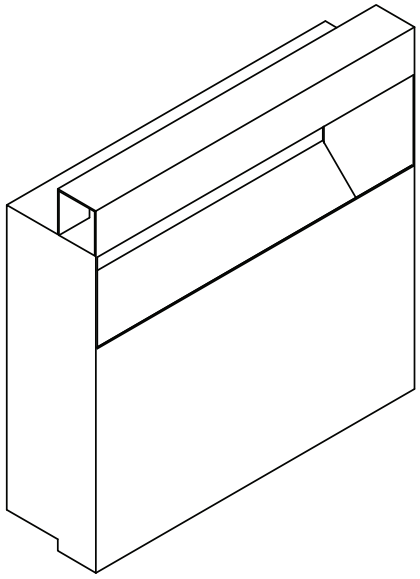


TO REMOVE:

Hold the baffle filter firmly and lift the filter up into the upper filter holder located at the top of the hood, swing the baffle filter towards the front of the hood until it clears the lower filter holding track. Pull the baffle filter down out of the upper filter holder track and remove.



ExtractAire™ Cartridge Filter



DO NOT ATTEMPT TO REMOVE OR ADJUST THE FILTER WHEN:

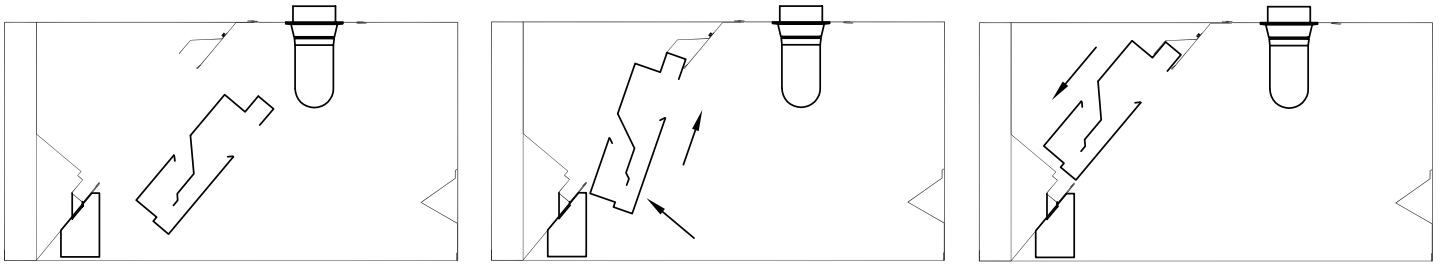
1. the exhaust fan is on.
2. the filters are hot.
3. the filters are over hot equipment.

PRIOR TO INSTALLATION OR REMOVAL:

Turn off the exhaust fan for the ventilation hood. Turn off the cooking equipment under the hood. Clear an area under hood, to allow the installer to place a ladder (or another approved form of elevating device) that will raise the installer to a level where he can easily install or remove the cartridges.

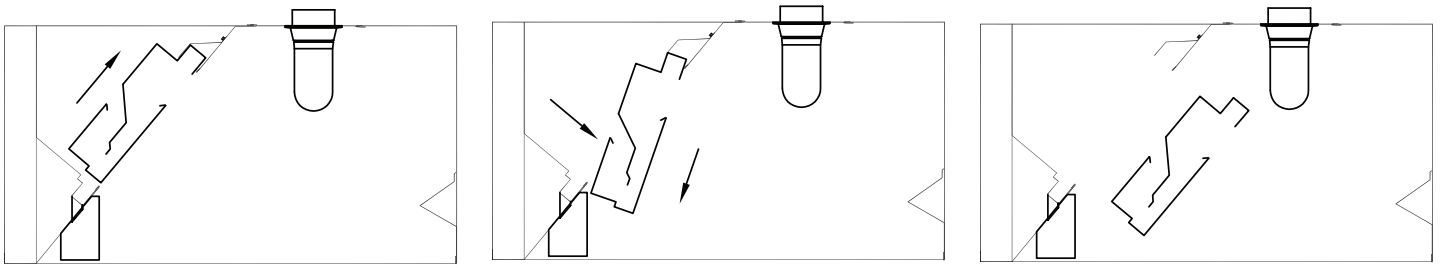
TO INSTALL:

Hold the cartridge firmly and insert the upper section of the cartridge into the upper filter holding track within the hood. Swing the cartridge towards the back of the hood until it clears the lower filter track holder. Lower the cartridge so that the notch on the front of the cartridge fits into the lower filter holding channel.



TO REMOVE:

Hold the cartridge firmly and lift the cartridge up into the upper filter holder located at the top of the hood, swing the cartridge towards the front of the hood until it clears the lower filter holding track. Pull the cartridge down out of the upper filter holder track and remove.



ADJUSTABLE FEATURE:

The ExtractAire™ Cartridges have an adjustable choke that allows the installer to adjust the amount of air flowing through each cartridge relative to the other cartridges in the same hood and the capabilities of the exhaust fan.

INITIAL SETUP:

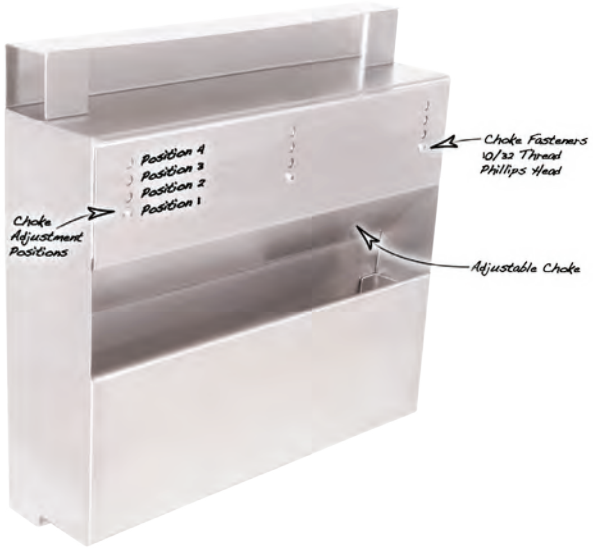
Set the adjustable choke in the full open position. The full open position is achieved by placing the choke in the position that results in the cartridge having the greatest open space at the back of the cartridge. Install the ExtractAire™ cartridges into the hood. Turn on the exhaust fan (using an airflow-measuring device) then adjust the exhaust fan to obtain the correct exhaust air flow specified for the hood.

START UP:

Start the cooking equipment and observe the hood as it captures and exhausts the effluents. If the hood is easily capturing all of the effluents and you are satisfied with the operation of the hood you may elect to leave all of the adjustable chokes in the full open position. No further adjustment is necessary. If you observe that the hood is struggling to exhaust effluents in a certain area of the hood relative to the other areas of the hood, you may elect to reposition the adjustable chokes to a more restrictive position in the cartridges that are in an area of the hood that is easily exhausting effluents. (Example: cartridges over low temperature equipment usually require less exhaust airflow relative to cartridges over high temperature equipment). The area of the hood with cartridges that have restrictive choke positions relative to the other cartridges in the hood will divert airflow to the area of the hood that have cartridges with chokes in the full open position. If after all the choke adjustments have been made and you still observe that the hood is struggling to or is not exhausting the effluents, increase the exhaust rate of the exhaust fan and repeat the start up procedure until the hood captures all of the effluents.

CARTRIDGE CHOKE ADJUSTMENT:

To reposition the choke, unscrew the three holding screws that secure the choke to the cartridge. Position the choke in the new desired location. Replace the screws and tighten.



There are four positions the adjustable choke can be placed in:

1. The top position (The position with the greatest open space created between the choke and the cartridge at the back of the cartridge) is the least restrictive.

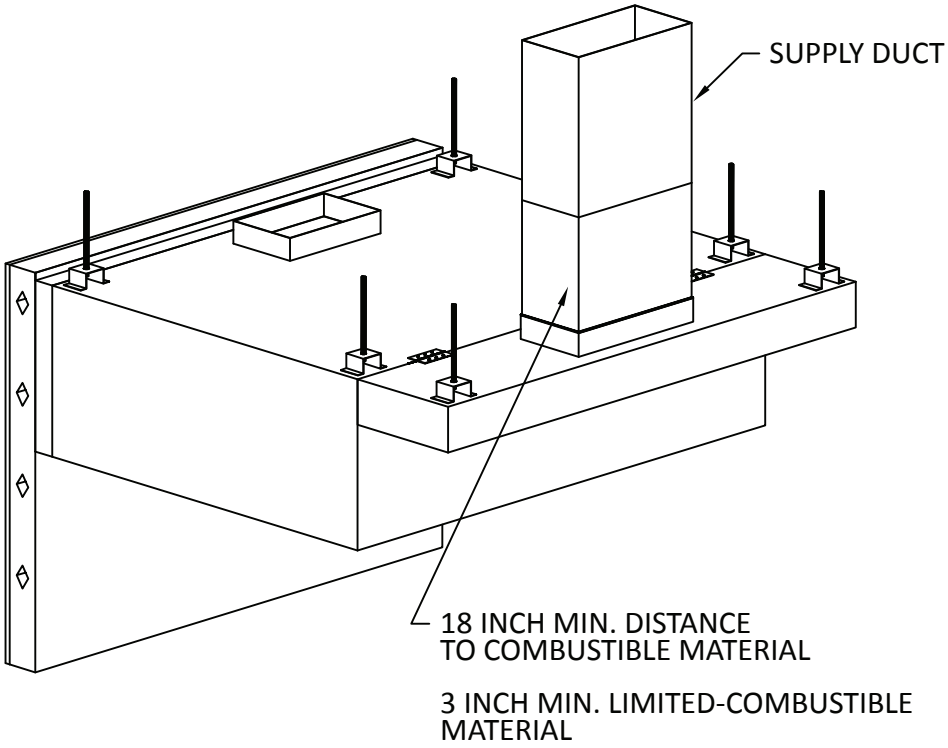
2. The bottom position (The position with the smallest open space created between the choke and the cartridge at the back of the cartridge) is the most restrictive.

3-4. The upper and lower middle positions are more restrictive than the top position and less restrictive than the lower position.

To divert a small amount of air from a cartridge to the accompanying cartridges place the choke in one of the middle positions. To divert a large amount of air from a cartridge to the accompanying cartridges place the choke in the bottom position. After you have made your desired adjustment, reinstall the cartridges in the hood. Make sure to place the cartridges in their proper place. Adjustment to the cartridge choke may necessitate adjustments to the exhaust fan. Use an airflow-measuring device to confirm that you have the required exhaust airflow specified for the hood. Restart the cooking equipment and observe the exhausting effluents. You may have to adjust the cartridge chokes more than once to obtain the optimum results.

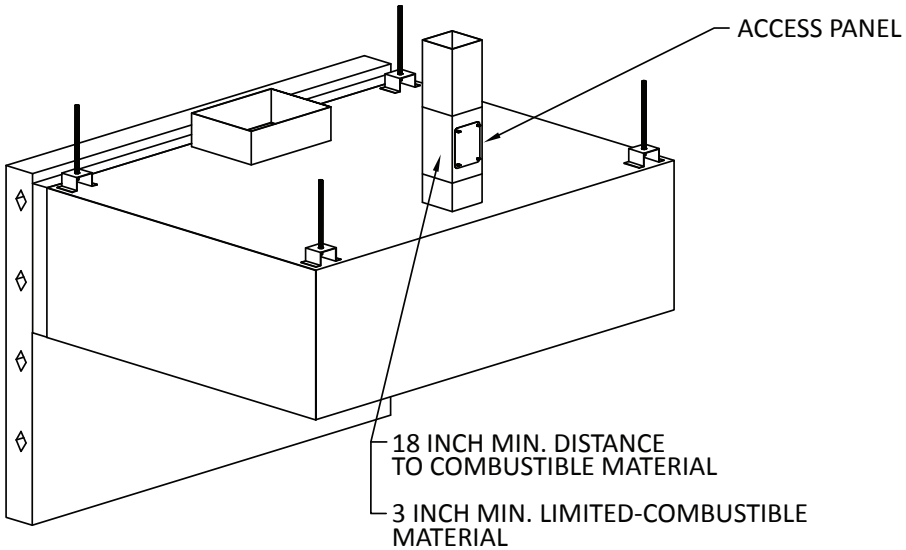
When you are satisfied that you have obtained the optimum exhaust airflow you should make a notation of the size, location and choke position of the cartridges. This will make it easy to reinstall the cartridges and chokes in the same position after they are removed for cleaning or inspection.

MAKE UP AIR DUCTS



MAKE UP AIR FIRE ACTUATED DAMPERS

FUSIBLE LINK



Several of Streivor's hoods such as the SA, WCFS, LCFS, ICFS, ICDS, CWCI, CWCD, and CWCC model of hoods include an internal make up air plenum built into the hood enclosure. Hoods with internal make up air plenums are manufactured and fitted with a fire actuated damper(s) wherever the makeup air inlet(s) penetrate the hood enclosure.

It is recommended that there be at least 18" of clearance between the top of the hood and the ceiling or other obstructions to allow adequate room to access and service the fire actuated dampers.

The fire actuated dampers are fitted with fusible links that have a rating of 165°f. If the temperature inside of the damper exceeds the rating of the damper the fusible link will melt and the spring loaded damper blade will close ceiling off the hood enclosure from the makeup air inlet.

Makeup dampers will be supplied to a nominal size of .25" less than the stated hood collar or damper size shown on the hood drawing. Thus a drawing showing a makeup air damper of 10" x 14" will have an actual outside dimension of 9.75" x 13.75".

Combustible materials may not be installed within 18" of the hood enclosure. Thus a non-combustible makeup air duct, such as sheet metal without combustible insulation should be installed to the makeup air damper assuring that no combustible materials are installed within 18" of any point of the hood enclosure.

If materials with a reduced clearance requirement are used to make the duct connection to the hood makeup air damper, the installer should follow the installation instructions of the reduced clearance system.

On hood models CWCI, CWCD, and CWCC the fire damper(s) are not accessible from the underside of the hood, Thus access to the fusible link inside of the damper must be provided in the makeup air duct above the damper. This can be achieved by installing an access door in the makeup air duct directly above the damper.

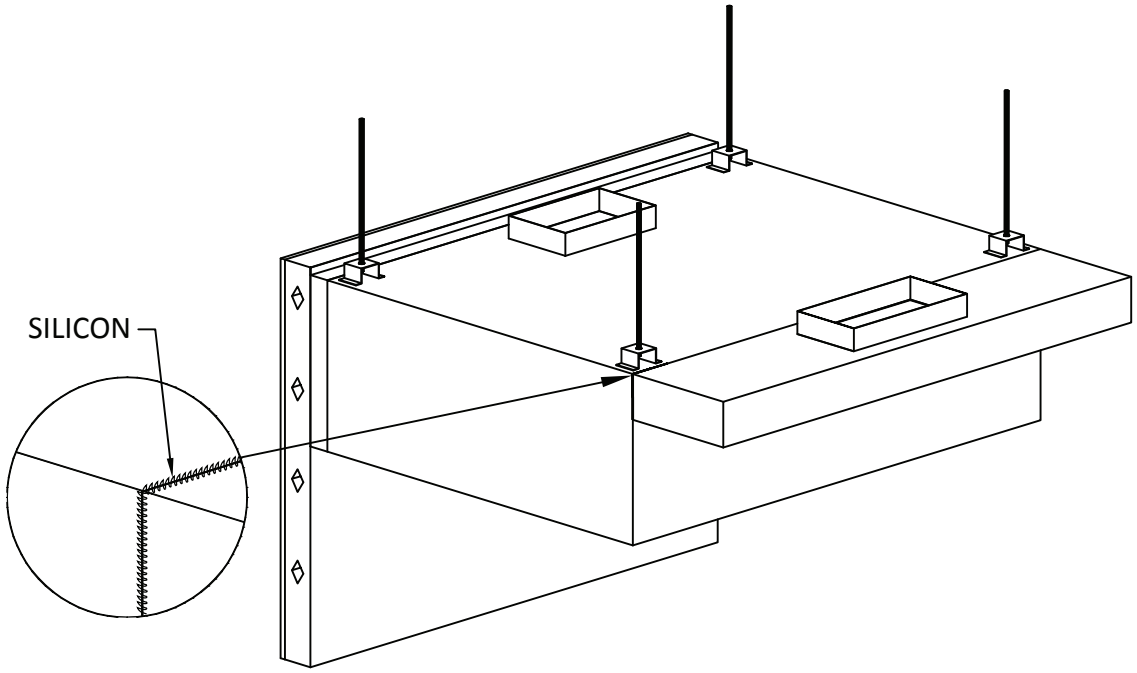
On hood models SA and WCFS, LCFS, ICDS the fire damper(s) can be accessed from the underside of the hood by removing the makeup diffusers on the front of the hood or the Smart Air Fan module from the internal make up air plenum. Thus an access panel in the makeup air duct above the hood is not required.

