

# EcoClean Kitchen Ecology Unit



## A powerful kitchen exhaust system that keeps the focus on the food

Excellent solution for architects and builders who need high performance, cost effective odor and smoke control

- Kitchen crews can focus on food prep and not complaints from the neighbors
- Removes customer concerns about food odors
- Easy to maintain
- Assurance of odor elimination rather than odor masking



## Experienced Odor and Gas Removal

The EcoClean Kitchen Ecology Unit removes commercial kitchen gases rather than masking the odors or spraying additional chemicals to complicate and harm the environment. Using a multi-stage filtration system to filter particulates and gases, commercial buildings get the protection they need—no matter what the building design. The EcoClean provides architects and owners peace of mind that the interior building and adjacent external areas will be protected from malodorous compounds so that whatever odors are produced by the kitchen are eliminated and removed. PureAir Filtration has applied its experience and market leadership in the field of gas and odor removal to commercial kitchen exhaust removal with the EcoClean Kitchen Ecology Unit.

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# The best odor, gas, and grease removal system on the market

## Thorough and Worry-free

Modern buildings have greater challenges when handling kitchen grease, odor, and gases. Traditionally, buildings were designed so kitchen exhaust was removed outside in areas that would not cause potential re-entry issues such as the sides or roofs of buildings. But with rear and roof areas incorporating livable space, direct malodorous exhaust away from those areas and nearby urban activity requires special handling. Exhaust airstreams carry a complex array of gaseous compounds at elevated concentrations and temperatures. Both exterior and interior protection is needed from odors and smoke.

Instead of merely redirecting kitchen exhaust to increasingly inappropriate exterior areas, PureAir's EcoClean Kitchen Ecology Unit accomplishes the following:

- Eliminates odor—no chemical odor masking
- Has a overall removal efficiency better than 95%
- Minimizes filter replacement service costs with a specially designed filter sequence
- Has specially formulated kitchen odor adsorbent media for gas-phase filtration
- Features 1 or 2 stage odor adsorbent media
- Is available in custom designs and modular sections
- Optional UV for microbial sterilization
- Allows easy maintenance and installation with simple dual-side access doors and panels
- Is suitable for exhausting into car parks and other non-critical zones as required by local codes
- Offers optional electrostatic precipitation stage

## E-MAGIC Control System

The PureAir E-MAGIC PLC Control system is a unique system designed to provide complete control of PureAir Ecology systems. The E-MAGIC system ensures all critical components are operated at peak performance and safely shut down during cleaning operations. Features include real-time status, push button control, disconnect switch, safety lockout, emergency stop, automatic re-start and shutdown, compensation for DST, and digital output meters. Complete cleaning cycles of filtering components are performed using easily-adjusted special detergent blends and oscillating sprayers. Fluids are drained from the unit followed by air drying from the unit's own blower.

## Features at a Glance

Secondary grease extraction (primary grease extraction at the hood by others)

