Providing Clean Indoor Air for the Nation since 1987

AIRWAVE®

BARTON UV- C Ozone Clean System
Made In U.S.A

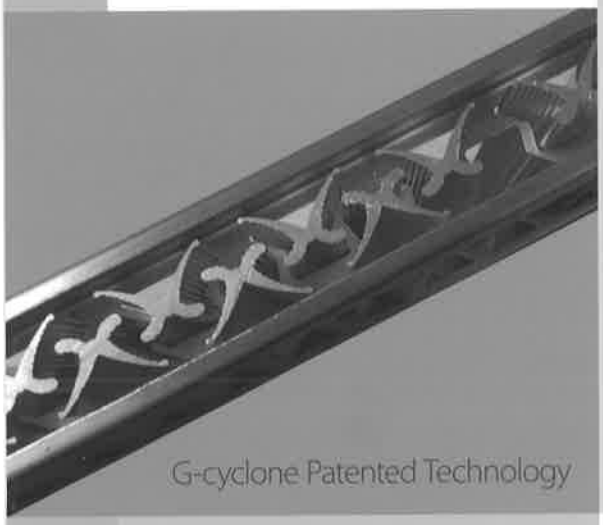
DIRK Leader of G-cyclone® Technology — High Efficiency Kitchen Hoods
Grease Filter

KING series Electrostatic Precipitator Smoke &
Grease Eliminator



DIRK®
Leader of G-cyclone® Technology

DIRK Mechanical Oil Filter



Operating Principle

Cooking fumes including carbon dioxide,water vapor,gas molecules and aerosoles could be purified effectively through G-Cyclone structure.
G-Cyclone,Special coating inside could insure 100% non-effluence of the UV radiation .



DIRK Mechanical Oil Filter



The left side is DIRK-UV Oil Pre-filter, which could prevent the UV radiation from eyes and human body.

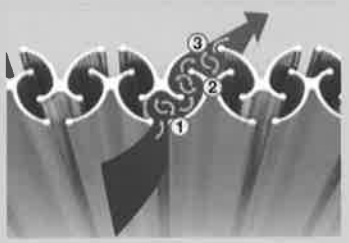
The right side is the normal baffle, which cannot block the UV radiation completely which is harmful and irritating to the eyes (risk of loss of sight) and may be irritating to the skin.

Specifications:

Specs	Dimensions (mm)(L*W*H)	Weight (kg)	Efficiency (%)	Pressure lost (Pa)
DX-5050	500*500*32	4.5	90	110
DX-5050-UV	500*500*32	6.8	90	117

Notes: SUS304 outline border,Aluminium materials. Other sizes can be ordered.
*Efficiency is suitable for particles size between 3~10 um.

Innovative design, advanced G-CYCLONE cyclone technology



Patented G-cyclone technology

The first step: The cooking fume particles are pre-separated by vortex flow and swing interference in the chamber 1

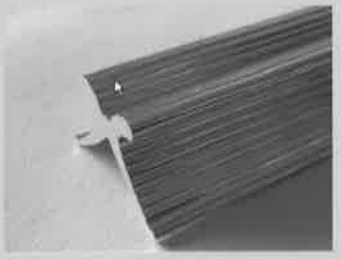
The second step: Cyclone effect is formed through the high DIRK surface tension, by releasing and en-enhance in the chamber 2. The smallest aerosol particles can be separated by the small cycle cyclone formed.

The third step: The air through step one and two, go into the chamber 3. The smallest particles can be further separated by aggregation and swing interference.



Patented G-cyclone self-cleaning technology

The separated grease and oil liquid flow into the DIRK container vertically by weight, through special "drainage effect" to the next process and now the separated solid particle can be flushed away. So, when the size of the liquid particles ≥ the solid particle, it get the effect of self-purification. Prolong the cleaning period.