Prior to installing the makeup air duct to the damper verify the fusible link is not broken and is securely holding the sliding damper blade in the retracted position. If the fusible link is broken or appear to be compromised in anyway contact Streivor for a replacement link prior to installing the makeup air duct or placing the hood in service.

When installing the makeup air duct to the damper be careful not damage the damper or fusible link, also make sure that no obstruction are created in the damper that will affect the ability of the sliding damper to fully close and seal if the fusible link is broken.

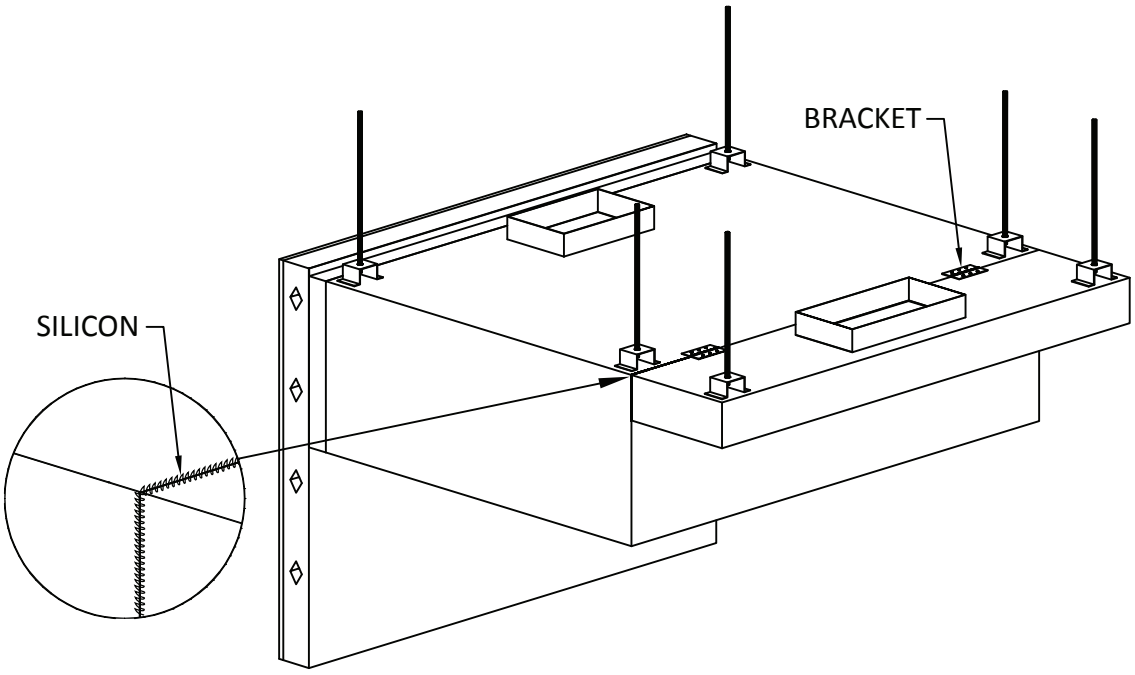
To allow for the proper air balancing of the hood internal make up air plenums it is strongly recommended that variable volume dampers be installed on every make up air damper inlet.

ADD ON PLENUMS



FACTORY INSTALLATION

Factory installed add on plenums are securely welded on to the hood. A thin layer of silicon is then applied to the seam between the hood and the plenum.



FIELD INSTALLATION

RECEIVING AND INSPECTION

The receiver should visually inspect the SPD/SPF for damage prior to unloading the SPD/SPF from the delivery company. If the receiver observes any damage they should immediately notify the deliver, and make a determination as to the extent of the damage. The receiver should not unload or receive the SPD/SPF from the deliverer if they believe the SPD/SPF has been damaged to such an extent that the SPD/SPF is not in a condition that is acceptable to them.

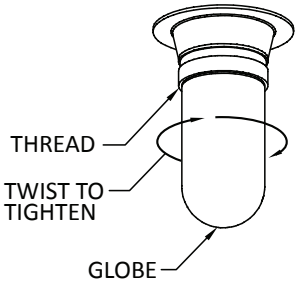
UNLOADING AND RECEIVING

After unloading the receiver should uncrate the SPD/SPF and repeat the Receiving and Inspection instructions prior to signing for and receiving the SPD/SPF.

INSTALLATION INSTRUCTIONS

1. Verify that the SPD/SPF is the size, shape and design that is specified on the engineered hood drawings.
2. If the supply collars are to be field installed, make the appropriate cutout on the plenum at this time.
3. The installer should pre position a ½ inch bolt approximately 3 inches up the all thread rods.
4. The SPD/SPF should be placed on an approved lifting device and elevated to the correct height. The SPD/SPF should sit flush with the top of the hood.
5. The ½ inch steel all thread rods should be inserted into the holes in the top of the hanger brackets welded to the top of the SPD/SPF.
6. The installer should install a ½ inch lock washer and ½ inch bolt to the bottom of all the hanger rods. The installer should level the SPD/SPF by turning the lower bolts up or down on the all thread rod. The installer should then turn the top bolts down and tighten them against the top of the hanger bracket with a wrench.
7. Secure the SPD/SPF to the hood using Streivor's supplied brackets.
8. Apply a continuous layer of silicon to the seam between the hood and the plenum.

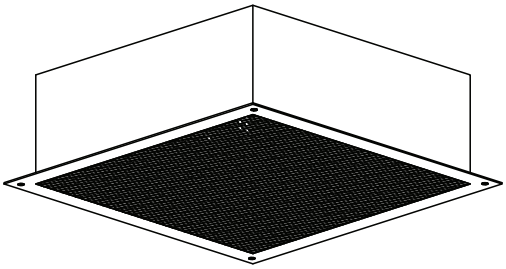
LIGHTING



VAPOR PROOF LIGHTS

Note: Streivor Air Systems does not provide the lamps (light bulbs) for light fixtures.

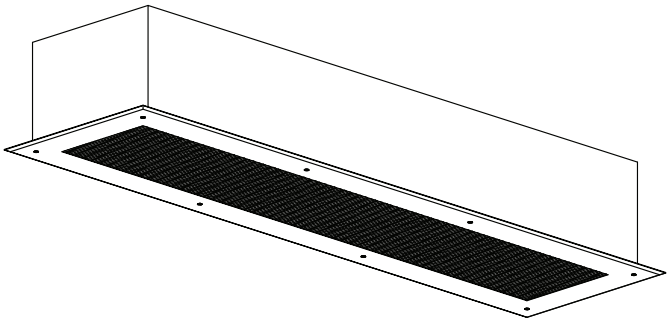
1. The lamps may be installed by carefully unscrewing the protective glass globe cover from the light fixture.
2. Install the lamp by screwing it into the light socket in the light fixture.
3. Replace the protective glass globe by carefully screwing it into the light fixture. Be careful not to cross-thread the glass globe.



RECESSED INCANDESCENT LIGHTS

Note: Streivor Air Systems does not provide the lamps (light bulbs) for light fixtures.

1. Recessed light fixtures are pre-installed at the factory. To install lamps remove the screws on the face of the light fixture inside the hood.
2. Remove the glass cover.
3. Install the lamps.
4. Replace the glass cover.



RECESSED FLUORESCENT LIGHTS

Note: Streivor Air Systems does not provide the lamps (light bulbs) for light fixtures.

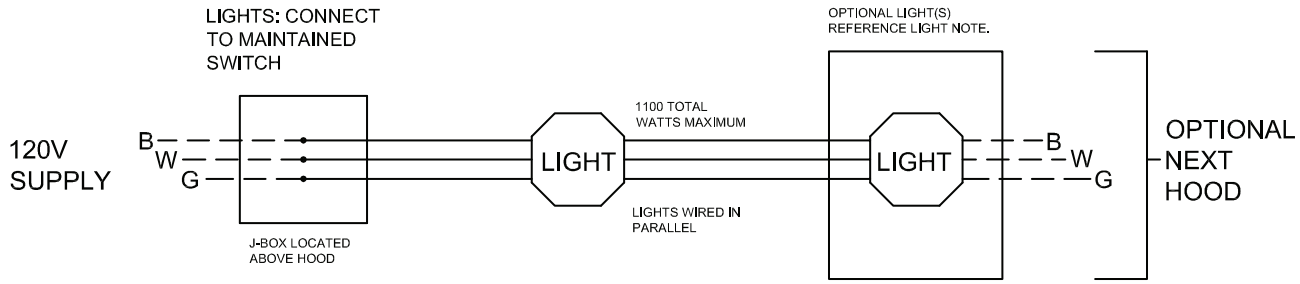
1. Recessed light fixtures are pre-installed at the factory. To install lamps remove the screws on the face of the light fixture inside the hood.
2. Remove the glass cover.
3. Install the lamps.
4. Replace the glass cover.

WIRING

Warning: All electrical work should be performed by a qualified electrician.

1. Locate the three light fixture wires (Hot, Neutral and Ground) in a junction box on the top of the hood.
2. Reference the wiring diagram for further details.

STREIVOR AIR SYSTEMS - LIGHT WIRING DETAIL



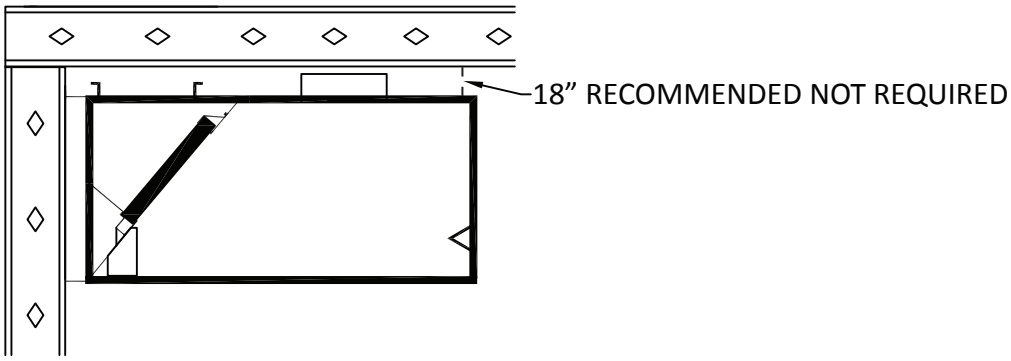
NOTE: LIGHT(S) WILL BE PROVIDED ACCORDING TO THE LENGTH OF THE HOOD.

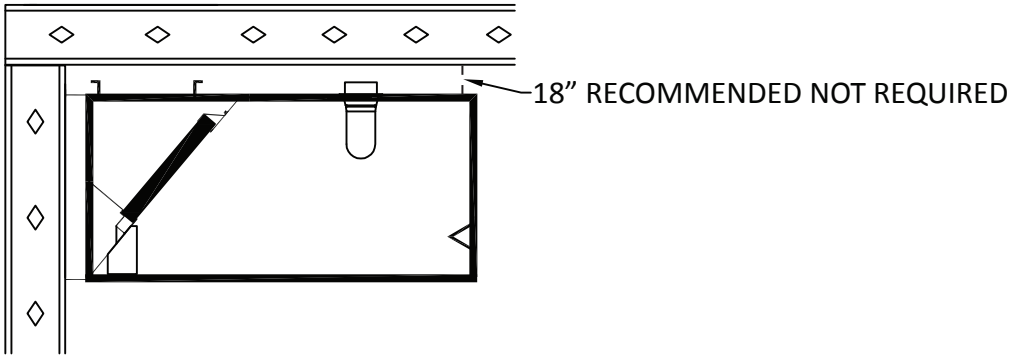
FIELD WIRING

STREIVOR FACTORY WIRING

DRAWING FOR REFERENCE ONLY.
ALL WORK TO BE PERFORMED BY QUALIFIED ELECTRICIAN FOLLOWING ALL APPLICABLE CODES.
SHORT CIRCUIT PROTECTION MUST BE PROVIDED.

HOOD CLEARANCE FOR LIGHTING FIXTURES



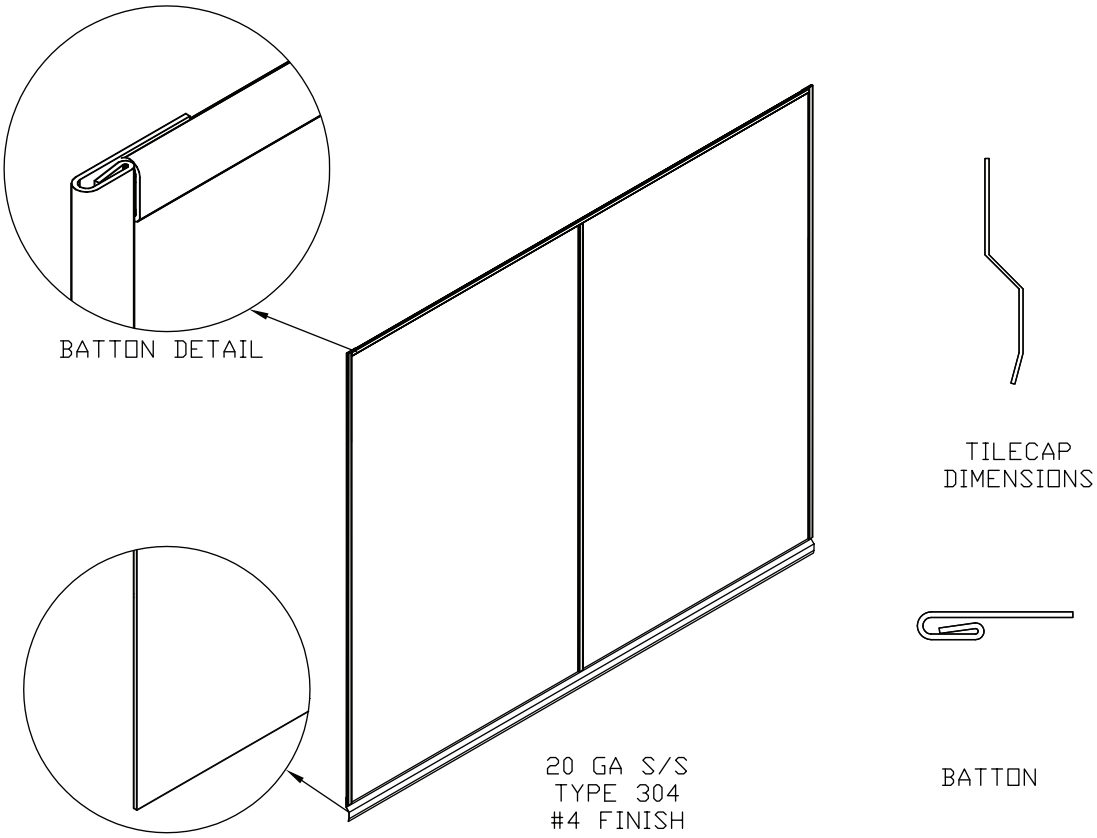


CONTAINMENT PANELS

Using a philips head screwdriver, remove the screws while another person is holding the stainless steel light duty panel.