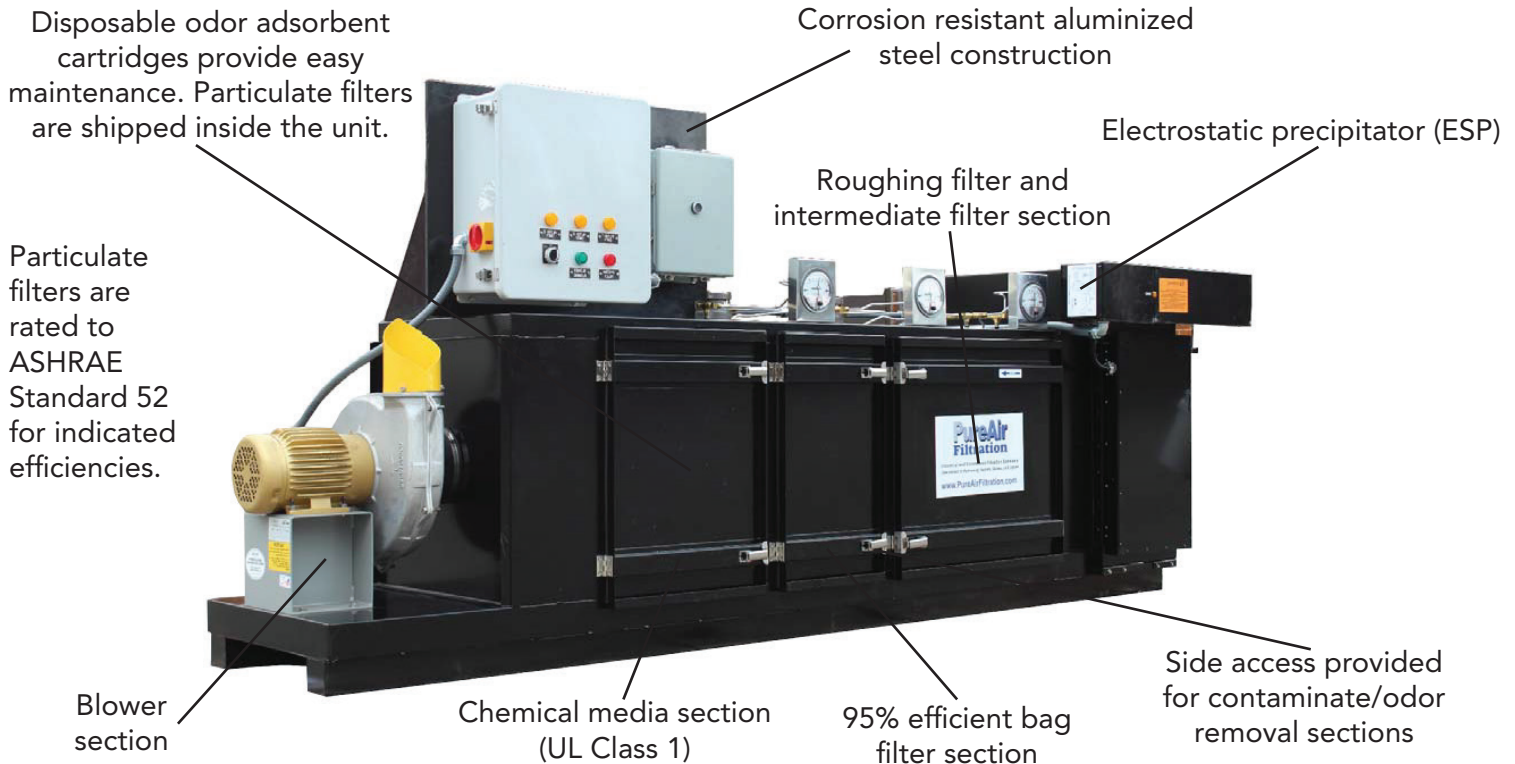
- High particulate capacity
- 1 or 2 stage odor adsorbent media
- Final filters
- Fire dampers (optional)
- Exhaust fan
- Control package with filter monitoring (optional)
- Motors Class F insulation, TEFC, high efficiency induction type meeting voltages for 50 and 60 Hz applications
- Special kitchen application fans with TEFC motors located "outside airstream"
- PureAir E-MAGIC PLC Control system

*Any of the above can be made into a combination. Can be completed as a single source supply.*

PureAir EcoClean complies with the following codes:

- NFPA 96
- UL762
- UL 1046
- UL 723
- UL 900

# Well-designed technology that performs the way you need it to



Disposable odor adsorbent cartridges provide easy maintenance. Particulate filters are shipped inside the unit.

Particulate filters are rated to ASHRAE Standard 52 for indicated efficiencies.

## Filter Sequence

<b>1<sup>st</sup> Stage (Optional)</b>	<ul style="list-style-type: none"> <li>• Electrostatic Precipitation (autowash ESP or manual)</li> <li>• Dry type and wet type self-cleaning ESP available to remove 95% of smoke.</li> </ul>
<b>1<sup>st</sup> Stage</b>	<ul style="list-style-type: none"> <li>• Roughing grease pre-filter, rated at average efficiency 30%; 51 mm (2 in) thick aluminum filters are supplied.</li> <li>• Filters are classified UL Class 2</li> <li>• Quantity and sizes of filters as per unit selection.</li> <li>• This section has a drain pan and drain pipe.</li> <li>• Connections are available on the bottom of the unit on both sides.</li> </ul>
<b>2<sup>nd</sup> Stage</b>	<ul style="list-style-type: none"> <li>• Intermediate filter, rated at average efficiency 30%; 51 mm (2 in) thick filters are Koch Multi-pleat</li> <li>• Filters are classified UL Class 1</li> <li>• Quantity and sizes of filters as per unit selection.</li> </ul>
<b>3<sup>rd</sup> Stage</b>	<ul style="list-style-type: none"> <li>• Bag filter, rated at average efficiency 95% by the DOP test method (0.3 micrometer particles); 36 in. (914 mm) thick filters</li> <li>• Filters are classified UL Class 2</li> <li>• Quantity and sizes of filters as per unit selection.</li> </ul>
<b>4<sup>th</sup> Stage</b>	<ul style="list-style-type: none"> <li>• Chemical Media Section, PP-18 modules, complete with CPS Blend Media.</li> <li>• Quantity and sizes of filters as per unit selection</li> <li>• UL Class 1 approved</li> </ul>
<b>5<sup>th</sup> Stage</b>	<ul style="list-style-type: none"> <li>• Chemical Media Section, PP-18 modules, complete with CPS Blend Media</li> <li>• Quantity and sizes of filters as per unit selection</li> <li>• UL Class 1 approved</li> </ul>
<b>6<sup>th</sup> Stage</b>	<ul style="list-style-type: none"> <li>• External or internal blower. External blowers must be Class II, UL762 approved. Internal blower must use smoke extraction motor.</li> </ul>

## Blower (Internal or External)

The blower features a centrifugal backward inclined single width, single inlet arrangement 9/10 depending on the application. The TEFC motor is located outside the exhaust air stream and is completely enclosed with a weather guard. The cleanout door, drain, and shaft cooler that protect the bearings are available on all blowers. Fan and motor feature fixed sheaves drive assemblies.

