AAF INTERNATIONAL *Better Air is Our Business®*

AmericanAirFilter®

# Side Access "Carbon"

***Part of a Total Systems Approach to Improved Indoor Air Quality (IAQ)***

## The Carbon Concept

The Side Access Carbon filter housing is designed for use with air handling units or other side access equipment. It offers the convenience of servicing the filter from outside the air duct and is especially suited for installations involving limited headroom.

The Side Access Carbon housing is a gas phase filtration system. It removes gaseous contaminants (note: gaseous contaminants are not captured by particulate filters) from the airstream through adsorption and in some cases chemical neutralization. During the adsorption process, gaseous molecules are physically attracted to the surface of the adsorbent medium where they are captured and retained.

## High Quality Media for Maximum Adsorption

The Side Access Carbon housing is available with a high quality activated charcoal (coconut shell based carbon), which is effective on a large range of common gaseous contaminants. The carbon conforms to a 4 x 8 mesh and has a minimum activity of 60% on carbon tetrachloride.

Since activated charcoal is not recommended on all gases, AAF International also offers alternative media such as activated alumina impregnated with Potassium Permanganate. The impregnant neutralizes the contaminant after it has been adsorbed. Such speciality media are effective on Formaldehyde, $SO_2$, and $H_2S$.

## Prefilters Protect Adsorbtion Media

Prefilters are recommended to protect the adsorbent media. AAF recommends using 30% average efficiency rated filters (per ASHRAE 52.1-1992) ahead of the adsorber filters.

When an impregnated speciality media is used, after-filters should be installed (see AAF's Flatbank and Vee-Bank housing.) The after-filter will capture any dusting that may result from chemical reactions between the contaminant and the impregnant. The housing can also be installed in a reverse flow direction with the prefilter on the downstream side.

## Trays are Easy to Use and Reuse

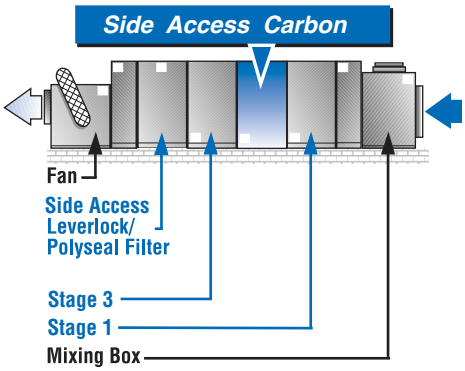
Each Side Access Carbon tray is furnished with 45 pounds of activated charcoal per 1,000 CFM of rated capacity. The retention time of the gas stream at the rated flow of 500 FPM is 0.09 seconds. Retention time can be increased by installing multiple housings in series or in parallel, or reducing the flow rate. The trays have a removable end cap which allows them to be refilled with fresh adsorbent on site. If desired, the emptied trays can be returned for refill.

*Side Access Carbon, side view, showing "V" bank trays.*

## Side Access Filter Housing for IAQ Applications

The Side Access housing was specifically designed to meet IAQ air cleaning requirements when used with AAF high-efficiency prefilters treated with antimicrobial.

The Side Access housing is ideal for removing the gaseous contaminants, including VOCs (Volatile Organic Compounds), that cause allergic reactions, discomfort, and health risks. Buildings with a cleaner air supply have reduced maintenance costs and healthier, more productive employees and tenants.




*Use the Side Access Carbon in combination with other AAF International IAQ-engineered filter products to enhance your system performance.*

AmericanAirFilter®

# Side Access "Carbon"

## Housing Features

### Rugged Construction

The Side Access Carbon housing is manufactured with exceptional structural strength. It utilizes 1 5/16" wide flanges, welded construction, and vertical supports and angle braces. The Carbon housing is designed to operate at up to 6 in. w.g. negative or positive pressure.

### Access Doors

Access doors are hinged and have over-center draw type plated latches. The doors seal against the housing using closed cell neoprene gasket. The standard housing is furnished with two doors.

### Sizes

The Side Access Carbon housing is offered in 96 sizes spanning heights from nominal 1' through 8', and widths from nominal 1' through 12'. Capacities range from 1,000 CFM to 48,000 CFM at 500 FPM.

Larger sizes are available. The Side Access Carbon housing is designed to expand using standard sizes as building blocks. For example, a nominal 16' wide unit can be built using two 8' wide modules or an 8' high unit using two 4' modules. Modules are factory pre-engineered for field installation.

### Housing Depths

The standard housing is 36" deep, which includes a 2" or 4" prefilter track.

### 2" or 4" Prefilter

Available with a 2" or 4" prefilter track to accommodate standard 2" or 4" prefilters. The prefilters slide on raised rounded ribs for easy installation and removal.

### Steel Skin Insulation

All Side Access Carbon housings can be furnished with optional 1" fiberglass insulation. Enclosed in a double metal skin, the insulation is external to the airstream. This optional insulation covers both doors, and top and bottom pans.

## Standard

- 96 Sizes
- 2 Depths (36" & 38")
- 60% Activity 4x8 Mesh Coconut Shell Based Activated Carbon Charcoal
- Refillable Enamel Coated Steel Trays
- Structurally Rated up to 6" Positive Pressure
- 16-Gauge Galvanized Steel
- Welded Construction
- 1 5/16" Turned Out Flanges
- Integral Prefilters, 2" or 4"
- Internal Bracing
- Factory Assembled

## Options

- Double Skin Insulation
- AHU Mating Flanges
- Weatherproof Construction
- High Pressure Construction
- Installed Pressure Gauges
- Static Pressure Taps
- Speciality Media

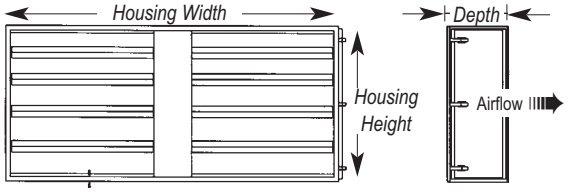
## Capacities (CFM) and Dimensions

Width →

Height ↓

| Designation | | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| | Housing | 26 1/8" | 49 1/2" | 72 7/8" | 96 1/4" | 119 7/8" | 143 1/4" |
| 1 | 26 7/8" | 2,000 | 4,000 | 6,000 | 8,000 | 10,000 | 12,000 |
| 2 | 51" | 4,000 | 8,000 | 12,000 | 16,000 | 20,000 | 24,000 |
| 3 | 75 1/8" | 6,000 | 12,000 | 18,000 | 24,000 | 30,000 | 36,000 |
| 4 | 99 1/4" | 8,000 | 16,000 | 24,000 | 32,000 | 40,000 | 48,000 |

Note: Capacities are based on an airflow velocity of 500 FPM. **Half size filter housings are available.**




1 5/16" *Undrilled Flange*
*(Typical all 4 Sides, Both Faces)*

***Front Elevation***

***End Elevation***

| Prefilter Depth | Housing Depth |
|---|---|
| 2" | 36" |
| 4" | 36" |

*Operating pressure drop at 500 FPM is 0.35 in. w.g.*


AAF INTERNATIONAL®
10300 Ormsby Park Place Suite 600
Louisville, Kentucky 40223-6169

**www.aafintl.com**
**Customer Service 800.477.1214**
**Fax 800.254.3019**


ENERGY STAR PARTNER

AAF has a policy of continuous product research and improvement and reserves the right to change design and specifications without notice.

ISO Certified Firm




APC-1-122C SEP '09