Using a philips head screwdriver, remove the screws while another person is holding the stainless steel heavy duty panel.

WALL FLASHING



FLAT WALL FLASHING

Prior to purchasing flat wall flashing, the height that the hood will be installed off the finished floor and the height that the panels will be installed above the finished floor needs to be determined so that the height of the panels can be determined.

The formula for determining the height of the panels is A-B=C

A= Height of hood off the finished floor

B= Height of installed panels off the finished floor

C= Height of panels

Once you determined the height of the panels you can proceed with ordering the panel.

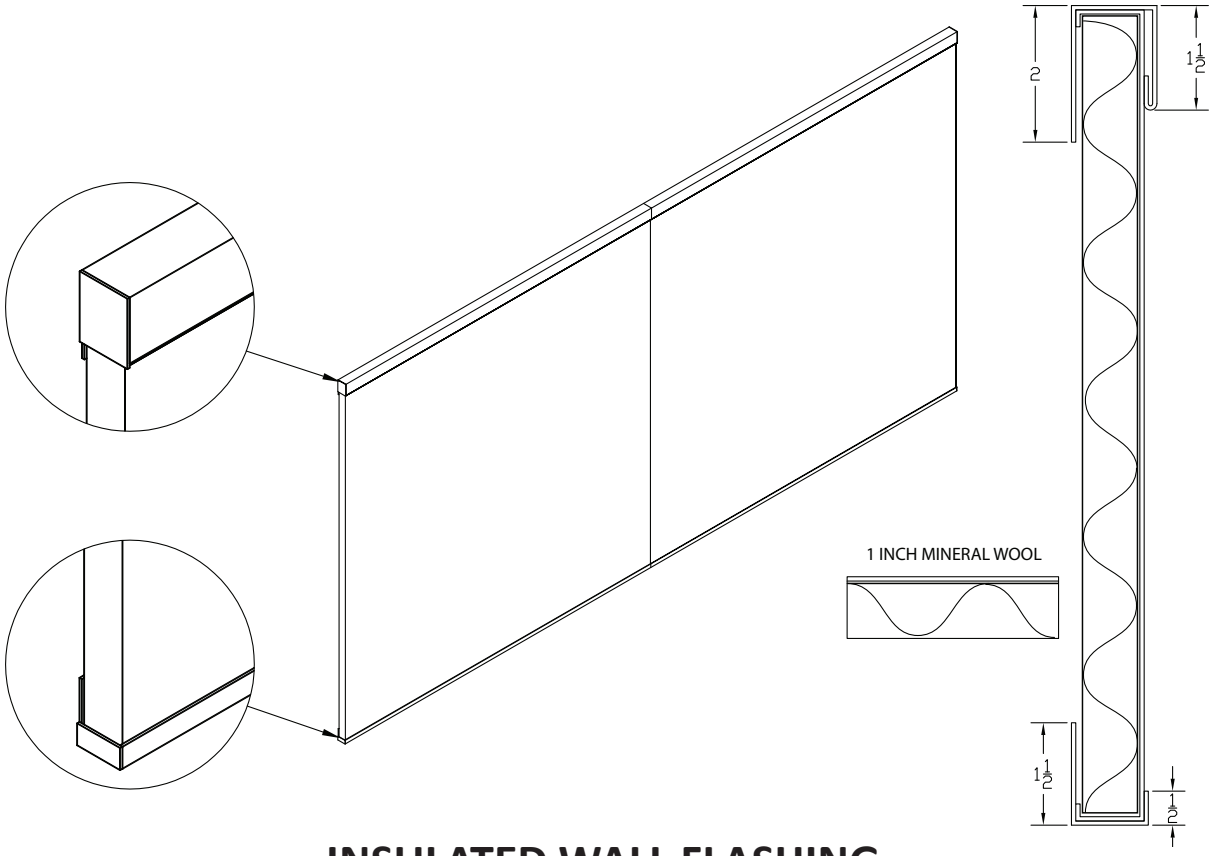
Suitable wall backing should be provided in the wall to allow the battons to be securely fastened to the wall. Note that all wall backing should be the requirement of the rating of the wall. Only fasteners that meet the requirement of the wall rating should be used. It is the responsibility of the Specifier to insure that the wall construction, backing and fasteners meet the requirements of the prevailing codes.

The hood should be installed per its installation requirements prior to installation of the flashing.

The flat wall flashing is supplied with battons and tilecaps. The tilecap should be installed first.

The first batton should be securely fastened to the wall using rivets. Slide the wall flashing into the batton. Secure the wall flashing to the wall using an adhesive.

Position the second batton so that it covers the raw edge of the wall flashing. Securely fasten it to the wall using rivets. Once in place, slide the wall flashing into the batton. Secure the wall flashing to the wall using adhesive. Repeat the process as necessary.



INSULATED WALL FLASHING

Prior to purchasing stainless panels with 1 inch insulation (panels) the height that the hood will be installed off the finished floor and the height that the panels will be installed above the finished floor needs to be determined so that the height of the panels can be determined.

The formula for determining the height of the panels is A-B=C

A= Height of hood off the finished floor

B= Height of installed panels off the finished floor

C= Height of panels

Once you determined the height of the panels you can proceed with ordering the panel.

Suitable wall backing should be provided in the wall to allow the panels tracks to be securely fastened to the wall. Note that all wall backing should be in the requirement of the rating of the wall. Only fasteners that meet the requirement of the wall rating should be used. It is the responsibility of the Specifier to insure that the wall construction, backing and fasteners meet the requirements of the prevailing codes.

The hood should per its installation requirements prior to installation of the panels.

The panels are supplied with the panel(s), the bottom track and the top track. The top track should be installed first.

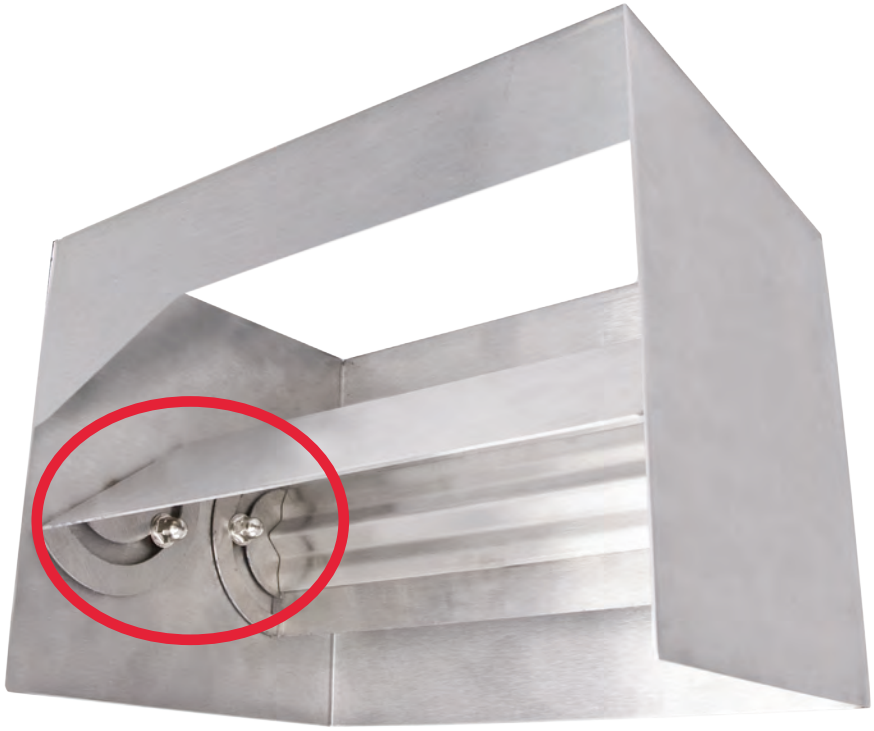
The top track should be securely fastened to the wall up tight against the hood. The top track has a 1 1/2 inch edge on the front surface.

The bottom track should be installed next.

Measure the height of the panel, add 1 inch to that number.

BalanceAire™

Internally Adjustable Volume Dampers for Exhaust Ducts



RECEIVING AND INSPECTION

The receiver should visually inspect the BalanceAire damper for damage prior to unloading the dampers from the delivery company. If the receiver observes any damage they should immediately notify the deliver, and make a determination as to the extent of the damage. The receiver should not unload or receive the BalanceAire dampers from the deliver if they believe the BalanceAire damper has been damaged to such an extent that the BalanceAire damper is not in a condition that is acceptable to them.

UNLOADING AND RECEIVING

After unloading the receiver should uncrate the BalanceAire damper and repeat the Receiving and Inspection instructions prior to signing for and receiving the BalanceAire damper.

INSTALLATION NOTE

The BalanceAire damper is UL Listed per the UL 710 Standard when installed in compliance with the National Fire Protection Association Standard 96. Only an installer that is trained in the field with years of experience and knowledge of the prevailing standards and codes should install the BalanceAire damper.

INSTALLATION INSTRUCTIONS

Verify that the BalanceAire damper is the size shape and design that is specified on the engineered drawings.

Review the area of hood exhaust collar or exhaust duct where the BalanceAire damper is to be installed. The BalanceAire damper must be installed in a location that will allow the inside bottom of BalanceAire damper to be accessible.

The BalanceAire damper can be manufactured to be installed for installation directly to the hood exhaust collar or as part of the duct system. The BalanceAire damper can be manufactured with several different top and bottom shapes to accommodate various exhaust collar and duct connections. The specifier should consult the project requirements and the prevailing codes to assure the BalanceAire damper is manufactured and installed as required and to the prevailing codes.

If the BalanceAire damper is installed in the hood exhaust collar the bottom of the BalanceAire damper must be accessible from inside of the hood exhaust plenum.

If the BalanceAire damper is installed in the exhaust duct it must be located in close proximity to the exhaust hood or a duct clean out so that the inside bottom of the BalanceAire damper will be accessible to allow access to the opposed blade adjustment guides and fasteners.

The BalanceAire damper has a top and a bottom. The adjustment track and locking fasteners are located on the bottom portion of the BalanceAire damper. The bottom of the BalanceAire damper shall be installed closest to the hood and furthest from the exhaust fan. When the BalanceAire damper is in the closed position the peak of the closed baffles will be at the top of BalanceAire damper and should be installed to the exhaust.

ADJUSTMENT INSTRUCTIONS

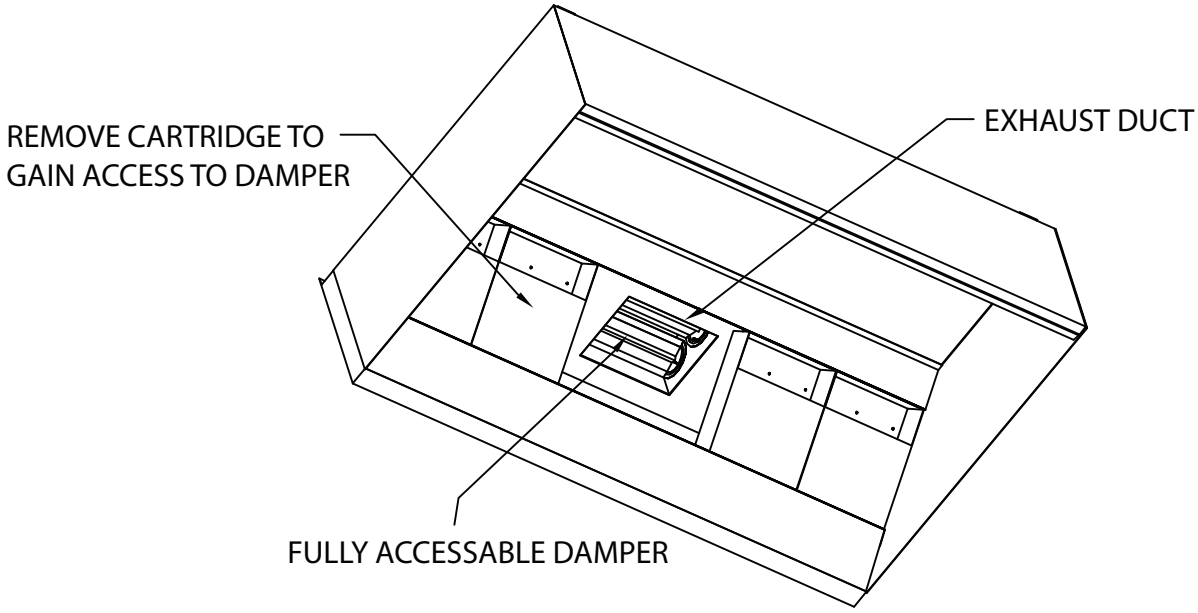
The BalanceAire damper can be adjusted by accessing the bottom of the internal section of the damper.

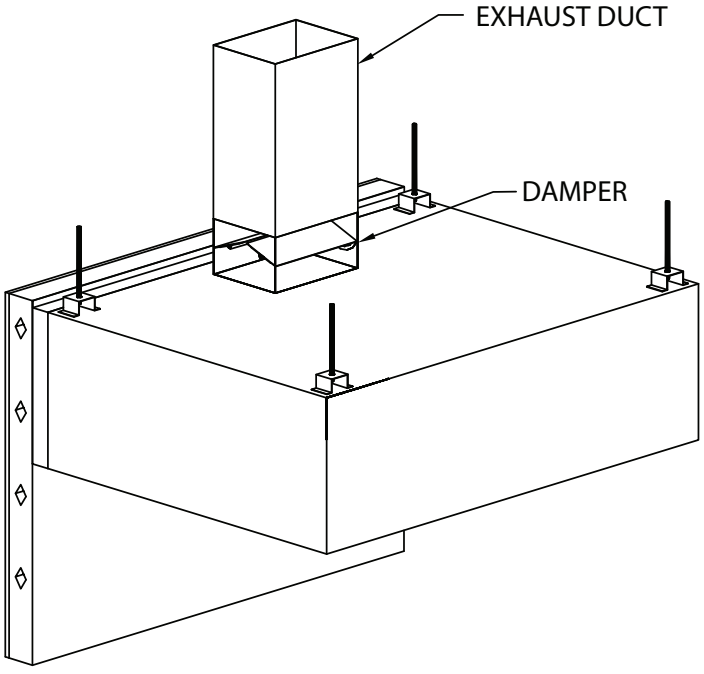
The BalanceAire damper has two opposing baffles. Each opposing baffle is independently adjustable. The opposed blades can be positioned in varying positions from 100% open to 95% closed. The BalanceAire damper is considered to be in the 100% open position when the opposed blades are a positioned parallel to the sides. The BalanceAire damper is considered to be in the 95% closed position when the opposed blades are a positioned in their most perpendicular position to the sides. The BalanceAire damper creates greater or lesser amounts of fan resistance based on the position of the opposed blades. The closer to parallel the opposed blades are to the sides the less fan resistance they will create, the closer to perpendicular the opposed blades are to the sides the more fan resistance they will create. The opposed blades can be adjusted independently, however, it is recommended that the opposed blades always be adjusted and set in a similar position.