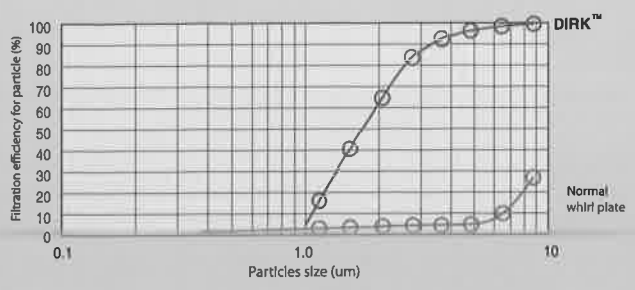


G-cyclone special alloy coating layer

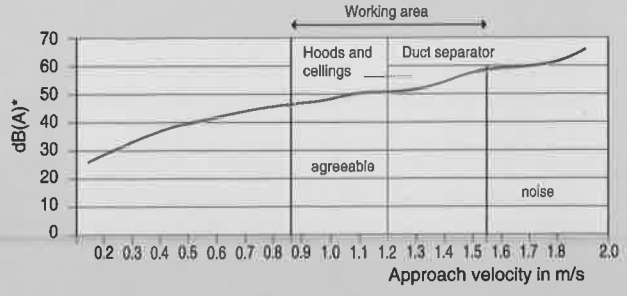
The G-cyclone special coating layers have excellent thermo physical properties, i.e., the large surface area and the excellent thermal stability, so that the cooling effect is obvious and when the air with cooking fumes pass through it, temperature decrease rapidly. The cooking fumes are then captured easily with both the air and cooking fumes separated.
The G-cyclone special alloy-coating layer cannot be adhered with cooking fumes thus it prolongs the product clean period.

DIRK efficiency curve

The conventional cooking fume filter screen or fire damper only have 15%~30% of treatment efficiency, so the oil dirt is piled up on the Kitchen hoods, ducts, fans and fume discharge outlet, this means the more costs for cleaning and repair, and the risk of fire hazard.
Using the DIRK grease filter can reduce the works of the cleaning hoods and ducts efficiently, and reduce the frequency of the maintenance and repair.



The illustration shows wind speed and noise curve table when the DIRK operates

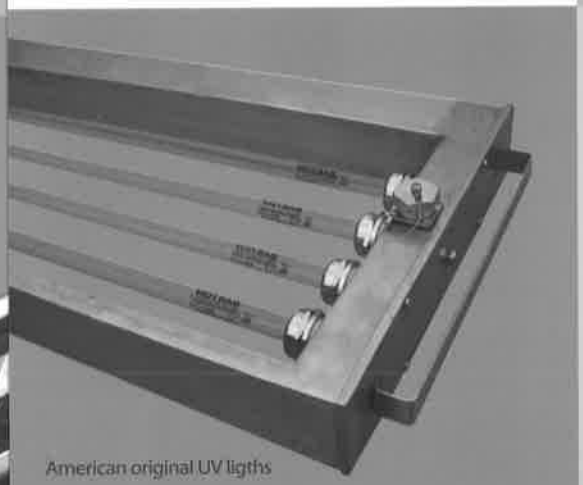


BARTON

UV-C & Ozone clean system

Made In U.S.A.

BARTON Hood Style



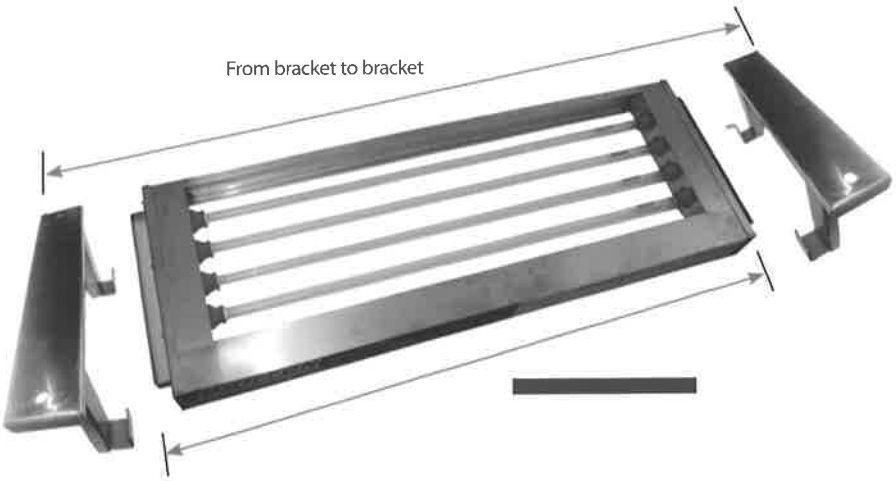
American original UV ligths





Barton exclusive ballast

From bracket to bracket



Control Cabinet



BARTON

Specifications:

	Specs	Dimensions (mm)(L*W*H)	Power (w)	Efficiency (%)	Hood
Holder To Holder	H2	935*315*85	38*4	92	1m-long
	H4	1775*315*85	79*4	92	2m-long
Bracket To Bracket	H2	1075*315*85	38*4	92	1m-long
	H4	1915*315*85	79*4	92	2m-long

Dimension of Control Cabinet is 300*300*170

BARTON Box Style







Barton UV·C&OZONE Clean Sytem

Specifications:

Specs	Dimensions (mm)(L*W*H)	Flange (w)	Operation Space (mm)	Air Volumn (m^3/h)	Efficiency (%)
H4B	1273*732*772	500*400	Single Door; 900	4000	90
H6B	1273*832*772	600*400	Single Door; 900	6000	90
H10B	1273*860*1000	628*628	Single Door; 900	10000	90
H20B	1485*1332*1030	1100*650	Single Door; 1200	20000	90
H30B	1485*1332*1380	1100*1000	Single Door; 1200	30000	90
H40B	1485*1632*1380	1400*1000	Single Door; 1200	40000	90
H50B	1485*2032*1380	1800*1000	Single Door; 1200	50000	90

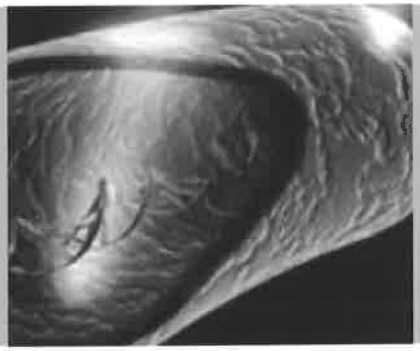
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BARTON

UV-C & Ozone clean system

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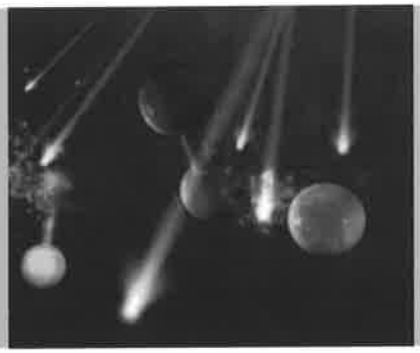
Photolysis

Grease and volatile organic compounds are easy attacked by UV-C.

$O_2 + hv \rightarrow O + O \rightarrow 2O_3$

$H_2O + hv \rightarrow OH + H \rightarrow OH + HO_2$

The double bonds of the long-chain molecules VOC are destroyed.



Ozonolysis

- Ozone and OH can react with organic compounds and alters them.
- This reduces the odor containing compounds produced during cooking process.

KING series





Model	K-300	K-400	K-600
Air Volume (CMH)	3000	4000	6000
Dimension(LxWxH)(mm)	570 x 605 x 650	570 x 840 x 650	570 x 1090 x 650
Flange size (mm)	400 x 480	600 x 430	880 x 480
Weight (Kg)	55 Kg	75 Kg	85Kg
Quantity of cell	1	1	2
Filtration Efficiency	97 %	97 %	97 %
Static Pressure dro	≤ 100 Pa	≤ 100 Pa	≤ 100 Pa
Power Supply (VAC/ph/Hz)	220/1/50	220/1/50	220/1/50
Power Consumption (W)	50	60	90

KING Series Electrostatic Precipitator (ESP) Air Cleaner

As businesses and cooking production grows, more cooking fumes, chemical fumes etc will be generated into the environment. This will results in further air pollution and neighboring businesses or residences may raise concern about air quality.

Airwave Electrostatic Air Cleaners help businesses control the pollution that they generated so that employees have a better and healthier working environment. A clean working environment will generate lots of goodwill among neighboring businesses and residences.

Airwave Electrostatic Air Cleaners can be easily configured and incorporated into various types of exhaust systems for various businesses like restaurants, kitchens, workshop, factories etc

Use K – Model for easy combination of machines

All of our standard products designs are built upon the modular system concept. We build cells in 3,000;4,000;6,000-CMH in size. These cells are then installed adjacently until the cumulative volume of the application is satisfied.





