



Electrostatic Kitchen air cleaner Technology

450-652-0668
800-461-0668
cadexair.com

CADEXAIR
EXPERTISE & INNOVATION

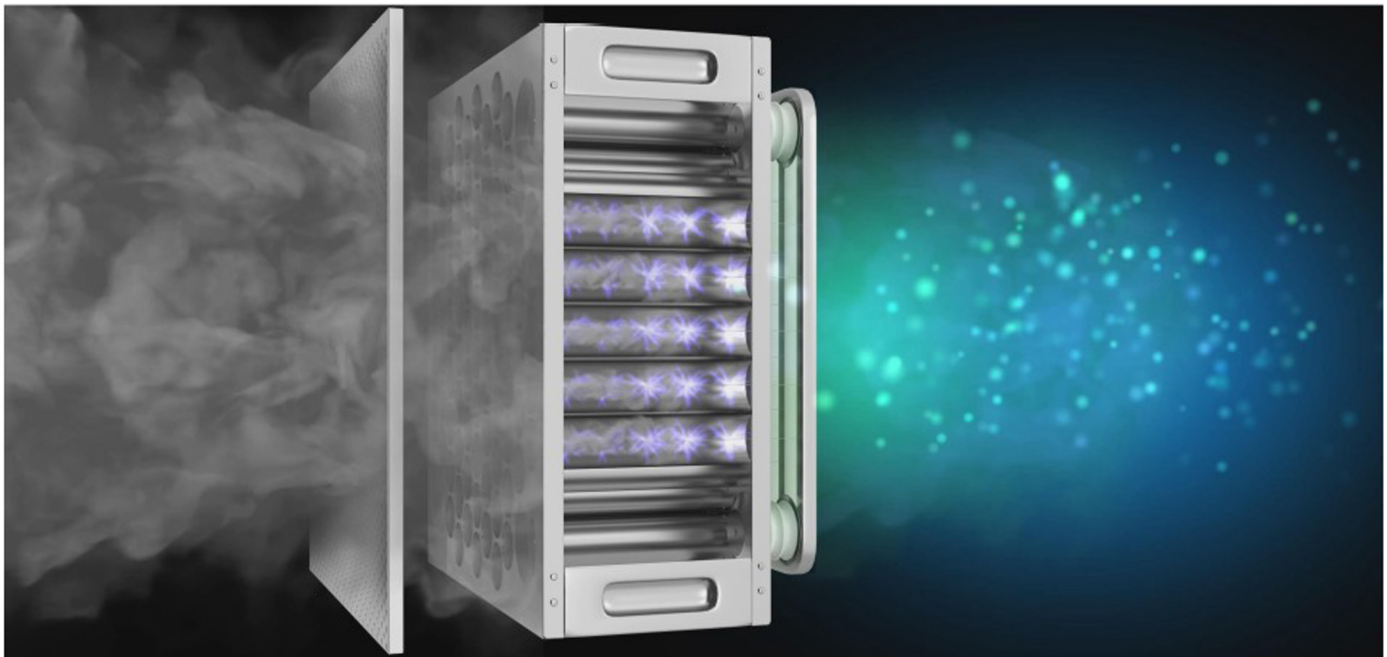
Operating Principles

Kitchen Air Cleaner (KAC) Cadexair Unit

To effectively remove the airborne grease particles from the hot exhaust emissions produced in commercial food processing applications, the Kitchen Air Cleaner Cadexair unit designed a range of electrostatic precipitators or ESP's which incorporates our years of innovations in unit mechanical designs, HV power pack contrais, and system safety protections, and has proven to be the tried and true answer to the universal market demand for a robustly effective, easily serviceable and highly automated solution.

As air passes into the combined ionizer/collector cell, grease particles in the air stream are negatively charged with a avalanche of electrons produced in field charging process as well as negative ions in diffusion charging process, and attracted to the grounded collectors where they get deposited and so are filtered out of the airflow.

There's virtually no mechanical force in action between the filter cell and air movement, resulting in very little pressure drop across the filters and lower need for higher pressure exhaust fans. Electricity energy of the KAC unit is applied only to the grease particles being collected and therefore is very energy efficient.



Operating Principles

Cylindrical Honeycomb Filter Cell

The filter cell consists of a parallel arrangement of cylindrical collectors formed as a honeycomb, with the spiked needle ionizers running on their axis, this ensures that the strongest possible average electrostatic intensity can be generated inside the filter cells. This type of filters some of the highest possible level of filtration efficiency on the market.

The digital Power Pack

A perfect combination of strong output power and higher power conversion efficiency. Complete contrais and safety features, such as soft start-up, constant output current, arc extinction and auto re-position, as well as extensive protections against repeated arcings, HV open circuit, short circuit, overload, overheat etc, ensure an optimum filtration efficiency of over 95% of the product, the safety inside the filter cells, and the fail-safe capabilities of the power pack at the same time, despite of fluctuations of system variables, such as type of food cooked, volume of air extracted, power grid instability, cleanness of the filter cells etc.