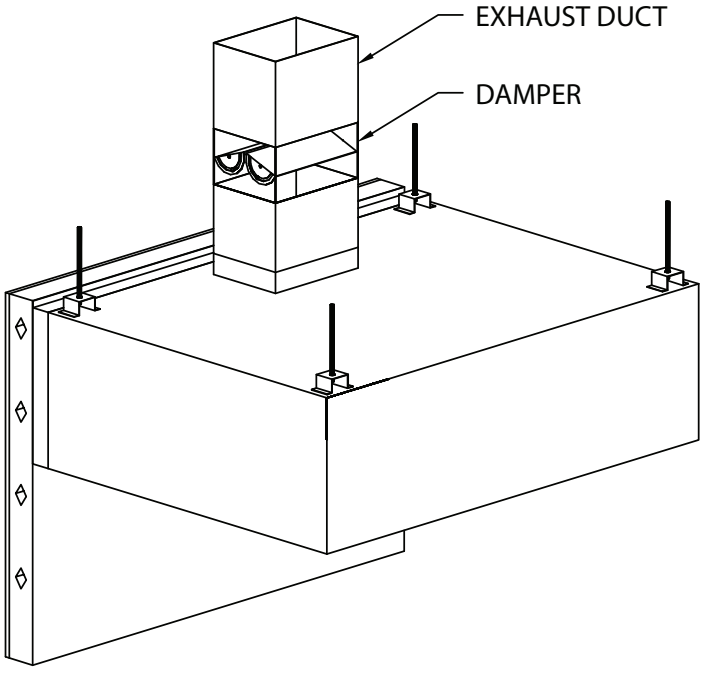
Each opposed blade has an adjustment track and a locking fastener. To position and an opposed blade find the locking fastener and turn the fastener counter clock wise to loosen the fastener. It is not necessary to fully remove the fastener from the threaded stud. With the fastener in the loose position, slide the opposed blade to the desired position and then turn the fastener clockwise to tighten and lock the opposed blade in place. It is important to securely fasten the fastener so as to hold the opposed damper in place, however, do not over tighten the fastener so that the fastener or threaded stud becomes damaged.

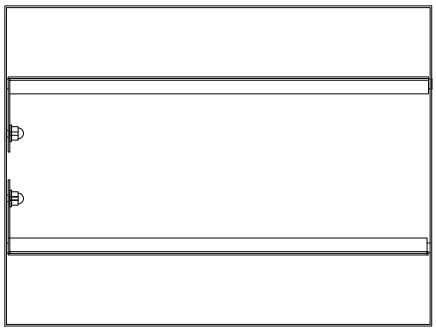
MAINTENANCE

Excessive amounts of grease and other effluents should not be allowed to build up on the BalanceAire damper. The BalanceAire damper should be cleaned by the same means and at the same interval as the associated duct work or as often as necessary.





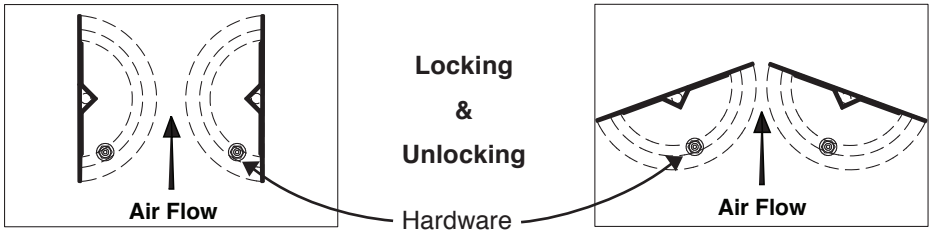




BOTTOM VIEW

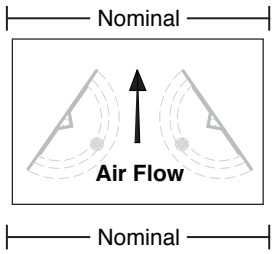
- **UL 710 Listed for use in Hoods and Ducts**
- **NFPA 96 Compliant**
- **Adjustable Opposed Blades**
- **100% open to 95% closed**
- **Locking, unlocking and adjusting hardware is located inside of the damper, accessible through the hood**
- **Low profile design**
- **All welded construction**

BLADE POSITIONING



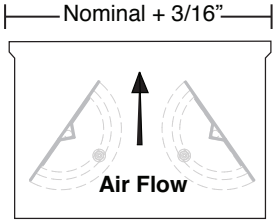
100% Open **95% Closed**

EDGE DETAILS



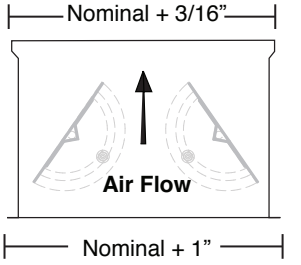
US-LS

Edge	Detail
Upper	Straight
Lower	Straight



UT-LS

Edge	Detail
Upper	Telescoping
Lower	Straight

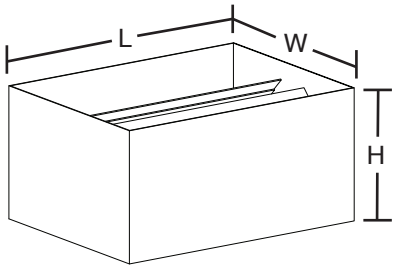


UT-LF

Edge	Detail
Upper	Telescoping
Lower	Flat

DIMENSIONING

Minimum height of the damper is determined by the damper width:



DAMPER WIDTH	DAMPER MIN. HEIGHT
8” to 11”	8”
12” to 16”	10”
17” to 21”	12”
22” to 24”	14”

UL LISTED

ENCLOSURES

Streivor™ Air Systems introduces Enclosures, the first ever UL 710 Listed hood and/or duct mounted enclosure with removable cover that protects hood and duct mounted monitoring equipment and allows access to the equipment through the hood.

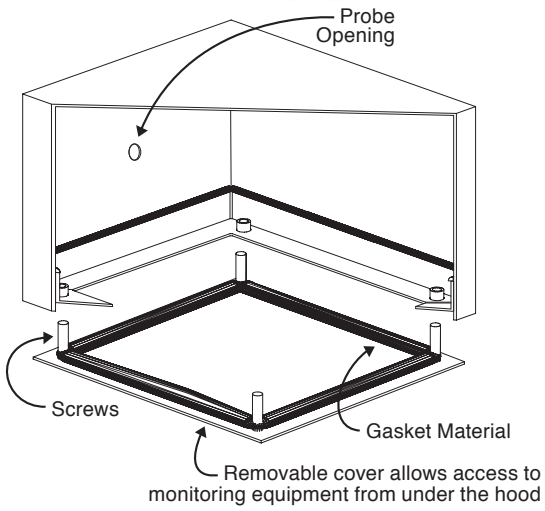
THE CHALLENGE

Installation of monitoring equipment designed to measure conditions inside of hoods and/or ducts needs to be easily accessible for adjustments, service and/or replacement. Accessing the hood or duct mounted monitoring equipment from outside of the hood or duct does not meet the requirement of easily accessible and often is not accessible at all, due to ceilings, walls or other obstructions.

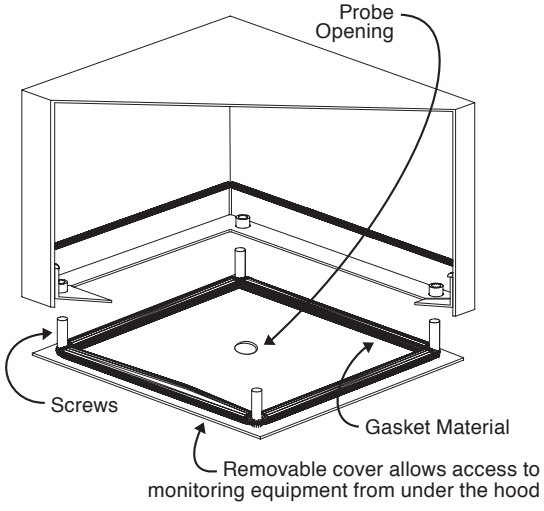
THE SOLUTION

Streivor™ Air Systems UL 710 Listed Enclosures with UL 1978 seals that facilitate duct and/or hood mounted monitoring equipment. Streivor's Enclosures are engineered to be fully welded into hoods and/or ducts, while still incorporating a removable protective cover that seals the Enclosure, protecting the monitoring equipment, and is accessible from inside the hood or duct. When the Enclosure's cover is removed it allows easy access for installation, adjustments and service to the equipment inside.

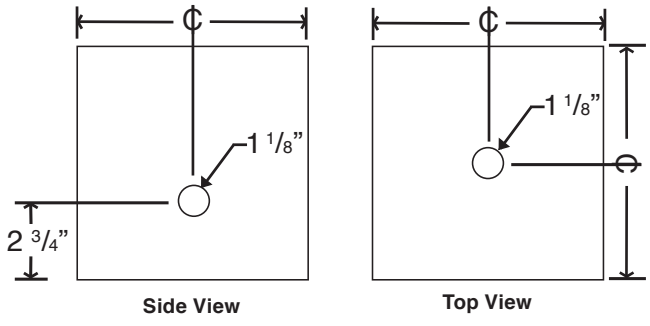
DUCT ENCLOSURE

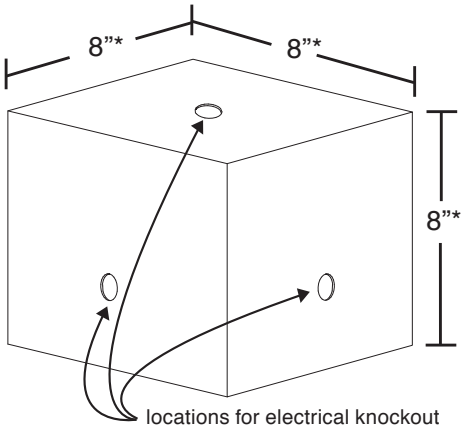


HOOD ENCLOSURE



ELECTRICAL KNOCKOUTS



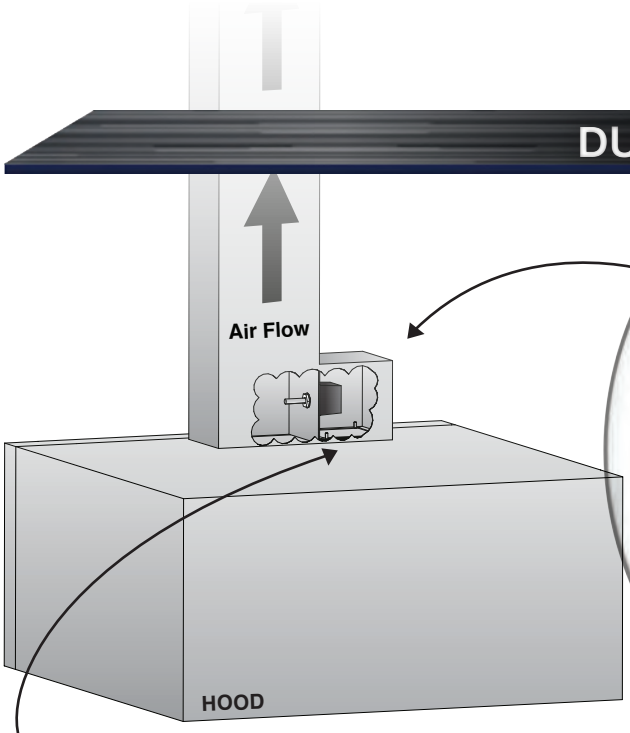


* Standard enclosure size will be 8"x8"x8"
Consult the factory for custom sizing

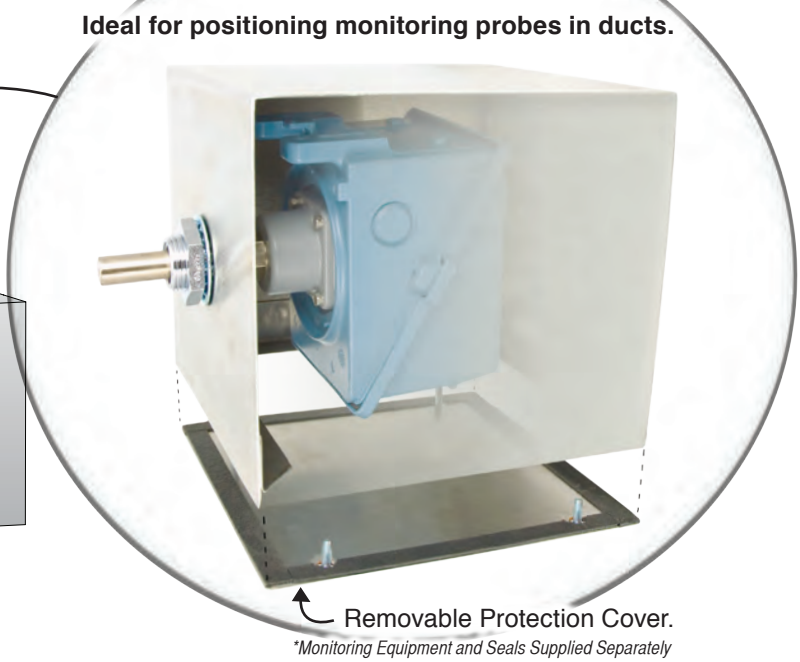
UL LISTED

DUCT MONITORING ENCLOSURE

Ideal for positioning monitoring probes in ducts.



Enclosures are to be continuously welded to the all welded liquid tight hood assembly.

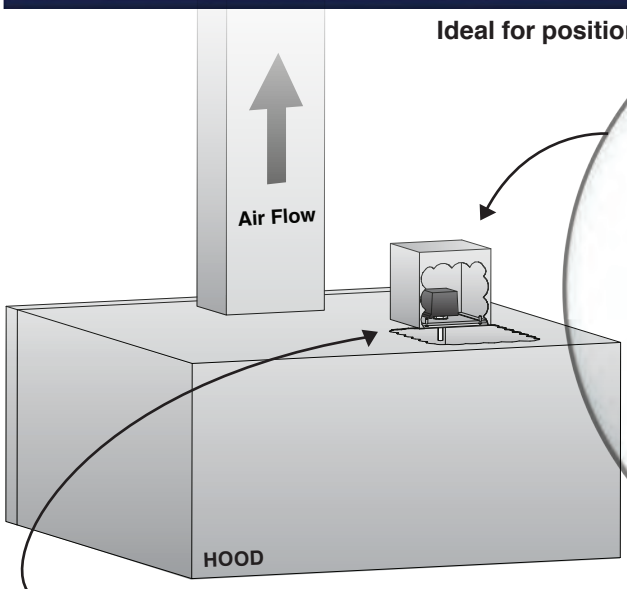


Removable Protection Cover.

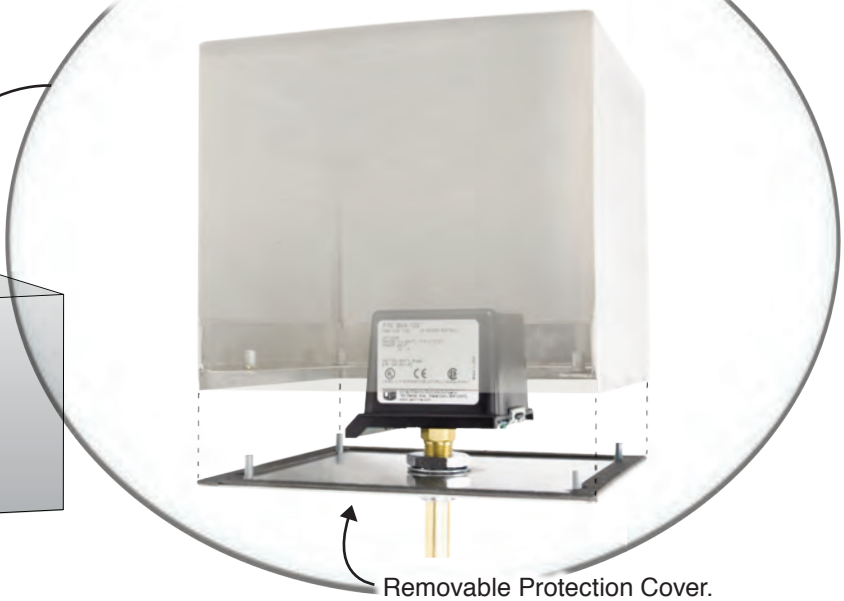
**Monitoring Equipment and Seals Supplied Separately*

HOOD MONITORING ENCLOSURE

Ideal for positioning monitoring probes in hood plenums or canopies.



