ScrubAir Systems, Inc.
Onion/Odor Control Carbon Absorption Systems
Making The Air Fit To Breathe!
“Life is like an onion. You peel it off one layer at a time; And sometimes you weep.”

Carl Sandburg, American Poet
Onions represent the third largest fresh vegetable industry in the U.S. Per capita consumption of onions is about 20 pounds /year.

Over 450 semi-truck loads of onions are used in the U.S. each day.

World onion production is estimated at approximately 105 billion pounds each year.

Near 13.67 pounds of onions per person across the world!
THE DEMAND

PRODUCTIVE, EFFICIENT AND HEALTHFUL

With an increasing demand for more fresh-cut processed onions worldwide, how can ScrubAir help your facility become a more productive, efficient and healthful work environment?
“The humble onion, with its tear-promoting pungency, is without question one of the healthiest things you can put into your body. Eat onions and live better.”

As onions are sliced, they release a class of enzymes, allinases, which break down amino acid sulfoxides. A specific compound produced during this process is 1-propenesulfenic acid, which is rearranged by another enzyme, called lachrymatory factor synthase, to produce syn-propanethial-S-oxide. Production of this gas peaks 30 seconds after mechanical damage to the onion, and it stimulates sensory neurons in the eye causing a stinging sensation; the eye therefore produces tears to flush it out.

Thiosulfimates are the primary flavour and odour producing molecules in an onion. These compounds are not present in intact bulbs, but are formed via enzymatic reaction from sulfur amino acids. Allicin is one of these compounds, which in turn quickly breaks down to form other sulfur-containing compounds.
Before Photos

“Mine eyes smell onions: I shall weep anon.”

by William Shakespeare All’s Well that Ends Well
What does ScrubAir do so that your workers no longer need to wear respirators to combat the effects of “Nature’s Tear Gas” when working in onion processing rooms?
Odor Control Systems
ScrubAir provides custom designed, highly efficient, low-maintenance, cost saving odor control systems to the Fresh Cut Processing Industry proven to increase worker productivity, reduce operating costs, and guard produce from cross-contamination.
Why is processing onions such a tearful experience?
Contact Us!

Contact ScrubAir for an experienced design engineer to visit your facility, evaluate your needs, provide a sketch and proposal for your review - of course at no charge or obligation to you.

ScrubAir odor control systems are designed to meet your present needs, and accommodate future growth and expansion.
How we do it
Ventilating the entire processing room is ineffective and costly - ScrubAir Odor Control Systems contain and remove the odors at the very source where they are generated:
CONVEYERS

SLICERS

SHAKERS

CHLORINE TANKS

01

02

03

04

05

06

07

08

PEELERS

INSPECTION TABLE

DICERS

HOPPERS
System on conveyer
System on Sorter
Our Guarantee

ScrubAir Onion/Odor Control Carbon Absorption Systems are guaranteed to:

Provide a minimum of 8-10 complete room exchanges per hour

Eliminate the loss of refrigerated air by providing a closed loop system designed to absorb the fumes in the carbon beds and then return the cleaned air back into the process area
efficiently source-capture the fumes and odors
Fabricated from 3/8" and 1/4" thick white PVC
Slot velocities designed for 2,200 feet per minute
Quadrant damers for balancing purpose

Custom Hoods

Designed to remove mist and onion peels prior to them entering the duct system
Fabricated from 1/4" high impact white PVC
Inlet and outlet transition
Filter housing

Inline Filters

Magnehelic gauge designed to monitor the pressure drop across the filters
Removable Kimre® polypropylene (washable) composite mesh pad designed to remove mist particles as small as 20 microns in diameter 99% efficiency
Clear hinged and bolt-on access doors with convenient spin off knobs to access components of unit
Quadrant dampers for balancing purposes
ScrubAir Systems Inc.
Making The Air Fit To Breathe

- **Stainless Steel Construction**
- **Damper for Balancing Purpose**
- **Quadrant Damper for balancing purposes**
- **Heat formed corners**
- **Fabricated from 1/4" thick white PVC**
- **Hook-on clear vinyl curtains**
- **Stainless Steel fasteners to attach to conveyer**
- **Designed per SMACNA recommendations for the most efficient air flow**
- **Fabricated from 3/16" and 1/4" this white PVC**
- **Connect hoods to inlet of scrubAir carbon/absorption unit**
- **Articulating Arms with Hoods**
- **Canopy Hoods for specific areas**
- **Covers for specific areas**
- **Duct and Fittings**
### ScrubAir Horizontal Carbon Absorption Unit

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>I.</strong></td>
<td>Particle Filter Kimre® composite mesh pad</td>
</tr>
<tr>
<td><strong>II.</strong></td>
<td>Carbon Absorption Filters</td>
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<tr>
<td><strong>III.</strong></td>
<td>Carbon Absorption Filters</td>
</tr>
<tr>
<td><strong>IV.</strong></td>
<td>Carbon Absorption Filters</td>
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</tbody>
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- Fabricated from 1/2” thick white PVC
- Inlet and outlet transitions
- Filter housings
- Magnehelic gauges designed to monitor the pressure drop across the particle filter as well as the overall unit
- Clear, hinged, bolt-on access doors with convenient spin off knobs to allow access to all components of the unit
- Drain
- Mounting base
★ ScrubAir uses New York Blower® fans and blowers

★ Supplies all duct and fittings required to return the cleaned air back into the process area

★ Includes control panel with circuit breaker disconnect and motor starter with VFD
ScrubAir is on the job from concept to completion

IDEA STEP

**Initial Meeting**
meet at your facility to evaluate specific needs, furnish preliminary drawings and quote - all of course at no cost or obligation!

**Design**
All design sketches are sent to our in-house CAD department for your final approval
All fabrication is done here in our Lake Zurich facility by qualified craftsmen.

Installation

Installation by experienced, safety trained ScrubAir crews includes every joint heat fusion welded, all stainless steel rods and fasteners required, rigging equipment to assemble, and balancing of the system.
Start up & Training

ScrubAir technicians come to your facility for start-up and training, and provide a complete operations manual with drawings and spare parts list.

24 Hour Service

ScrubAir provides a 24 hour on call service for service and troubleshooting.
“The onion and its satin wrappings is among the most beautiful of vegetables and is the only one that represents the essence of things. It can be said to have a soul.”

Charles Dudley Warner, ‘My Summer in a Garden’ (1871)