Cleanness of the filter cells are examined automatically and optimal working currents are set in real-time to accommodate the constantly changing conditions to avoid total breakdown of the product resulted from frequent arcings when filter cells become dirty, and to significantly eut down on tiller cell cleaning frequency.

Filter working status can be accessed with a PC board CC-200 a powerful gateway based on the instant data sampling and distant communication capabilities of the digital power pack.

Perforated Prefilter

To remove large particles and oil droplets and aid in even air distribution across the tiller cells so that uniform load is received in every single collector and cleaning and servicing costs are reduced.



Models & Duct-Mounted

Model	Rated Airflow (CFM)	Dimension (inch)	Power (W)	Weight (lb)
KAC-1-1200	1200	29x28x30	680	160
KAC-1-1800	1800	29x32x35	645	220
KAC-1-2500	2500	29x34x37	683	238
KAC-1-3500	3500	29x55x35	737	310
KAC-1-5000	5000	29x60x37	712	339
KAC-1-6000	6000	29x80x35	809	429
KAC-1-7000	7000	29x60x64	1474	554
KAC-1-10000	10000	29x80x69	1424	661
KAC-1-12000	12000	29x78x64	1380	778
KAC-1-14000	14000	29x87x69	1692	857
KAC-2-1200	1200	29x34x37	698	235
KAC-2-2500	2500	58x34x37	1396	330
KAC-2-3500	3500	58x55x35	1460	619
KAC-2-5000	5000	58x60x37	1496	679
KAC-2-7000	7000	58x55x64	2920	1086
KAC-2-10000	10000	58x60x69	2992	1318
KAC-2-12000	12000	58x78x64	3064	1556
KAC-2-14000	14000	58x85x69	3152	1712
KAC-3-1200	1200	87x30x30	2040	482
KAC-3-1800	1800	87x34x35	1935	661
KAC-3-2500	2500	87x36x37	2049	714
KAC-3-3500	3500	87x57x35	2211	932
KAC-3-5000	5000	87x62x37	2136	1018
KAC-3-6000	6000	87x80x35	2427	1289
KAC-3-7000	7000	87x57x64	4422	1633
KAC-3-10000	10000	87x62x69	4272	1984
KAC-3-12000	12000	87x80x87	4140	2334
KAC-3-14000	14000	87x87x69	5076	2572

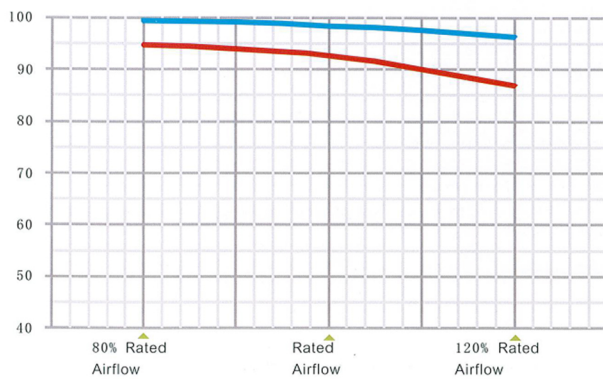
Single Pass Unit

Double Pass Unit

Triple Pass Unit

Smoke removal Efficiency

Smoke Removal Efficiency %

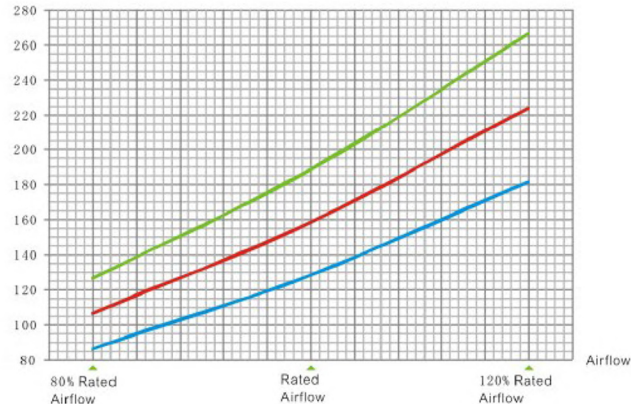


Note: Data given above is based on lab results and is only for reference.