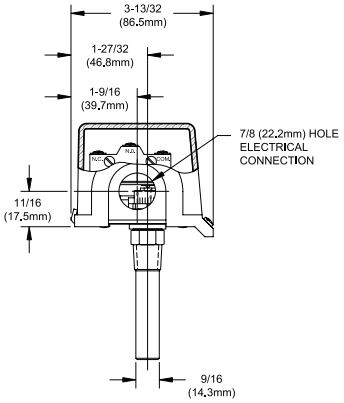
Enclosures are to be continuously welded to the all welded liquid tight hood assembly.

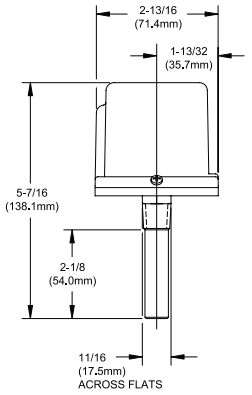


Removable Protection Cover.

**Monitoring Equipment and Seals Supplied Separately*

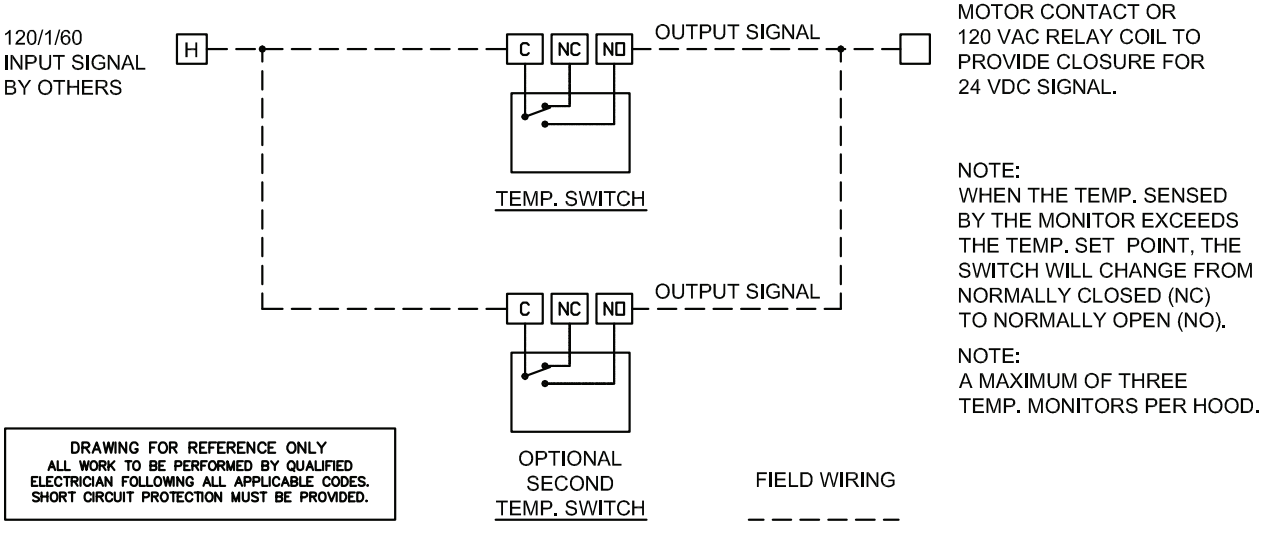
TEMPERATURE MONITORS

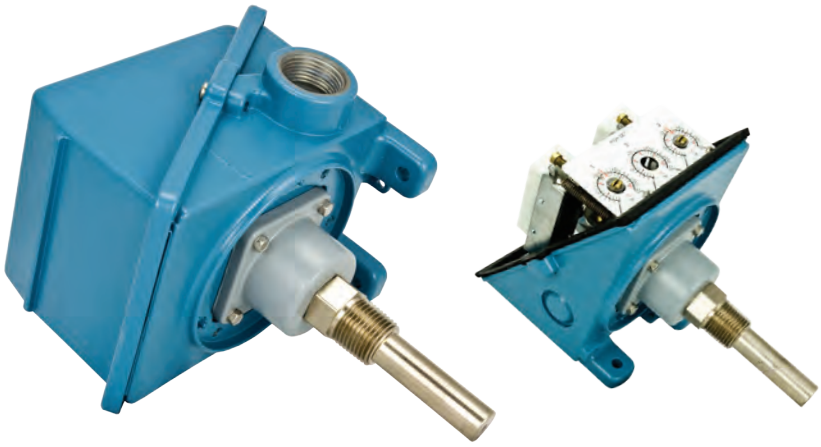


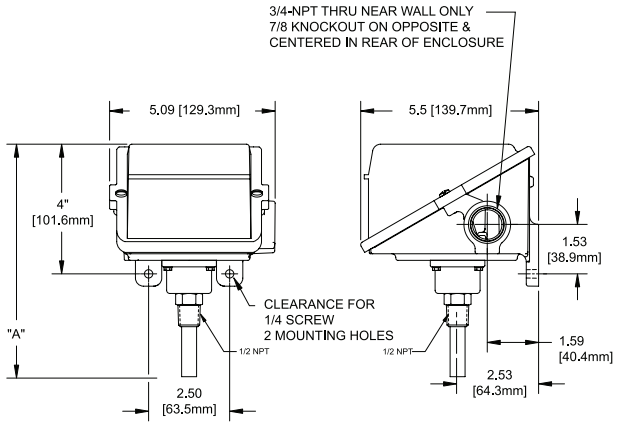


SINGLE TEMPERATURE MONITOR

STREIVOR AIR SYSTEMS - SINGLE TEMP. SWITCH WIRING DIAGRAM

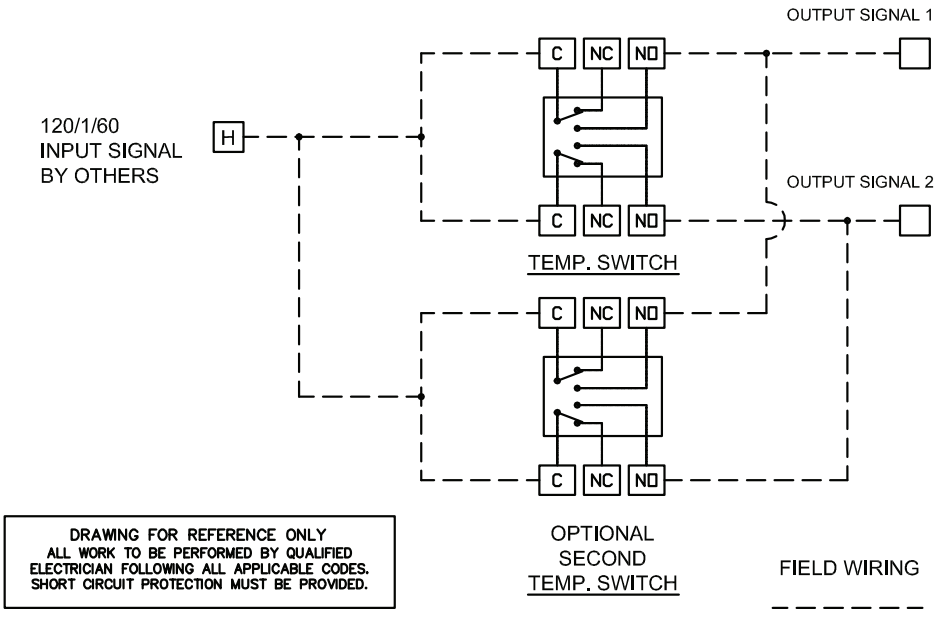






DUAL TEMPERATURE MONITOR

STREIVOR AIR SYSTEMS - DUAL TEMP. SWITCH WIRING DIAGRAM



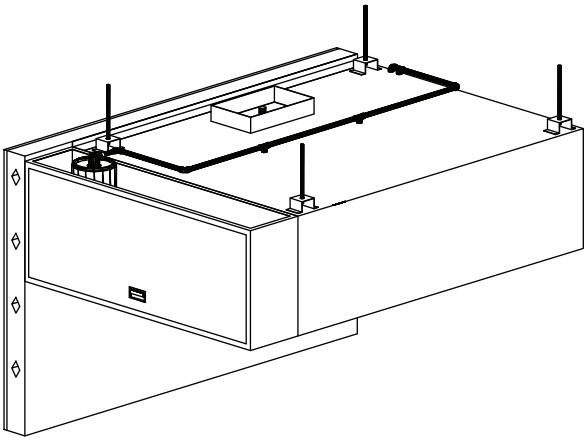
MOTOR CONTACT OR
120 VAC RELAY COIL TO
PROVIDE CLOSURE FOR
24 VDC SIGNAL.

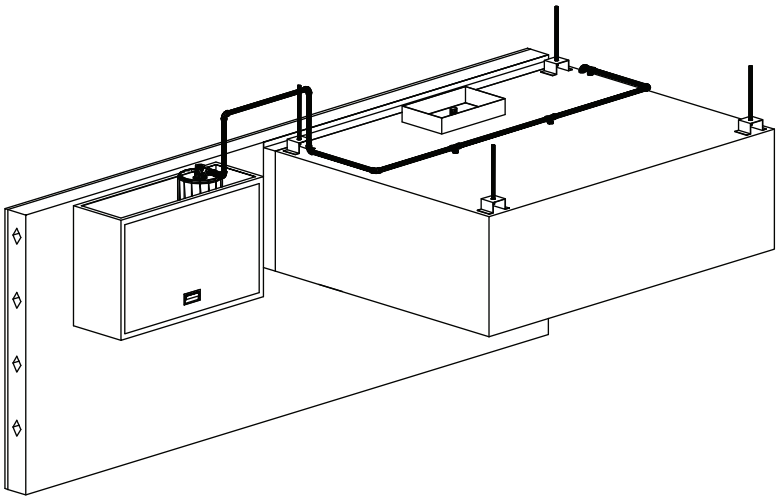
MOTOR CONTACT OR
120 VAC RELAY COIL TO
PROVIDE CLOSURE FOR
24 VDC SIGNAL.

NOTE:
WHEN THE TEMP. SENSED
BY THE MONITOR EXCEEDS
THE TEMP. SET POINT, THE
SWITCH WILL CHANGE FROM
NORMALLY CLOSED (NC)
TO NORMALLY OPEN (NO).

NOTE:
A MAXIMUM OF THREE
TEMP. MONITORS PER HOOD.