Model	K-800	K-1200	K-2400
Air Volume (CMH)	8000	12000	24000
Dimension(LxWxH)(mm)	570 x 840 x 1300	570 x 1090 x 1300	1140 x 1090 x 1300
Flange size (mm)	600 x 1070	880 x 1125	880 x 1125
Weight (Kg)	144kg	166kg	332kg
Quantity of cell	2	4	8
Filtration Efficiency	97 %	97 %	97 %
Static Pressure drop	≤ 100 Pa	≤ 100 Pa	≤ 100 Pa
Power Supply (VAC/ph/Hz)	220/1/50	220/1/50	220/1/50
Power Consumption (W)	120	180	360
Joined system	K-400 x 2	K-600 x 2	K-600 x 4

KING series

How KING Series (ESP) Air Cleaner works

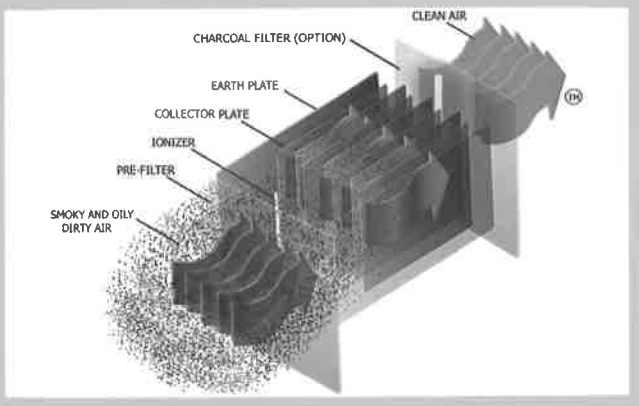
The fan blower first draws in contaminated air through a washable pre-filter, which traps larger particles.

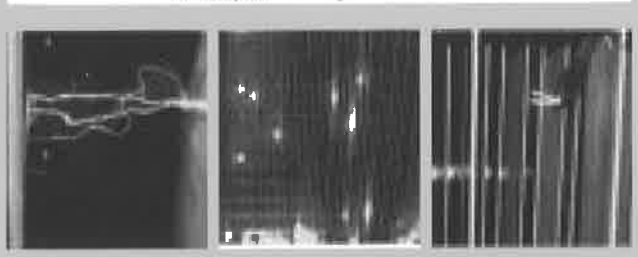
Smaller particles as small as 0.01 micron passes through a strong electrical field (ionizing section) where the particles received an electrical charge.

The charged particles then pass into a collector plate section made up of a series of collecting plates equally spaced 7mm apart.

Each alternate plate is charged with the same polarity as the particles, which repel, while the interleaving plates are grounded, which attract and collect the contaminants.

KING Series (ESP) Air Cleaners traps both wet and dry particulates. The particulates are held in these plates until they are washed away.





12KVDC (ionizer) and 6KVDC (collector)
High Voltage Electrostatic Charging in process

ESP + UVC



Model	UV-K600(Per System)
Air Volume (CMH)	6000
Dimension(LxWxH)(mm)	570 x 1090 x 650
Flange size (mm)	880 x 480
Weight (Kg)	100 Kg
Quantity of cell	2
Filtration Efficiency	97 %
Static Pressure drop	≤ 100 Pa
Power Supply (VAC/ph/Hz)	220/1/50
Power Consumption (W)	117
Quantity of UV light	4
UV power (W)	39 x 4 tubes

Remove Odour and kill bacteria, viruses effectively

2 in 1 new revolution technology (ESP + UVC), it's the best combination to solve your oily, greasy, smoky and odour problem.

No more using of conventional charcoal/carbon filters, which requires high maintenance and replacement cost and the risk of clogging of charcoal/carbon filters, which will results in blockage and in return reduces the airflow, eventually affect the operation of the system.

