Bring the power of
industrial strength
Activated Carbon
into your home with the

VOC3

Activated Carbon Matrix Module™

For control of VOCs, Odors,
and Gas Phase Contaminants

SolaceAir

VOC³ Activated Carbon Matrix Module™

THE PROBLEM: VOCs, Odors, & Gas Phase Contaminants
Materials and activities that surround us every day are continuously generating airborne pollutants. A vast conglomeration of odors and gas phase contaminants is created from cooking, cleaning, furniture, carpets, hobbies, nail polish, dry cleaning, smoking - the list goes on. According to a 2003 Harvard School of Public Health report, "Of 120 homes tested for 89 separate volatile organic compounds (VOCs), 100% of them had levels that exceeded safe standards."

THE SOLUTION: Activated carbon filtration systems have been used for decades in critical applications for the removal of harmful odors and chemical gases. Carbon works through a process called adsorption – the deposition of a gas on a solid. Because of its molecular structure, Carbon is an excellent natural adsorber. For this reason, hospitals, museums, and clean manufacturing facilities all rely on the power of activated carbon to capture contaminants.

The most widely used commercial carbon filtration systems consist of 1"-2" deep trays filled with carbon pellets. Large arrays of them are typically used and air handling systems must have special powerful fans to overcome very high resistance to airflow. And because carbon pellet systems can shed carbon dust, downstream filters become necessary which can further restrict airflow, making high-impact carbon systems impractical for use in residential applications. Today, through developments using advanced composites and extrusion technologies, the effectiveness of industrial-strength activated carbon is available for your home.

The unique, revolutionary design of the VOC³ Activated Carbon Matrix (ACM) Module utilizes an activated carbon/ceramic honeycomb matrix that features unrestrictive air channels to provide a pathway for air to flow with low resistance. Because the carbon and ceramic are baked for 24 hours at 1,200 degrees Fahrenheit, they are tightly bound together, eliminating dust shedding and the need for downstream filters.

OUTSTANDING PERFORMANCE: Carbon effectiveness and longevity are functions of weight and dwell time. More weight means more capacity for odor removal and a longer service life. One gram of activated carbon has 10,000 square feet of internal surface area. One pound of activated carbon has a surface area equal to about 125 acres. The VOC³ Activated Carbon Matrix Module provides over four pounds of activated carbon to provide a service life of up to two years.

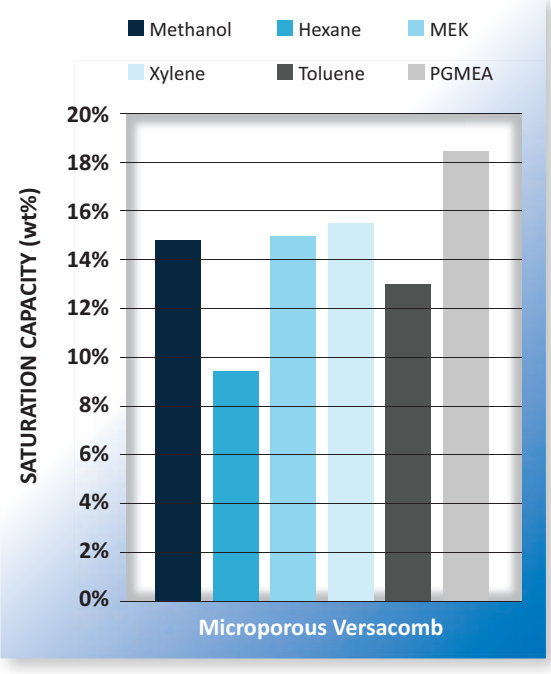
The VOC³ is engineered to retrofit into many brands of off-loop HEPA and deliver an 80.0% to 90.0% up-stream/downstream removal.

Air Velocity		Dwell Time	Removal
fpm	"w.g.	(seconds)	(%)
78	0.040	0.090	99.9
99	0.050	0.070	99.5
113	0.055	0.062	99.0
207	0.110	0.034	90.0
276	0.160	0.025	80.0

VOC³ Effectiveness: The chart above shows removal of Xylene which is has representative characteristics as many common vehicle exhaust emissions and many common VOCs

UNSURPASSED VERSATILITY:

- Suitable for high airflow applications (>500 fpm)
- Suitable for high temperature applications up to 500°F
- Suitable for damp conditions up to 99% RH
- Can be mounted horizontally or vertically
- Airflows in either direction



VOC³ saturation capacities for various solvents

VOC³ Activated Carbon Matrix Module™

THE SOLACEAIR SERIES2™ WHOLE HOUSE BYPASS HEPA SYSTEM:

The VOC³ slides into the SolaceAir Series2™ Whole House Bypass HEPA System. The Whole House Bypass HEPA System includes a quiet multi-speed blower section and three stages of advanced filtration to remove 99.97% of particles .3 micron in size down to .01 microns.

The Bypass HEPA system can be mounted to the HVAC system plenum or installed in a dedicated loop. The Bypass HEPA system overcomes this requirement by positioning the system parallel to instead of across the airstream. Polluted air is directed through the filter on multiple passes to cleanse the air. Working in combination with a pre-filter to capture larger particles, the system is designed to operate at peak performance for up to two years before requiring replacement the HEPA filter. Carbon and pre-filters are replaced twice annually.

The VOC³ fits these models of HEPA air cleaners.

• Dynamic	DYNHP-300
• Pure Sept	HP-500
• General Aire	AC500
• Luxaire	S1-HEPA300

BYPASS HEPA FEATURES:

- Quiet, compact, and lightweight design
- Thermally insulated cabinet provides quiet operation
- Two-speed, maintenance-free, pre-lubricated PSC motor
- 30% efficient pleated pre-filter
- 99.97% efficient HEPA Filter collects particles down to 0.01 microns
- Easy access front access door with safety shut-off
- Duct-mounted or collar mounted for any type of HVAC system
- Seven (7) Year Limited Warranty

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