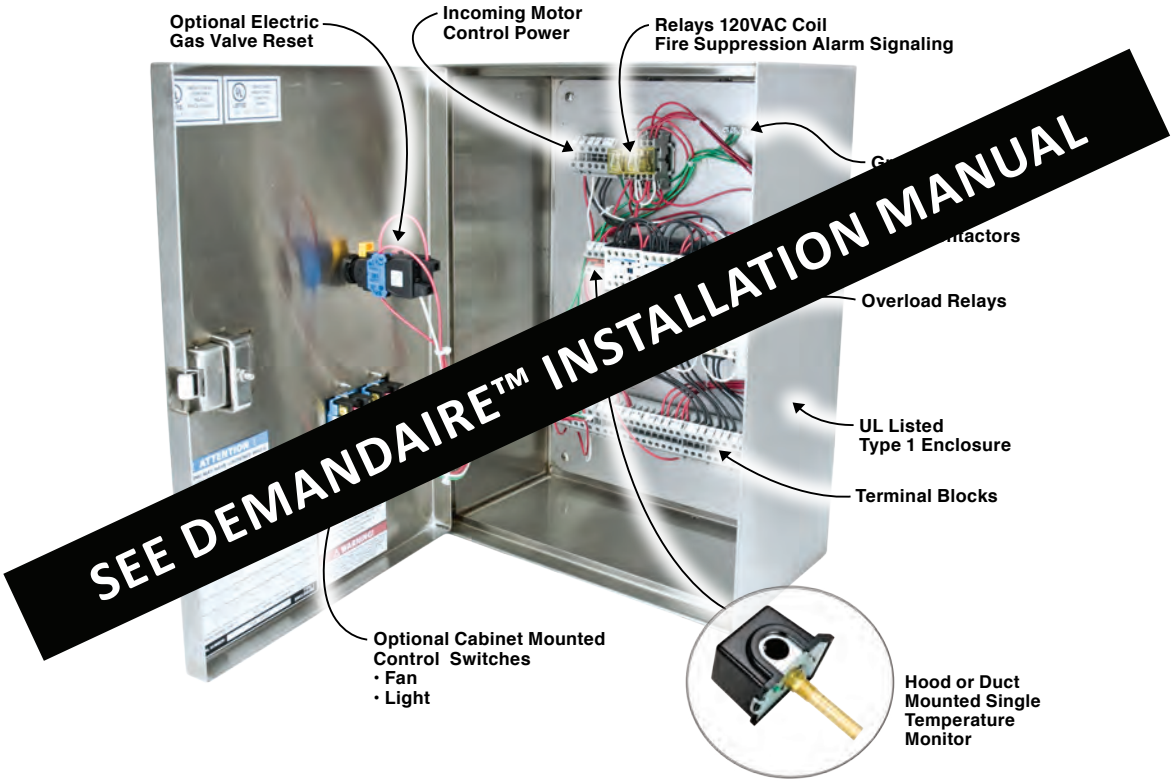
HOOD UTILITY CABINET



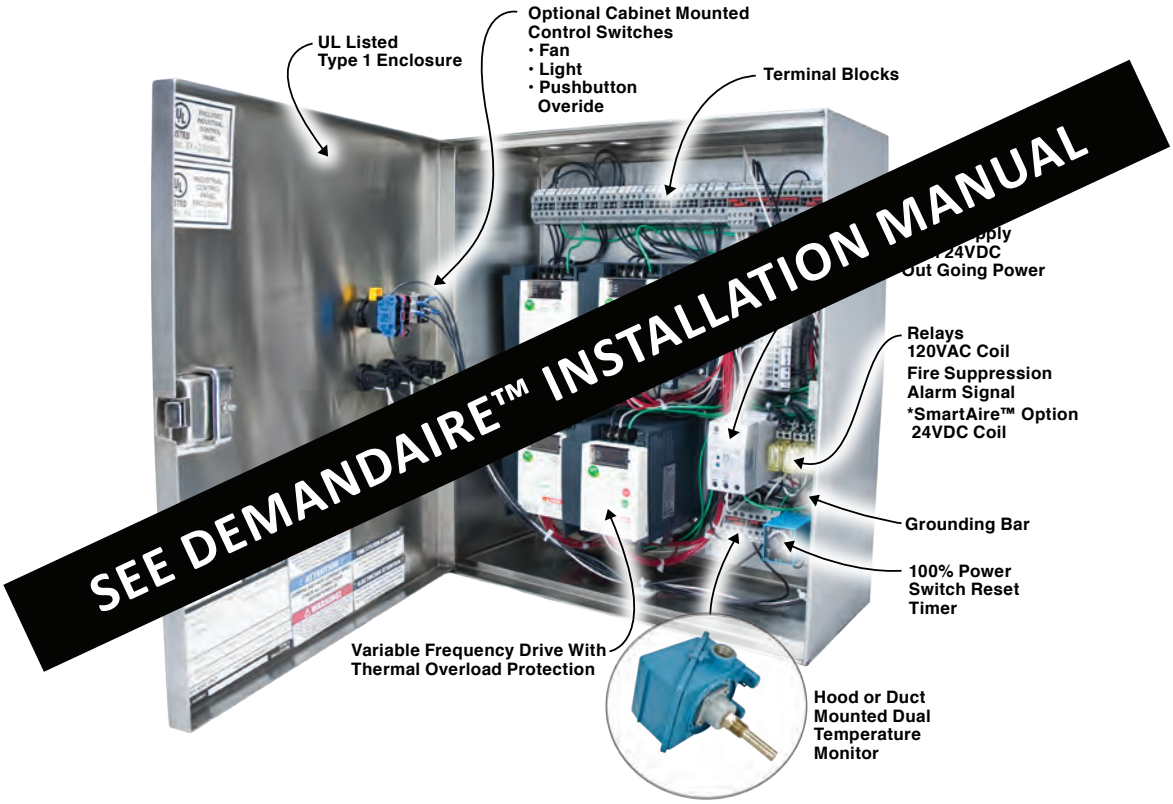


DEMANDAIRE™

STANDARD CONTROL PANEL

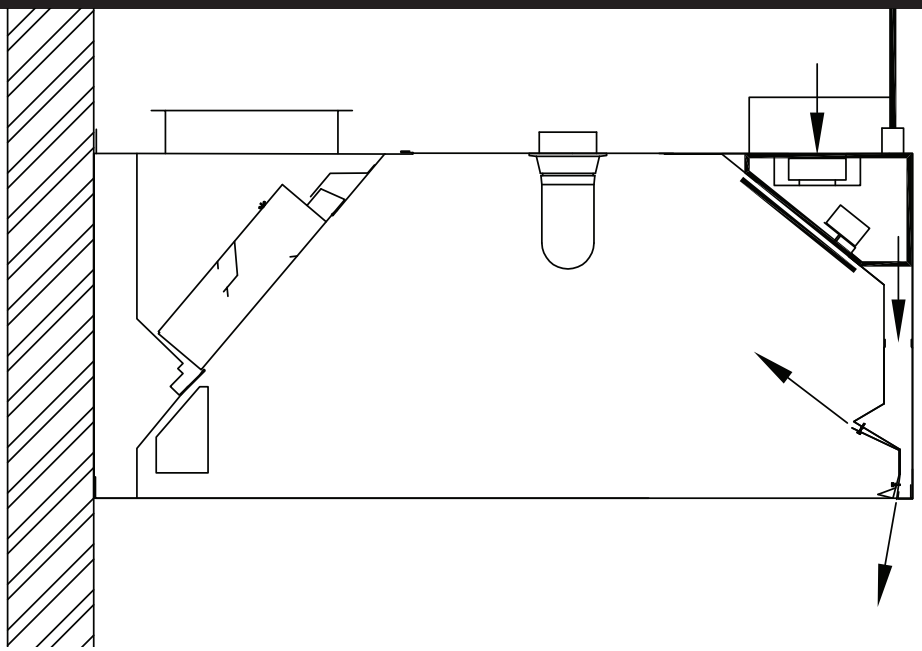


VARIABLE FREQUENCY DRIVE (VFD) CONTROL PANEL



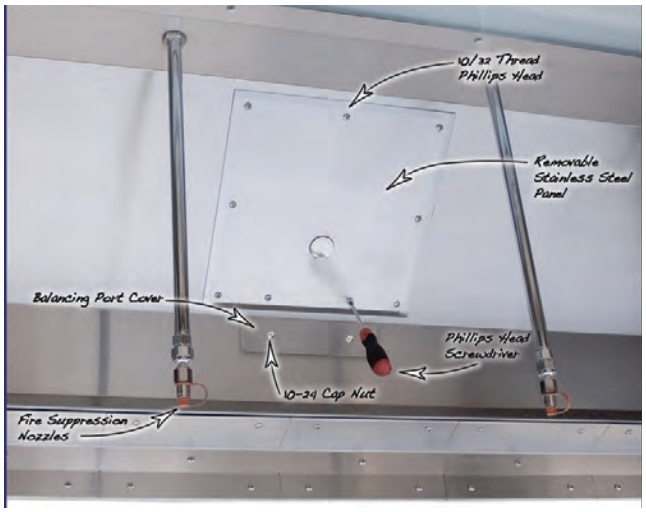
SmartAire™

SMARTAIRE™ INTERNAL HOOD FAN (IHF)

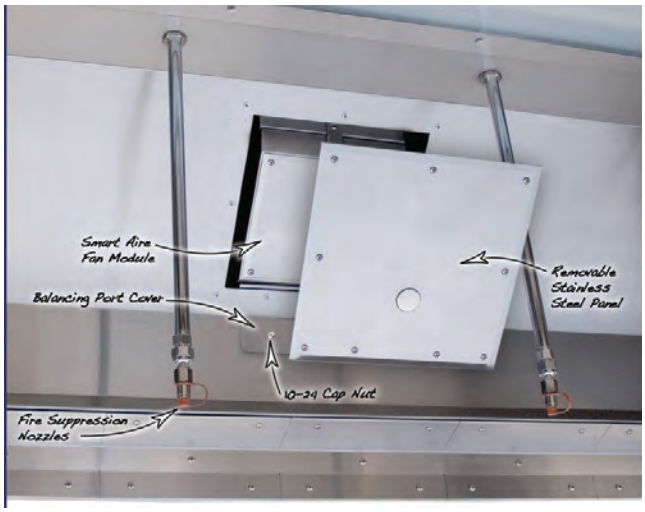


Installation of Internal Hood Fan (Optional)

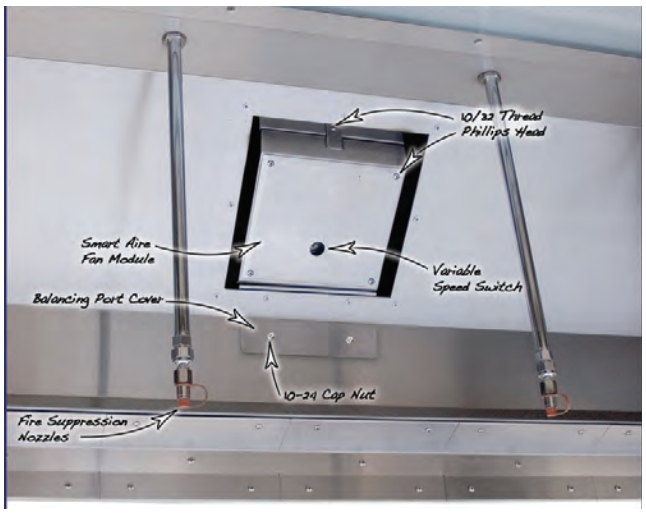
Note: Internal hood fans are only offered with Smart Air Hoods.



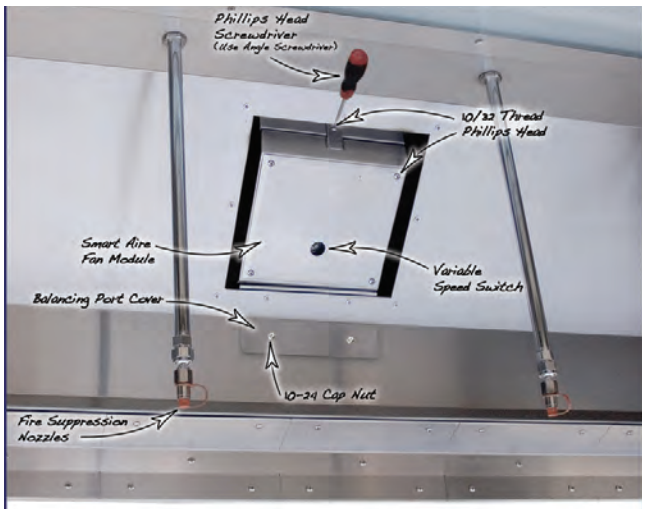
Using a philips head screwdriver, remove the screws while holding the stainless steel cover.



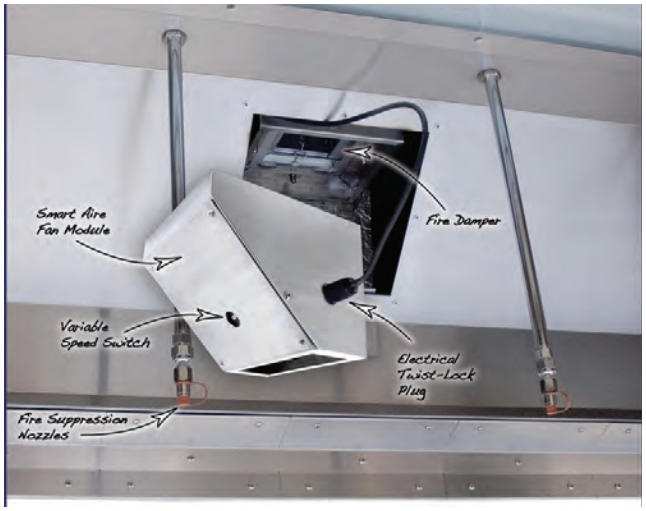
Remove the stainless steel cover to uncover the SmartAire Fan Module.



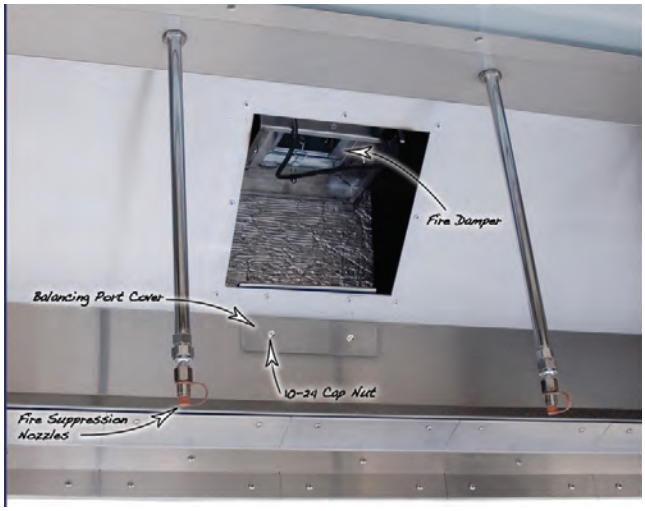
Once the fan module is exposed the variable speed switch can be accessed to adjust IHF's speed.



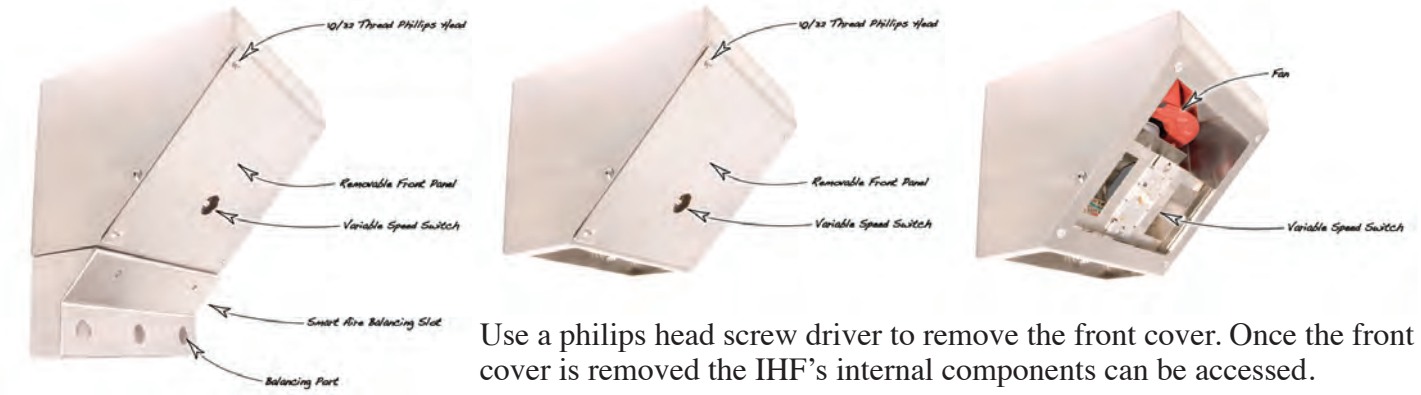
Use a philips head screw driver to remove the internal hood fan module.



The electrical twist-lock plug can be disconnected to fully remove the IHF module.

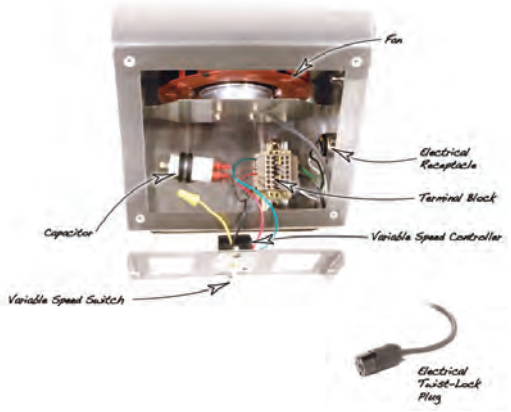


Removing the IHF module allows access to the fire damper.



Use a philips head screw driver to remove the front cover. Once the front cover is removed the IHF's internal components can be accessed.

Parts List:
A. Fan
B. Capacitor
C. Terminal Blocks
D. Electrical Receptacle
E. Variable Speed Controller
F. Variable Speed Switch
G. Electrical Twist-Lock Plug

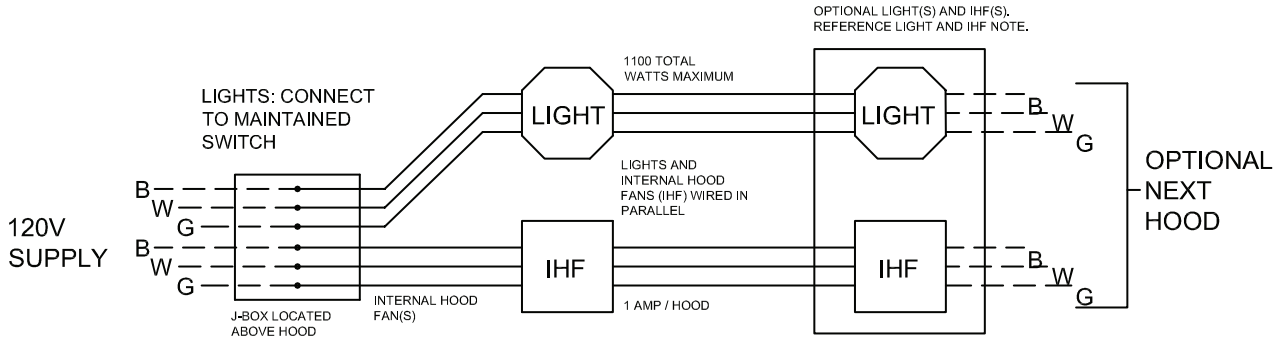


WIRING

Warning: All electrical work should be performed by a qualified electrician.

1. Locate the three Internal Hood Fan wires (Hot, Neutral and Ground) in a junction box on top of the hood.
2. Reference the wiring diagram for further details.

STREIVOR AIR SYSTEMS - LIGHT AND INTERNAL HOOD FAN (IHF) WIRING DETAIL



ELECTRICALLY INTERLOCK EXHAUST FANS, MAKE UP AIR FANS AND INTERNAL HOOD FANS (IHF'S)

NOTE: LIGHT(S) AND IHF(S) WILL BE PROVIDED ACCORDING TO THE LENGTH OF THE HOOD.

NOTE: NFPA 96 SECTION 8.3.2 - WHEN FIRE-EXTINGUISHING SYSTEM DISCHARGES, MAKEUP AIR SUPPLIED INTERNALLY TO HOOD SHALL BE SHUT OFF.

NOTE: INTERNAL HOOD FANS MUST COMPLY WITH NFPA 96 SECTION 8.3.2

FIELD WIRING — — — — — —

STREIVOR FACTORY WIRING ————————

DRAWING FOR REFERENCE ONLY.
ALL WORK TO BE PERFORMED BY QUALIFIED ELECTRICIAN FOLLOWING ALL APPLICABLE CODES.
SHORT CIRCUIT PROTECTION MUST BE PROVIDED.

AIR BALANCE

1. Locate the balancing port cover on the front inside of the hood and remove the cover.

2. Adjust the variable speed controller by rotating the switch (clockwise to increase, counter-clockwise to decrease).

START UP AND ADJUSTMENT OF THE UPPER AND LOWER AIR STREAMS

To achieve the maximum performance of a Smart Aire hood, it is critical that the air streams be adjusted and set to the ideal volume and speed.