Advantages

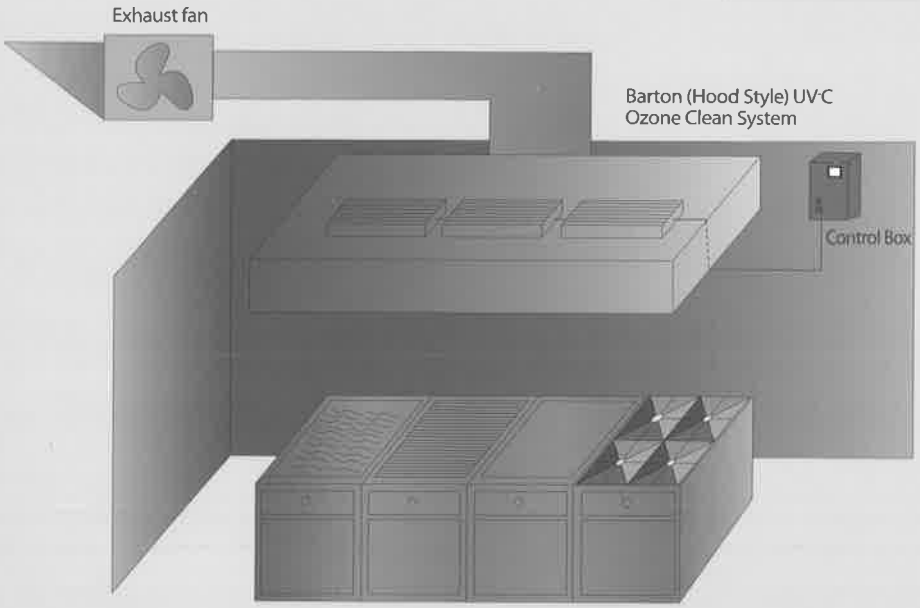
- ESP reduces the need for excessive and frequent cleaning of duct works thus saving on cleaning and maintenance costs
- ESP prevents grease deposits from forming within the duct overtime and reduces the potential danger of fire propagation.
- UVC (BARTON UV Technology from USA) Ultraviolet light kills viruses and bacteria, breaks down grease and reduces odour
- UVC save tremendous cost of high replacement of charcoal filter
- UVC radiation is an innovative and economical solution for greasy and smoky problem