— Double Pass Unit
— Single Pass Unit

Pressure Drop Curve

Pressure Drop Pa

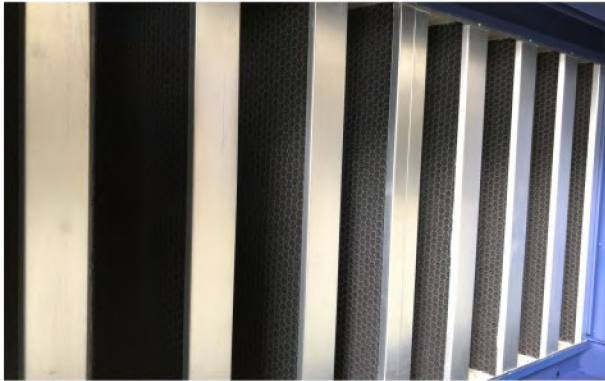


— Single Pass Unit
— Double Pass Unit 2000~24000
— Triple Pass Unit 28000~50000

CADEXAIR
EXPERTISE & INNOVATION

Activated Carbon Filter option

When installed in conjunction with Cadexair KAC unit, the Activated Carbon Filter should be located down stream of the KAC unit.



V-Bank Carbon Filter



Honeycomb Activated Carbon

Encased Adsorption Material: High Grade Carbon Granuels

Support Mesh: Plastic Honeycomb Grid

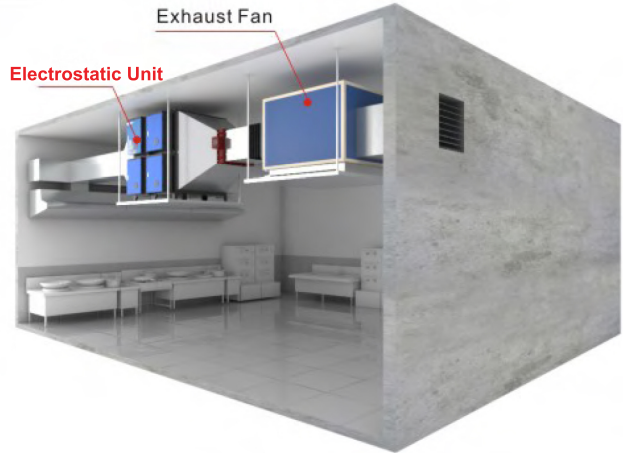
Advantages: Features high adsorption capabilities and decent aerodynamic performance. Can be used for general adsorption of malodorous gases such as toluene, xylen, benzenes, phenols, lipids, alcohols, aldehydes, and so on from the exhaust emissions.

V-Shape Carbon Panel: Allows larger receiving surface and ease of installation and servicing.

Model Matched (Single Pass)	Model Matched (Double Pass)	Carbon Filter Model	Quantity of Filter	Housing	Dimension (LxWxH) (inch)
KAC-1-1200	X	CX-2C	AC-2K*1	CX-2C	29x24x30
KAC-1-1800	X	CX-3C	AC-3K*1	CX-3C	29x28x35
KAC-1-2500	KAC-2-2500	CX-4C	AC-4K*1	CX-4C	29x30x37
KAC-1-3500	KAC-2-3500	CX-6C	AC-3K*2	CX-6C	29x50x35
KAC-1-5000	KAC-2-5000	CX-8C	AC-4K*2	CX-8C	29x55x37
KAC-1-6000	KAC-2-6000	CX-9C	AC-3K*3	CX-9C	29x74x35
KAC-1-7000	KAC-2-7000	CX-12AC	AC-3K*4	CX-12C	29x50x64
KAC-1-10000	KAC-2-10000	CX-16C	AC-4K*4	CX-8C *2 (in parallel)	29x55x69
KAC-1-12000	KAC-2-12000	CX-20C	AC-3K*6	CX-9C *2 (in parallel)	29x74x64
KAC-1-14000	KAC-2-14000	CX-24C	AC-4K*6	CX-12BC *2 (in parallel)	29x81x69

Carbon Filter Cells Model	Dimension (LxWxH) (inch)	Shell Weight (lbs)	Carbon Weight (lbs)
AC-2K	19x19x9	26	44
AC-3K	24x23x9	30	72
AC-4K	26x25x9	35	94

Installation Technology Demonstration



- Low Level Discharge
- Indoor Installation



- High Level Discharge
- Indoor Installation



- High Level Discharge
- Outdoor Installation



Ma Poule Mouille

Urbain Grille Portuguese Restaurant



MED Grill

Mediterranean Cuisine Restaurant



ONI House

Steak House Restaurant



BÀCARO Pizzeria

Montreal Lucerne Square



Ville Emard Bagels

Wood-fired oven



Many more to come

...

T 450-652-0668

T 1 800 461-0668

CADEXAIR
EXPERTISE & INNOVATION

Contact us

Design, pricing and sales
sales@cadexair.com

Technical support and cleaning
info@cadexair.com

Head office

1010, boulevard Lionel-Boulet
Varennes, QC Canada J3X 1P7

Quebec city branch

7625 boulevard Wilfred-Hamel
Québec, QC Canada G2G 1C3