Each air stream is adjustable in individual segments. When a Smart Aire hood leaves the factory all of the baffle segments are set with 1/8 inch spacing between the baffles and the hood. In a large amount of installations having the baffles set with the same spacing will provide satisfactory results. In other installations it may be beneficial to have varying spacing for varying baffles.

Each baffle can be individually adjusted. Each baffle has two 10/32” bolts. The bolts can be used to adjust the spacing between the baffle and the hood.

To reduce the spacing turn the bolts clockwise using a Philips head screwdriver, being careful not to over tighten the bolts so as not to strip the bolts or the ribnut.

Reducing the spacing between the baffle and the hood will create more resistance to the makeup air and thus less air will be returned in that particular segment.

To increase the spacing turn the bolts counter clockwise using a Philips head screwdriver, being careful not to remove the bolts all the way out from the ribnut.

Increasing the spacing between the baffle and the hood will create less resistance to the makeup air and thus more air will be returned in that particular segment.

All Smart Aire hoods are equipped with one or more internal hood fans. The internal hood fans draw air in the hood make up air plenum. The internal hood fan(s) are preset at the factory to deliver approximately 7 cfm/ft to both the upper and lower air streams. In a large amount of installations having the baffles set with the same spacing will provide satisfactory results. In other installations it may be beneficial to have increase or decrease the volume of air being supplied to the air streams.

The Smart Aire hoods are equipped with a variable volume switch on each of the internal hood fans. To adjust the internal hood fan volume remove the stainless plug on the internal hood fan cover plate. Once the plug has been removed locate the fan variable volume switch adjustment knob. Using a flat head screwdriver turn the knob clockwise to increase and counter clockwise to decrease the volume of the internal hood fan.

The volume of air being supplied to the air streams can be determined by measuring the speed of the air moving through the internal hood fan supply air tunnel ram. To measure the airspeed in the tunnel ram, remove the tunnel ram cover plate. When the cover plate is removed there is access to the three tunnel ram measuring ports. Using an annometer insert the measuring device into each port and obtain and record the air speed in each of the three ports. Determine an average of the three measurements.

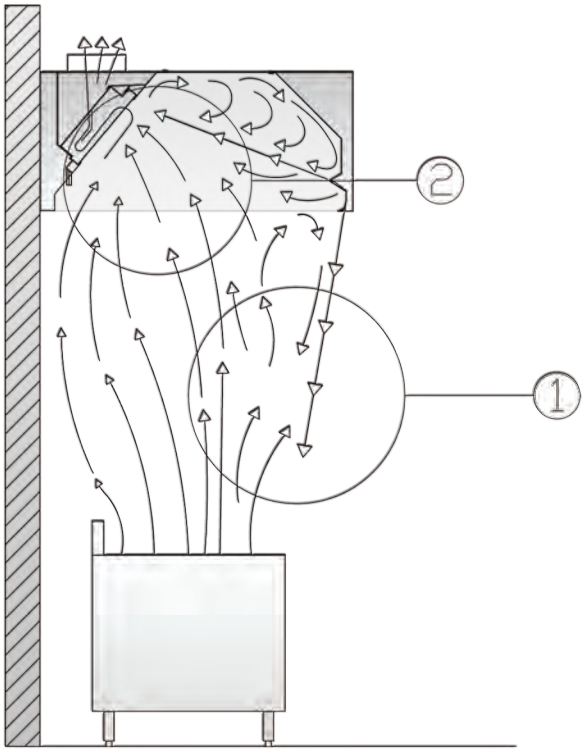
Note the maximum amount of air that can be supplied to the air stream is 25 cfm/ft.

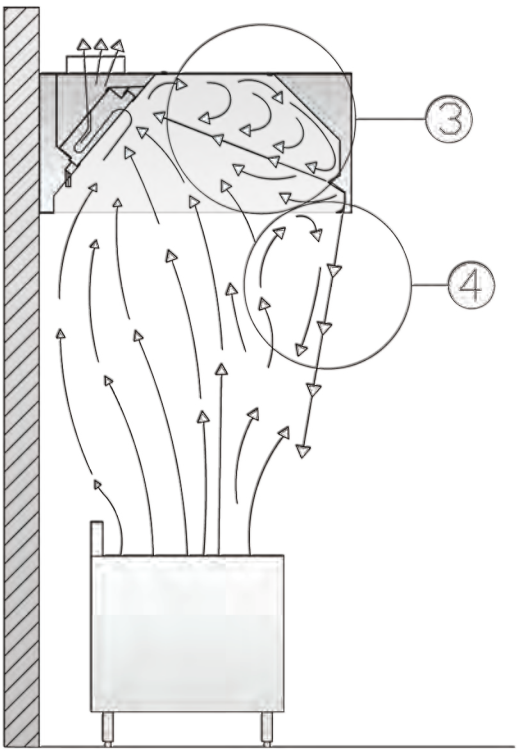
THE FOUR STEPS TO ENERGY EFFICIENCY WITH SMART AIRE™

Streivor Air Systems™ Wall Canopy Box Design hoods with Smart Aire™ technology are fabricated with two continuous adjustable high velocity low volume streams of air along the length of the front interior of the hood. Each hood is equipped with one lower and one upper air stream that work in combination to increase the capture and containment efficiency of the hood.

Each air stream is positioned and directed to obtain the maximum positive benefits of a stream of air with the minimum amount of negative turbulence.

The lower air stream directs a stream of air in an inward downward direction towards the front of the cooking equipment. The upper air stream directs a stream of air in an inward and upward direction toward the exhaust opening in the ExtractAire™ cartridge filter.





STEP ONE

The lower air stream forms an air curtain that interacts with the heated plume that is rising in an upward and outward direction from the cooking equipment. The air stream creates a barrier that contains the outward movement of the plume.

STEP TWO

The heated plume rising up into the hood interacts with upper air stream. The upper air stream pushes the rising plume towards the back of the hood where the majority of the heated plume is exhausted on its first pass by the filter opening.

STEP THREE

A portion of the heated plume may not be exhausted as it passes by the filter exhaust opening the first time. This portion of plume will continue past the exhaust opening in the filter and follow the inner contours of the hood. The upper air stream interacts with the plume coming down from the top of the hood that has bypassed the exhaust opening in the filter, keeping the plume up in the hood and pushing the plume towards the back of the hood where it is exhausted through the filter.

STEP FOUR

The lower air stream forms an air curtain originating at the lower portion of the back edge of the front of the hood. The air curtain acts as a barrier that stops any outward movement of the plume from under the hood and creates a low pressure area that draws room air towards the exhaust hood.

TESTING & BALANCING

AIRFLOW TEST AND BALANCING

The exhaust and supply (when provided) air flow rates were established under controlled laboratory conditions; and greater exhaust and/or lesser supply air is required for complete vapor and smoke removal in specific installations.

STREIVOR AIR SYSTEMS AIRFLOW TEST AND BALANCE (TAB)

All hoods should be tested and balanced after installation and prior to being placed into operation.

Streivor Air Systems provides an engineered hood drawing for every hood. The engineered hood drawing states the minimum exhaust and maximum make up air that can be moved through the hood. Note: not all hoods have make up air provided through the hood.

Prior to starting the test and balance:

1. locate the engineered hood drawing for the hood
2. locate the Streivor Air Flow TAB worksheet in the Streivor Manual

The TAB worksheet provides a template of how to calculate the total exhaust airflow through a hood. There are several different ways to calculate the total exhaust airflow through an exhaust hood. The Streivor (TAB) worksheet provides an option that is widely accepted in the hood industry for exhaust hoods with grease filters.

Using the TAB worksheet verify and document that the information provided on the engineered hood drawing matches the hood, by confirming that the following items are in alignment,

1. Hood listing label
2. Hood enclosure dimensions
3. Exhaust collar(s)
4. Make up air collar(s)
5. The type of cooking equipment
6. The cooking equipment positioning
7. The type of filters (ExtractAire™ cartridge or baffle)
8. The filter size and quantity

After you have verified that all of the above hood information is in alignment with the engineered hood drawing proceed to the air balancing.

Using a velometer obtain and record air speed readings from the filters at the locations that are shown on the TAB work sheet. Using the worksheet determine the total exhaust airflow exhausting from the hood matches the total specified on the engineered hood sheet. If the hoods total exhaust airflow matches the specified total on the engineered hood drawing you may proceed to put the hood into operation, however, if the total exhaust airflow does not match the specified exhaust airflow contact the person responsible for making adjustments to the exhaust fan prior to proceeding to put the exhaust hood in operation and make adjustments as needed.

After the total exhaust airflow rate has been set, the make up air system should be balanced so as not to create more than a .02” negative pressure.

When the exhaust airflow and makeup air system are set to the specified levels the cooking equipment under the hood can be operated.

Note: never operate the cooking equipment when the exhaust fan is not on.

Note: there are several factors that contribute to the performance of a hood system. Things such as, drafts or unanticipated cooking equipment positioning and/or use can lead to the hood not being able to achieve is maximum performance. As a result exhaust and make up air fan(s) may need to be adjusted after the original TAB has been performed.

Note: greater exhaust and/or lesser makeup air flow rates may be required for complete vapor and smoke removal in specific installations.

HOOD MODEL # _____

HOOD WIDTH: _____ HOOD LENGTH: _____

HOOD LENGTH IN INCHES ÷ 12 _____

x

MIN. CFM/FT: _____

=

TOTAL MIN HOOD CFM: _____

ACTUAL SPECIFIED CFM: _____

÷

TOTAL EFFECTIVE ARE (A OR B): _____

=

TARGET FPM: _____

BAFFLE FILTERS

12 x 16 _____ x .97 = _____ 16 x 16 _____ x 1.36 = _____

12 x 20 _____ x 1.25 = _____ 16 x 20 _____ x 1.75 = _____

TOTAL EFFECTIVE AREA : A. _____

CARTRIDGE FILTERS

16 x 16 _____ x .40 = ____

16 x 20 _____ x .51 = ____

TOTAL EFFECTIVE AREA : B. _____

Cartridge Filters

Total FPM _____ ÷ 3 = [ ]

Total FPM _____ ÷ 3 = [ ]

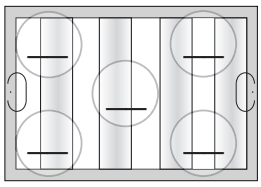
Total FPM _____ ÷ 3 = [ ]

Total FPM _____ ÷ 3 = [ ]

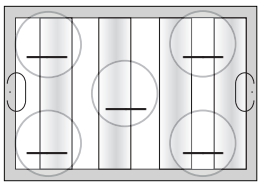
Total FPM _____ ÷ 3 = [ ]

Total FPM _____ ÷ 3 = [ ]

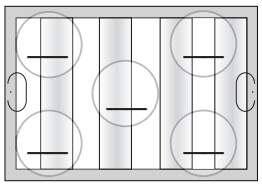
Baffle Filters



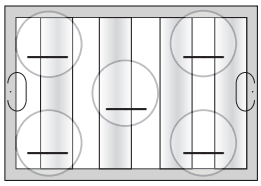
Total FPM _____ ÷ 5 = [ ]



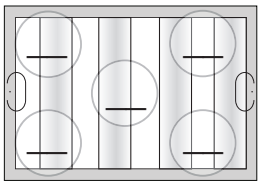
Total FPM _____ ÷ 5 = [ ]



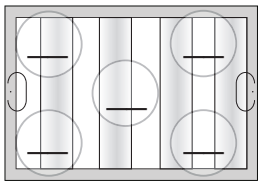
Total FPM _____ ÷ 5 = [ ]



Total FPM _____ ÷ 5 = [ ]



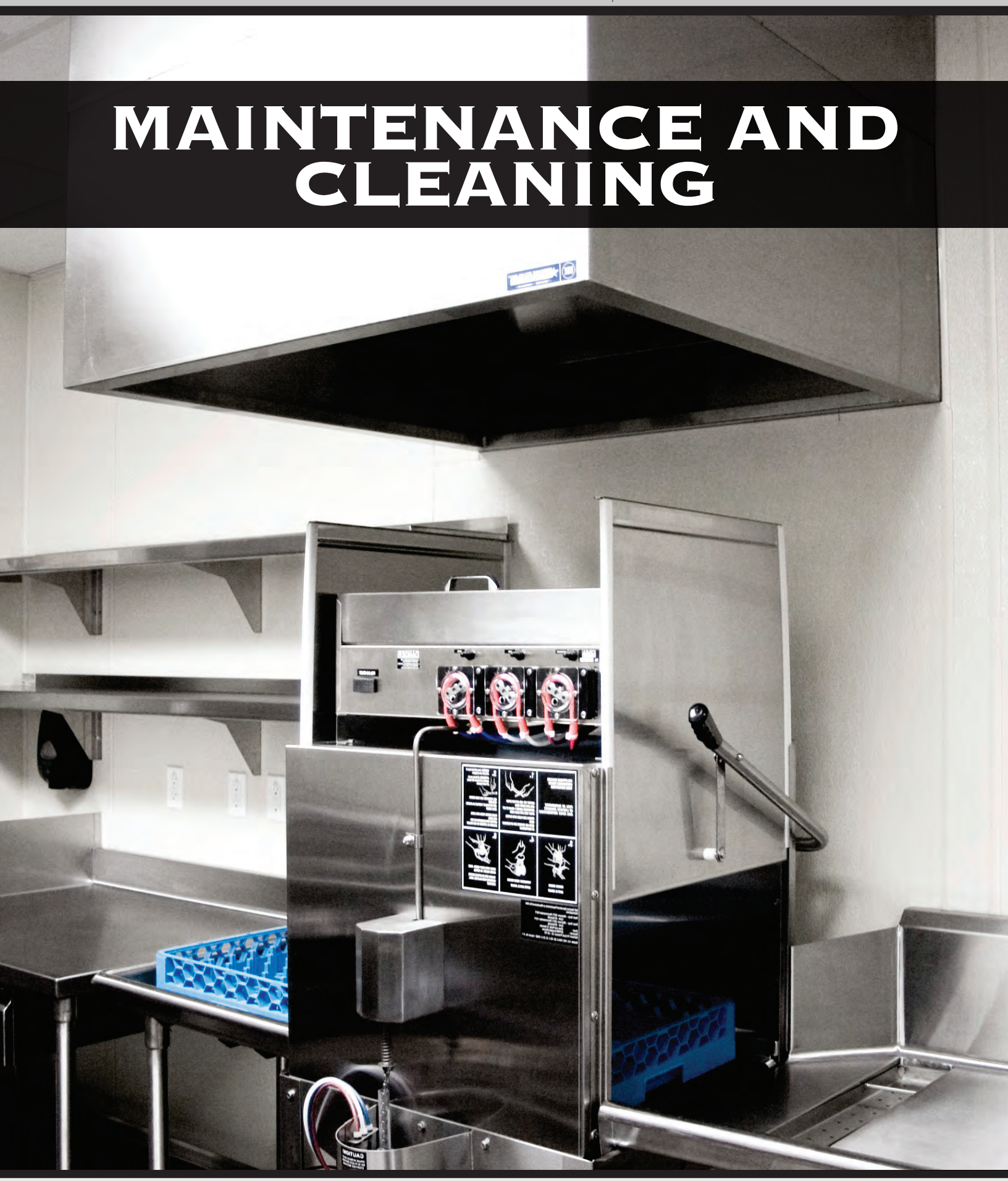
Total FPM _____ ÷ 5 = [ ]



Total FPM _____ ÷ 5 = [ ]

Total of FPM Averages : [ ]
÷
Total Number of Filters : [ ]
=
Total Average FPM : [ ]
x
Total Effective Area (Pg #1) : [ ]
=
Hood Exhaust Air : [ ]

MAINTENANCE AND CLEANING



GENERAL MAINTENANCE

1. The exhaust fan for the ventilation hood should be turned on whenever the cooking equipment underneath the hood is in use or warm.
2. The hood should be wiped down daily or as frequently as necessary with a wet cloth or sponge to keep grease from accumulating.
3. Fire suppression specialists should be contracted to maintain the fire suppression system in accordance with the codes of the local governing authority. The fire suppression installer can assist you with this.
4. Grease cups (generally located at the bottom ends of the filter track) should be removed, emptied, and replaced as often as necessary to avoid overflowing. Check daily until there is a confident and appropriate schedule.
5. The exhaust fan and make up air fan should be inspected, greased (lubricated), and cleaned every six months unless otherwise specified by the manufacturer.
6. The exhaust duct system should also be cleaned as necessary to avoid excessive grease buildup. The frequency of cleaning necessary may vary depending on the system load.
7. Should changes to the cooking equipment or lineup be made, consult your hood supplier and your fire suppression specialists about appropriate hood and fire system adjustments or replacement.
8. Light bulbs should be replaced as necessary to maintain adequate lighting on the cooking surface. Use an adequate ladder to safely reach the lights. Do not do this while the cooking equipment is hot.
9. Should airflow reduce, inspect the filters for grease build up or foreign objects. Remove as necessary or replace the filters. Should the problem continue, have a mechanical contractor inspect the fan and exhaust system.
10. Filters:

    Baffle- Remove, wipe down, and replace regularly.
    Discard and buy new when clogged or worn.