BARTON

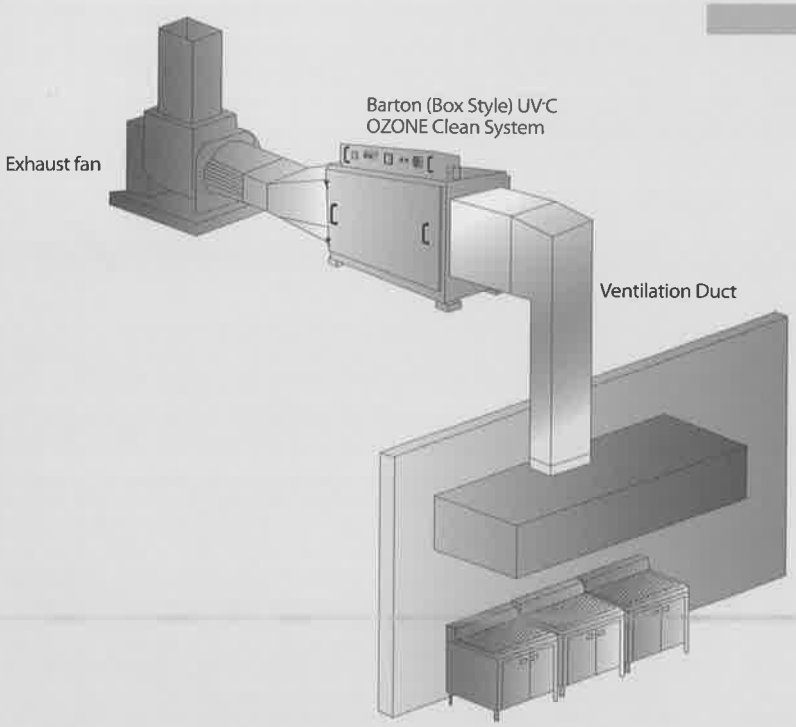
UV-C & Ozone clean system

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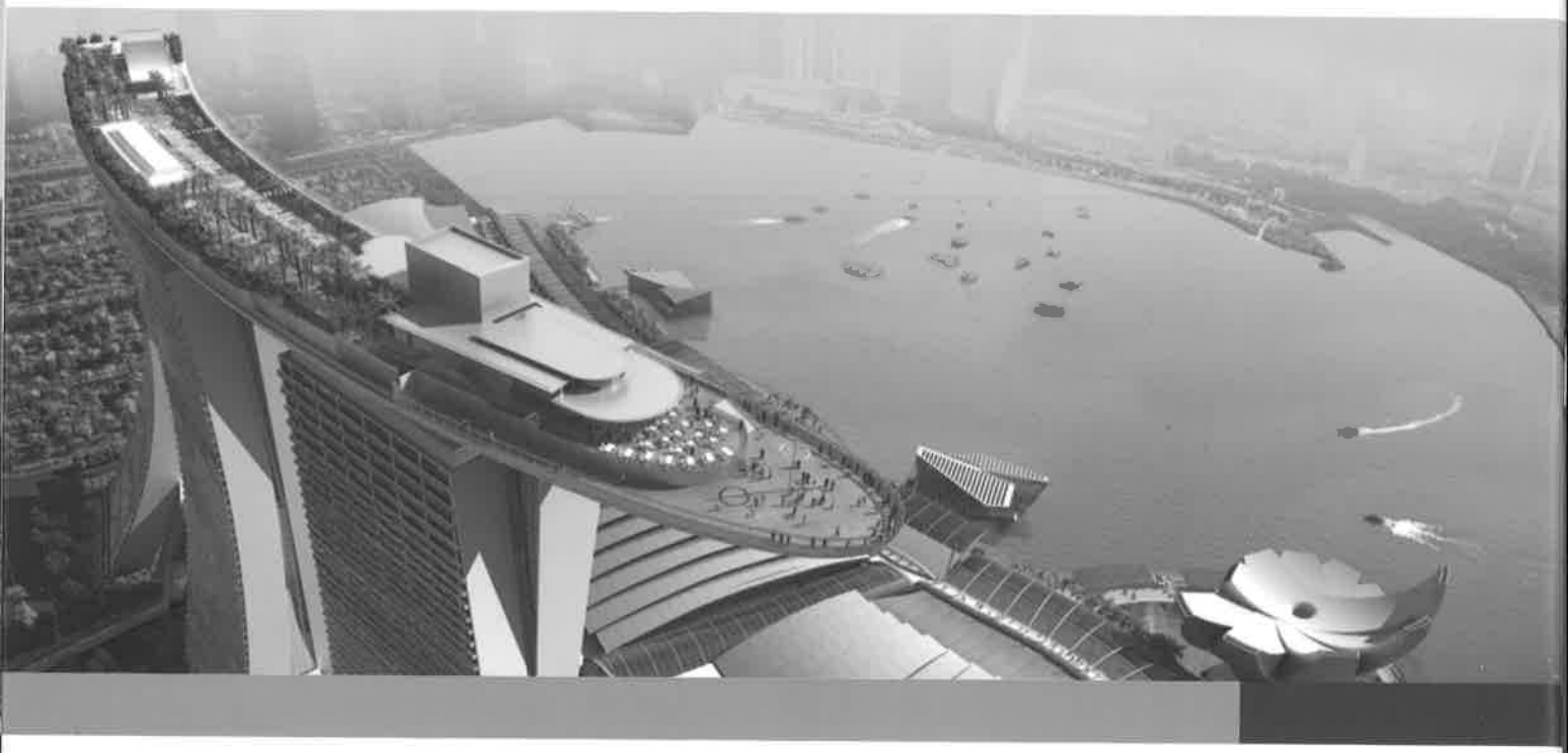
Barton (Hood Style) Installation Diagram