The blower/motor efficiency is based on maximum airflow volume (cfm) in the listed range. Other selections with different wheels and motors are available based on required cfm and external static pressure (ESP). Contact PureAir for details.

External blower must be Class II, UL762 Approved Internal blower is equipped with a smoke extraction motor designed specifically for kitchen exhaust applications.

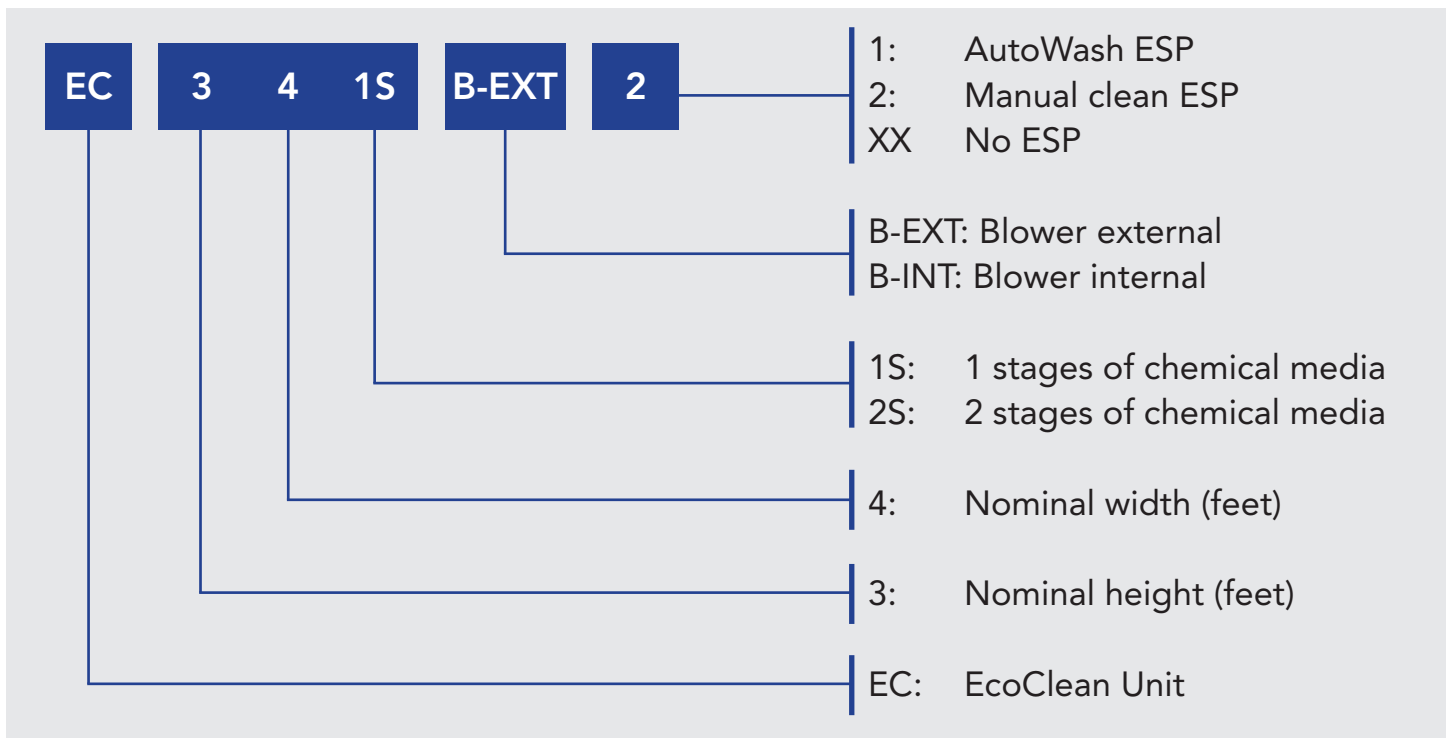
## Standard Equipment

Filter differential pressure monitoring system contains DWYER Series 2000 gauges that monitor pressure drops across the pre-filter, all particulate filters, and system.

The filter gauge box is field-interchangeable on left or right sides depending on access availability.

Model	Max Airflow CMH (CFM)
EC-202	1100 (2000)
EC-402	2300 (4000)
EC-404	4600 (8000)
EC-604	7000 (12000)
EC-606	10000 (18000)
EC-707	14000 (24500)
Larger and custom sizes available by special order	

## Ordering Information



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