    Cartridge – Remove, wash, and replace as necessary.
    (Recommended weekly)

11. Should an earthquake or other damage inflicting incidence occur, call a mechanical contractor to inspect all structural supports for damage, and all duct for leaks.

Notes:

Exhaust hoods have no moving parts, so operation of the hood is limited to the on/off switch function of the fans and the lights.

Should the fire suppression system trigger, call the local fire emergency number. Once the fire is extinguished, call your fire suppression contractor to reset and clean before resuming use of any cooking equipment. If your system is also tied into an alarm system, you may need to contact the alarm company or the building manager as well.

FAQ's

1. **Are Streivor Air Systems Hoods Listed by Underwriters Laboratories?** Streivor Air Systems offers several different designs of hoods, some of our hood designs are U.L. listed and some are not. The Streivor Air Systems Hoods that are U.L. listed will be clearly marked on the web-site.
2. **Are Streivor Air Systems Baffle Type Grease Filters U.L. Classified?** Yes. All Streivor Air Systems baffle type grease filters are U.L. Classified to Standard #1046.
3. **Are Streivor Air Systems (ExtractAire™) High Velocity Adjustable Slot Cartridge Grease Filters U.L. Classified?** Yes. All Streivor Air Systems (ExtractAire™) high velocity adjustable slot cartridge grease filters are U.L. Classified to Standard #1046.
4. **Is Streivor Air Systems an NSF approved factory?** Yes. Streivor Air Systems is a NSF approved factory. Streivor Inc, is approved under Food Equipment Standard #2 custom equipment manufacturer to mark Streivor Air Systems and Streivor Inc products with the NSF label.
5. **What is a Kitchen Exhaust Hood?** A Kitchen Ventilation Hood is an air-intake device that is first, designed to capture vapors, fumes, smoke, steam, heat and/or odors from commercial food and heat-processing equipment, and second is to remove the captured matter by means of a mechanical exhaust system.
6. **Are their different Types of Hoods used for different Types of Heat-Processing Equipment?** There are two types of hoods that are commonly referred to in most mechanical codes. One is a TYPE I Hood and the other is a TYPE II Hood.
7. **What is a Type I Hood?** A Type I Hood is a hood that is designed for collecting and removing vapors, steam, fumes, odors and GREASE and SMOKE produced by heat-processing equipment.
8. **What is a Type II Hood?** A Type II Hood is a hood that is designed for collecting and removing vapors, steam, fumes, and odors produced by heat-processing equipment. A Type II Hood should NOT be used over heat-processing equipment that produces grease or smoke.
9. **What is an Exhaust Only Hood?** An exhaust only hood is a hood that is designed for collecting and removing vapors, steam, fumes, odors and sometimes GREASE and SMOKE produced by heat-processing equipment. An exhaust only hood has only one plenum designed for the sole purpose of exhausting air. An exhaust only hood does not have any additional plenums built into it to accommodate make-up air.
10. **What is a Compensating Hood?** A compensating hood is a hood that has an outside air supply that is mechanically delivered to a plenum built as a part of the hood for the purpose of delivering air below or within the hood cavity.
11. **What is a Supply Air Hood?** A supply air hood is a hood that has an outside air supply that is mechanically delivered to a plenum built as a part of the hood for the purpose of delivering air back into the kitchen, but not below or within the hood cavity.
12. **What is a Plenum?** A plenum is an enclosure that is designed to contain exhaust or supply air of different pressure levels for removal or delivery.
13. **How do I determine the amount of air that needs to be exhausted from my hood?** The amount of air that needs to be exhausted will be determined by the Streivor Air Systems hood series that you select and the size and type of cooking equipment you intend to operate under the hood. Streivor Air Systems has a several different series of hoods that have been listed by Underwriters Laboratories to determine minimum exhaust air levels. These minimum exhaust air levels are based on a cubic feet per minute (cfm) formula multiplied by the length of the hood. To determine the amount of exhaust air you will require: 1. Select the Streivor Air Systems series hood that best fits your ventilation and architectural requirements. 2. Determine the total length of the cooking equipment to be operated under the Hood. 3. Add all required additional hood overhangs (if any) to the total equipment length to determine the minimum overall length of the hood. 4. Select the hood model by determining the maximum cooking temperature of the piece of cooking equipment that has the HOTTEST cooking temperature. The hood model number is equal to the minimum cfm/ft formula. 5. Multiply the hood model number by the hood length using the cfm/ft formula. Note: the above formula is a guide to form an approximation of the required hood exhaust air amount for Streivor Air Systems U.L. Listed hoods; however certain conditions either foreseen or unforeseen may require greater exhaust and/or lessor supply air flow rates for complete vapor and smoke removal in specific installations. Consult the factory before engineering decisions are made or equipment is purchased for additional information.
14. **What is an Air Duct?** An air duct is a passageway through which air flows.
15. **What Type of Duct does a Type I Hood designed for Grease and Smoke removal require?** The Uniform Mechanical Code states that a Type I Hood must have a duct that is specifically designed for grease laden air. The duct shall be constructed of at least.

0.055 inch thick (1.40mm) (No. 16 manufacture's standard gage) steel or stainless steel at least .044 inch (1.10mm) in thickness continuously welded and water tight. You should consult with the local Authority Having Jurisdiction for information regarding Type I duct requirements in your area prior to any engineering decisions or fabrication.

16. **What Type of Duct does a Type II Hood require?** The Uniform Mechanical Code states that a Type II Hood must have a duct that is constructed of rigid metallic materials of al least 0.024-inch (.0.61mm) (No.24 gage) thick. You should consult with the Local Authority Having Jurisdiction for information regarding Type II duct requirements in your area prior to any engineering decisions or fabrication.
17. **What determines the size of the exhaust duct for a Type I Hood?** The size of the exhaust duct of a Type 1 Hood is determined by the amount of air that will be exhausted and the speed at which that air will be moving. The Uniform Mechanical Code states that a duct system serving a Type I exhaust hood must be sized in such a manner to provide an air velocity within the duct system of not less than 500 feet per minute or greater than 2500 feet per minute.
18. **What determines the number of and location of Type I exhaust duct(s)?** The Uniform Mechanical Code states that an exhaust duct with in a Type I hood shall be located as to optimize the capture of particulate matter. Each outlet shall serve not more than a 12 foot section of hood. EXCEPTION: Listed exhaust hoods are to be installed in accordance with the terms of their listing and the manufactures installation instructions.
19. **Do hoods over 12 foot in length require 2 exhaust ducts?** Not always, some hoods receive a listing that allows the manufacturer to manufacture hoods longer that 12 feet in length that only require 1 exhaust duct.
20. **Does Streivor Air Systems manufacture exhaust hoods over 12 foot in length that require only 1 exhaust duct?** Yes, Streivor Air Systems manufactures several different series of hoods that have been listed by Underwriters Laboratories to be installed in lengths exceeding 12 feet.
21. **Does the exhaust duct have to located in the center of the hood plenum?** The Uniform Mechanical Code states that an exhaust duct within a Type I hood shall be located as to optimize the capture of particulate matter. Each outlet shall serve not more than a 12 foot section of hood. EXCEPTION: Listed exhaust hoods are to be installed in accordance with the terms of their listing and the manufactures installation instructions.
22. **What is a restaurant hood pre-engineered fire suppression system?** A pre-engineered fire suppression system is a utility shut down and extinguishing agent distribution system that is designed for protecting the hood, plenum, exhaust duct, grease filters, and cooking appliances from grease fires.
23. **When is a fire suppression system required?** The general rule is that fire suppression system is required in all Type I Hood applications. You should consult the Authority Having Jurisdiction in all cases for clarity on when a hood fire suppression system is required or not required.
24. **Does the installation of a fire suppression system require a permit?** Yes, a permit issued for the installation of a hood system usually will not encompass the fire suppression system. A separate permit specifically for the fire suppression system will be required. This usually will require submitting drawings of the pre-engineered system to the local Authority Having Jurisdiction well in advance of the test and the restaurant opening for issuance of a permit. Before a fire suppression system can be activated and made ready for use the local Authority Having Jurisdiction will need to witness a test of the functionality of the system. The system installer should perform this test.
25. **How is a hood fire suppression system actuated?** The hood fire suppression system can be automatically actuated via fusible links or manually actuated via manual pull stations.
26. **Does the gas and electricity need to be shut down when the fire suppression system actuates?** Yes, all gas or electricity will need to be shut down that powers the equipment under the hood underneath the hood, in addition any/all electricity that is located under the hood also needs to shut down. In some cases supply fans, exhaust fans, supply and exhaust fans or other equipment may be required to shut down upon the fire suppression system actuation. Consult the local Authority Having Jurisdiction for the requirements in you area!
27. **Does the supply/exhaust fan need to be shut down when the fire suppression system actuates?** In some cases supply fans, exhaust fans, supply and exhaust fans or other equipment may be required to shut down upon the fire suppression system actuation. Consult the local Authority Having Jurisdiction for the requirements in you area!
28. **Is a gas shut off valve required?** A gas shut off valve will be required anytime that gas is used to power the cooking equipment under the hood in which the fire suppression system is installed.
29. **Who installs the gas shut off valve?** A gas shut off valve will be supplied to you upon the purchase of the system if it is required. It the responsibility of the owner to have a properly licensed contractor install the gas valve at their sole cost. Consult the factory or

factory authorized fire suppression system installer for the proper location and installation instructions.

30. **Is an electricity shut off switch required?** An electricity shut off switch will be required anytime that electricity is used to power the equipment under the hood in which the fire suppression system is installed.
31. **Who installs the electricity shut off switch?** An electricity shut off switch will be supplied to you upon the purchase of the system if it is required. It the responsibility of the owner to have a properly licensed contractor install the electricity switch at their sole cost. Consult the factory or factory authorized fire suppression system installer for the proper location and installation instructions.
32. **How does the electricity shut down on a gas system?** The fire suppression system will be supplied with a micro switch that is to be connected to a contractor that when actuated will shut down the electricity that is required to be shut down during the Fire Suppression system actuation. It the responsibility of the owner to have a properly licensed contractor install the contractor and all wiring and conduit and any other materials at their sole cost. Consult the factory or factory authorized fire suppression system installer for the proper location and installation instructions.

CHECKLIST

Project: _____ **Date:** _____

Address: _____

	YES	NO	N/A
1. Listed Hood	☐	☐	☐
2. All welded Hood Enclosure. If no see #3	☐	☐	☐
3. Alternate construction: Liquidtight Hood Enclosure as part of listed Hood. If yes see #3.1	☐	☐	☐
3.1. Listing documents and drawings for the alternate construction are attached	☐	☐	☐
4. Stainless Steel: 20 gauge minimum thickness	☐	☐	☐
5. Steel: 18 gauge minimum thickness	☐	☐	☐
6. Hood Enclosure clearance to combustible materials = 18 inches or greater. If no see #6.1	☐	☐	☐
6.1. Listing documents and drawings for reduced clearance system or listed Hood are attached	☐	☐	☐
7. Hood Enclosure clearance to limited-combustible materials = 3 inches or greater. If no see #7.1	☐	☐	☐
7.1. Listing documents and drawings for reduced clearance system or listed Hood are attached	☐	☐	☐
8. Is there a volume damper installed in the exhaust duct collar? If yes see #8.1	☐	☐	☐
8.1. Listing documents and drawings for the volume damper are attached	☐	☐	☐
9. Make up air inlets and/or outlets penetrate the Hood Enclosure. If yes see #10	☐	☐	☐
10. Listed fire damper installed where the make up air inlets and/or outlets penetrate the enclosure	☐	☐	☐
11. Grease Removal Devices are integral to the Hood. If yes see #11.1	☐	☐	☐
11.1 Listing documents and drawings for Hood with integral Grease Removal Devices are attached	☐	☐	☐
12. Includes removable Grease Removal Devices (Grease Filters). If yes see #13	☐	☐	☐
13. Grease Filters are UL 1046 Listed	☐	☐	☐
14. All of the exhaust air flows through the Grease Removal Devices	☐	☐	☐
15. Grease Filters are installed at a 45 degree angle to the horizontal or greater	☐	☐	☐
16. Drip Tray beneath the lower edge of the filters	☐	☐	☐
17. Grease Filter Drip Tray is kept to the minimum size required to collect grease	☐	☐	☐
18. Grease Filter Drip Tray is pitched to drain into an enclosed metal container	☐	☐	☐
19. Enclosed metal container has a capacity of 1 gallon or less	☐	☐	☐
20. The exhaust fan turns on when the cooking equipment is turned on	☐	☐	☐
21. The make up air system turns on when the exhaust fan is turned on	☐	☐	☐
22. Does the Hood have make up air supplied into the Hood Enclosure? If yes see #23	☐	☐	☐
23. Make up air supplied into the Hood Enclosure shuts off upon fire system activation	☐	☐	☐
24. Does the Hood and its installation comply with the prevailing codes?	☐	☐	☐

Hood System: ☐ Approved ☐ Not Approved

Comments: _____

_____

_____

_____

_____
Inspector/Specifier

WARRANTY

Streivor, Inc., (Seller), warrants this equipment to be free from defects in materials and workmanship, under normal use and service, for the period of 12 months from the date of shipment. This warranty shall not apply if:

1. The equipment is not installed by a qualified installer per the Seller's installation instructions (copy of which is shipped with the product).
2. The equipment is not installed in accordance with federal, state, and local codes and regulations by a qualified installer.
3. The equipment is misused or neglected.
4. The equipment is not operated within its published capacity.

The Seller shall not be liable for incident and consequential losses and damages potentially attributed to malfunctioning equipment.

Should any part of the equipment prove to be defective in material or workmanship within the 12 months warranty period, upon examination by the Seller, such part will be repaired or replaced by Seller at no charge. The Buyer shall pay all labor costs incurred in connection with such repair or replacement. Equipment shall not be returned without Seller's prior authorization and all returned equipment shall be shipped by the Buyer, F.O.B. Seller's factory, freight prepaid.

Note: Due to a continuous program of product improvement, Streivor reserves the right to make changes in design and specifications without prior notice.

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UL LISTED

The Ultimate Hood Balancing Damper
Patented

DemandAire

UL LISTED

The Ultimate in Demand Ventilation Systems

Enclosures

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The Ultimate Enclosures for the Protection of Hood and Duct Monitoring Equipment
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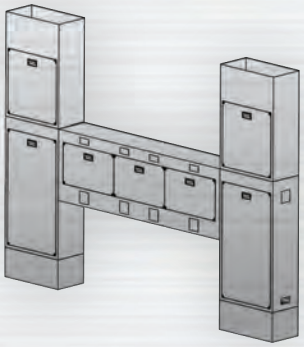

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