Barton (Box Style) Installation Diagram



Our most recent project at Singapore Marina Bay Sands







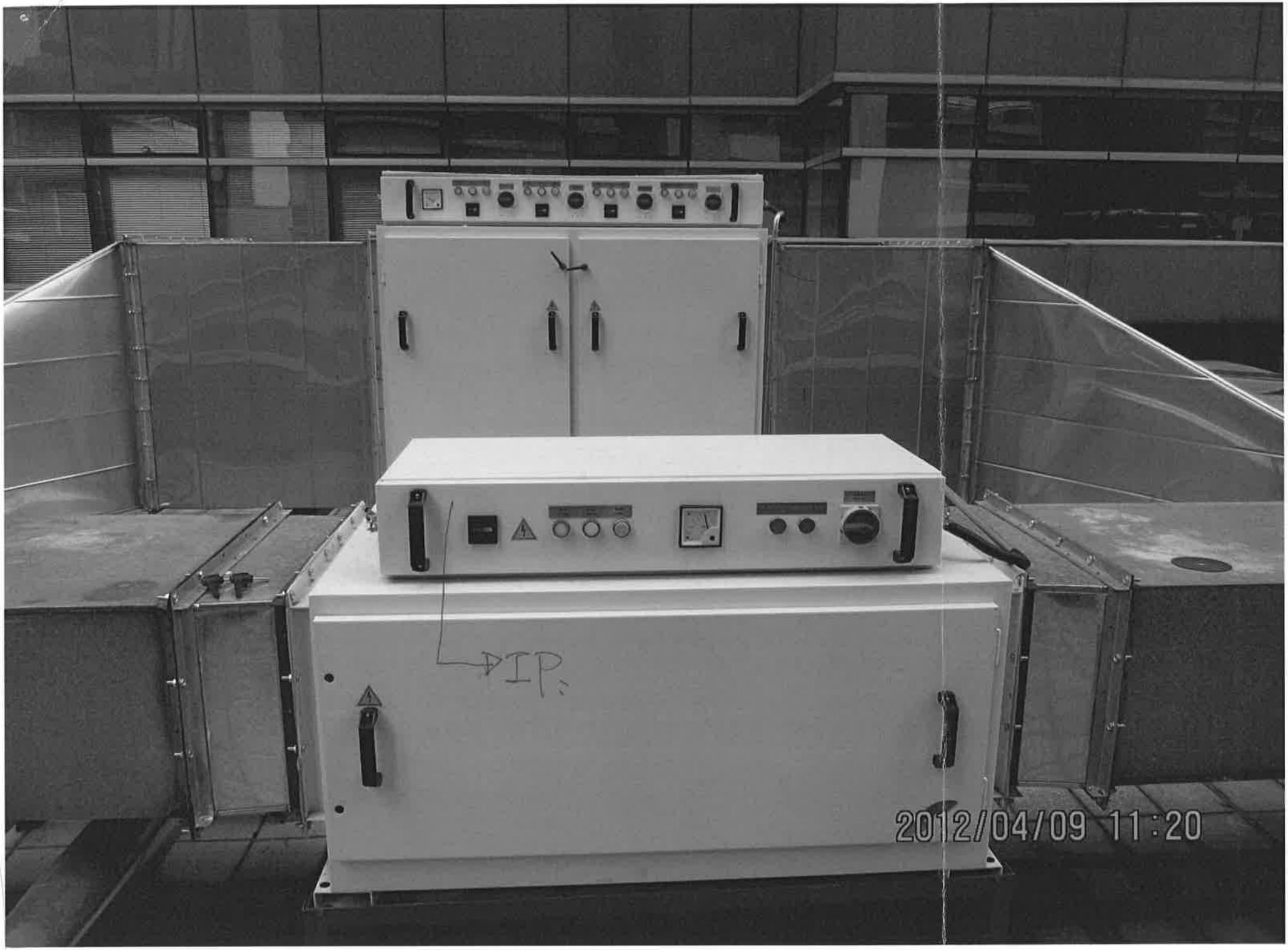




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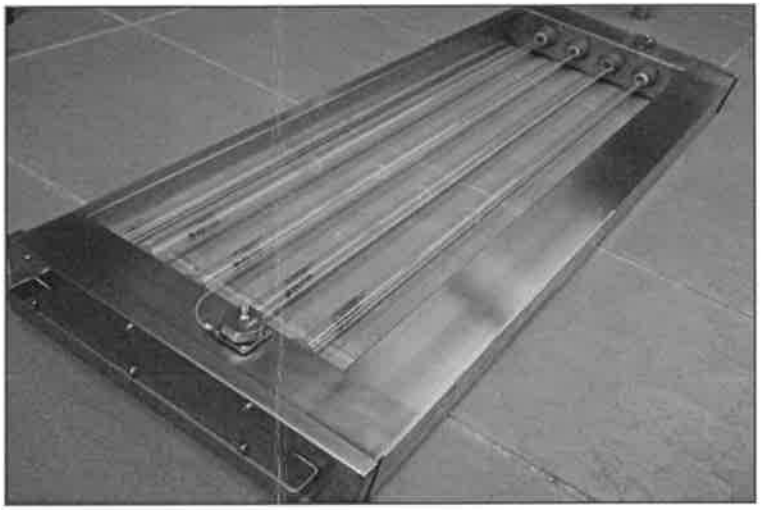

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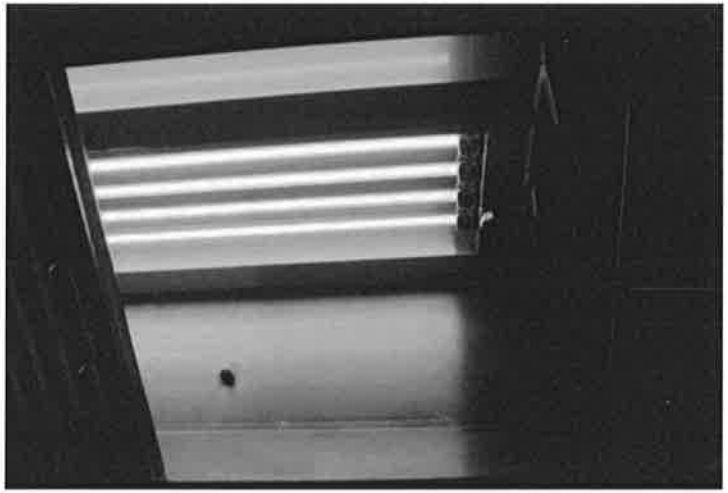

UV light
UV light
to produce O3
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Installation Procedure:



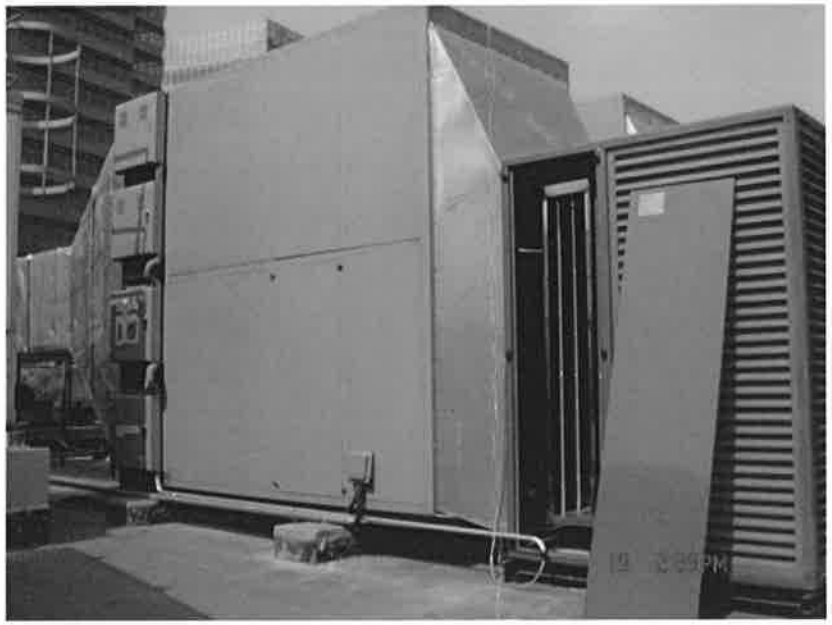






Our Customers:

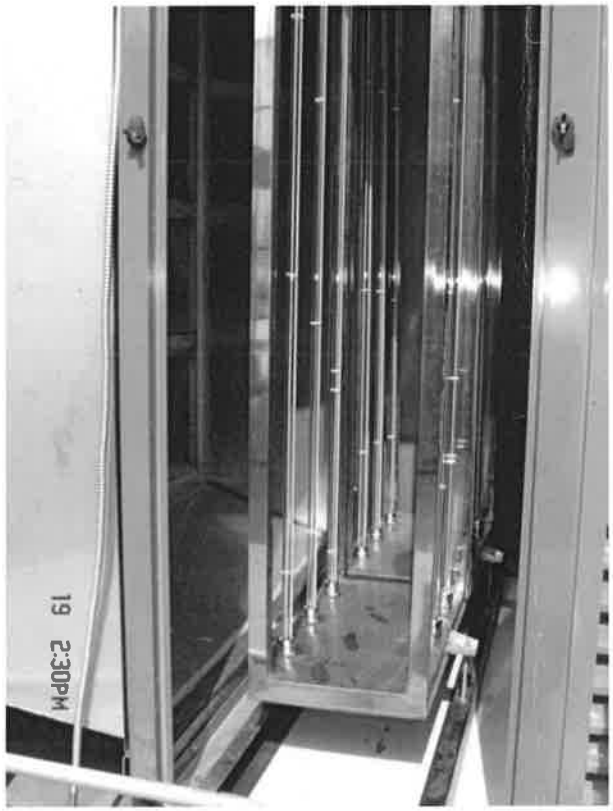




Our Customers:

Using our Barton Box-style





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